



VIRGINIA BOARD OF EDUCATION

AGENDA ITEM

Agenda Item: L

Date: June 15, 2022

Title: First Review of the Proposed 2022 *Physical Education Standards of Learning Curriculum Framework*

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Purpose of Presentation:
Action required by state or federal law or regulation.

Executive Summary:
The 2022 *Physical Education Standards of Learning* describe the Commonwealth's expectations for student learning and achievement in grades K-12 physical education. Periodic revisions of the standards are necessary to update content, clarify important concepts, and reflect emerging public health issues, current academic research, and best practice. Academic content standards for physical education were first developed in 1988 with subsequent revisions in 1995, 2001, 2008, 2015, and 2022. The Virginia Board of Education (Board) adopted the 2022 *Physical Education Standards of Learning* on March 17, 2022. The current standards may be viewed on the Virginia Department of Education's (VDOE) [Physical Education Standards of Learning webpage](#).

The 2022 *Physical Education Standards of Learning* embrace a comprehensive, collaborative review of the standards and the expertise of diverse constituents. The standards were developed through numerous phases of meetings convened with Virginia educators, college professors, and other stakeholders. Additional citizen input was solicited throughout the process and through a public comment email account and two virtual public hearings with the Board. The standards align with Priorities 1 and 3 of the [Board's Comprehensive Plan](#). The VDOE took the following steps to review the 2015 *Physical Education Standards of Learning Curriculum Framework* and create the proposed 2022 *Physical Education Standards of Learning Curriculum Framework*:

- changed the structure of the curriculum framework from four elements (i.e., VDOE Standard(s) Student Friendly Language; Suggested Sample Assessments; Terms (vocabulary) and Content Information; and Suggested/Sample Activities) to two elements (i.e., Essential Understandings and Essential Knowledge and Skills) in order to align with the 2020 *Health Education Standards of Learning Curriculum Framework*;
- convened meetings with steering and educator committees composed of teachers, curriculum supervisors, and higher education faculty;
- solicited additional feedback from teachers and other critical stakeholders; and
- reconvened the steering committee to reach consensus on the proposed 2022 *Physical Education Standards of Learning Curriculum Framework*.

The 2022 *Physical Education Standards of Learning* and the proposed *Physical Education Standards of Learning Curriculum Framework* have been organized into the following strands to provide clarity for learning expectations and to provide learning progressions for:

1. *Demonstrating competence in motor skills and movement patterns needed to perform a variety of physical activities. (Motor Skill Development)*
2. *Applying knowledge of the structures and functions of the body and how they relate to and are affected by human movement to learning and developing motor skills and specialized movement forms. (Anatomical Basis of Movement)*
3. *Achieving and maintaining a health-enhancing level of personal fitness. (Fitness Planning)*
4. *Demonstrating the aptitude, attitude, and skills to lead responsible, fulfilling, and respectful lives. (Social and Emotional Development)*
5. *Explaining the importance of energy balance and the nutritional needs of the body to maintain optimal health and prevent chronic disease. (Energy Balance)*

The layout of the proposed *Physical Educational Standard of Learning Curriculum Framework* was reformatted to provide internal consistency with curriculum frameworks for other disciplines, such as the recently adopted 2022 *Health Education Standards of Learning Curriculum Framework*. Changing the layout of the proposed curriculum framework significantly changed the content. However, a dynamic technical assistance document that mirrors the format of the 2015 *Physical Educational Standard of Learning Curriculum Framework* will be maintained to bridge the transition to the new layout, broaden the scope of the proposed *Physical Education Standard of Learning Curriculum Framework*, and be periodically updated to include emerging best practice resources for the 2022 *Physical Educational Standard of Learning* within the seven-year review cycle.

Attachments A and B include the strikethrough and clean versions of the proposed *Physical Education Standards of Learning Curriculum Framework*.

Action Requested:

Action will be requested at a future meeting. Specify anticipated date below:
July 21, 2022

Superintendent's Recommendation

The Superintendent of Public Instruction recommends that the Board of Education receive for first review the proposed revisions to the 2015 *Physical Education Standards of Learning Curriculum Framework*.

Previous Review or Action:

Previous review or action. Specify date and action taken below:

Date: January 28, 2021

Action: Report on Timeline for the Review and Revision of the *Physical Education Standards of Learning* and *Physical Education Standards of Learning Curriculum Framework*.

Background Information and Statutory Authority:

The Board has made a commitment to maintain rigorous and relevant expectations for student learning that meet or exceed national and international benchmarks for college and career readiness. The 2022 *Physical Education Standards of Learning* were adopted by the Board on March 17, 2022, and can be reviewed online at the Virginia Department of Education's (VDOE) [Physical Education Standards of Learning webpage](#).

The 2022 *Physical Education Standards of Learning* include the following:

- adding the Profile of a Graduate "life readiness" skills as an essential component of a quality physical education program;
- changing Strand 4 from "Social Development" to "Social and Emotional Development";
- adding instructional scaffolds for content that promotes "inclusion" to strand 4 to encourage shared responsibility and supportive and challenging experiences that deepen individual learning for all students;
- replacing the term "mature" to "developmentally appropriate" to promote responsive conversations that support individual growth;
- realigning skills within the Motor Skill Development strand and adding specificity for the number of critical elements students need to demonstrate;
- separating eye-hand skills and eye-foot skills into discrete standards to promote mastery; and
- scaffolding instructional content for the Fitness Planning and Energy Balance strands to support practices that inform an incremental improvement approach to learning.

The goals of the 2022 *Physical Education Standards of Learning* are:

- to equip students to be life ready with the knowledge, skills and attributes necessary to: acquire, interpret, and understand physical education concepts; and develop and apply a range of skills needed to improve health and prevent and control chronic diseases (Content Knowledge);
- to acquire and practice effective communication, self-management and stress-management skills, social awareness, and collaboration skills (Workplace Skills);
- to engage in home, school, and community projects to enhance physical, mental, social and emotional health (Community Engagement and Civic Responsibility); and
- to explore a variety of kinesiology related career opportunities in health science, human anatomy, physiology, sport and exercise science, education, biomechanics, physical performance, coaching, and fitness and community health management (Career Exploration).

A series of meetings were convened with an educator committee composed of teachers, curriculum supervisors, and higher education faculty to discuss changing the format of the 2015 *Physical Education Standards of Learning Curriculum Framework* from a four-column, four-element structure (i.e., VDOE Standard(s) Student Friendly Language; Suggested Sample Assessments; Terms (vocabulary) and Content Information; and Suggested/Sample Activities) to a two-column, two-element structure (i.e., Essential Understandings and Essential Knowledge and Skills) to align with the format use for the 2020 *Health Education Standards of Learning Curriculum Framework*. The proposed 2022 *Physical Education Standards of Learning Curriculum Framework*, a companion document to the 2022 *Physical Education Standards of Learning* amplifies and supports the *Physical Education Standards of Learning* and further defines the content knowledge, skills, and understandings. The standards and curriculum framework are not intended to encompass the entire curriculum for a given grade level or course. School divisions are encouraged to incorporate the standards and curriculum framework into a broader, locally designed or selected curriculum. The curriculum framework delineates in greater specificity the minimum content that all teachers should teach and all students should learn.

Each topic in the proposed 2022 *Physical Education Standards of Learning Curriculum Framework* is developed around the Standards of Learning. The format of the curriculum framework facilitates teacher planning by identifying the key concepts, knowledge, and skills that should be the focus of instruction for each standard. The curriculum framework is divided into two sections: Essential Understandings and Knowledge and Skills. The purpose of *Essential Understandings* includes content and key concepts that assist teachers in planning instruction. *Essential Knowledge and Skills*, on the other hand, provides an expansion of the physical education knowledge and skills that each student should know and be able to demonstrate.

Fundamental skills learned in physical education are the building blocks of more complex competencies needed to engage in sports, physical activities, and other exercise settings. As motor skills competence increases, physical activity participation also increases and that increased participation feeds back into motor skills competence. An increasing amount of evidence suggests that people who feel competent in performing physical skills remain more active throughout their lives. Conversely, those who are less skilled may be hesitant to display what they perceive as a shortcoming and may opt out of activities requiring higher levels of motor competence. The proposed curriculum framework supports a planned sequential K-12 standards-based program of curricula and instruction designed to develop motor skills, knowledge, and behaviors of healthy active living, physical fitness, sportsmanship, self-efficacy, and achieve the goals of becoming knowledgeable and skillful movers who value and adopt a physically active, healthy lifestyle and understand the science behind physical movement.

Timetable for Further Review/Action:

Following the first review, the proposed *2022 Physical Education Standards of Learning Curriculum Framework* will be shared with stakeholders via a Superintendent Memo. It is anticipated that this item will come to the Board in July 2022 for final review.

Impact on Fiscal and Human Resources:

Impact on Fiscal and Human Resources: The administrative impact and any other cost associated with the development and distribution of the standards and curriculum framework will be absorbed within existing resources.



Proposed 2022 Physical Education Standards of Learning Curriculum Framework

For First Review: June 15, 2022

Adopted XX, 2022 by the Virginia Board of Education

Daniel A. Gecker, President

Dr. Tammy Mann, Vice President

Dr. Pamela Davis-Vaught

Dr. Francisco Durán

Anne B. Holton

Dr. Keisha Anderson

Superintendent of Public Instruction Jillian Balow

VIRGINIA BOARD OF EDUCATION

INTRODUCTION

The *Physical Education Standards of Learning for Virginia Public Schools* identify the academic content for the essential concepts, processes, and skills for physical education in kindergarten through grade twelve. These standards provide school divisions and teachers with a guide for creating aligned curricula and learning experiences in physical education to help students understand the benefits of achieving and maintaining a physically active lifestyle and learn the skills necessary for performing a variety of physical activities.

The 2022 *Physical Education Standards of Learning* support the Profile of a Virginia Graduate through the development and use of communication, collaboration, creativity, critical thinking and civic responsibility skills necessary to adopt and maintain human movement fundamental to optimizing health and performance, preventing injury, managing feelings, and building healthy relationships.

The *Physical Education Standards of Learning* identify the academic content for the essential concepts, processes, and skills for physical education in kindergarten through grade twelve. These standards provide school divisions and teachers with a guide for creating aligned curricula and learning experiences in physical education to help students understand the benefits of achieving and maintaining a physically active lifestyle and learn the skills necessary for performing a variety of physical activities.

The *Physical Education Standards of Learning* and the proposed *Physical Education Standards of Learning Curriculum Framework* have been organized into strands to provide clarity for learning expectations and to provide learning progressions.

GOALS AND STRANDS

1. *Demonstrate competence in motor skills and movement patterns needed to perform a variety of physical activities. (Motor Skill Development)*

This strand focuses student learning on the development and demonstration of competence in motor skills and a variety of movement forms, increasing the likelihood of participation in physical activities. Students will have movement experiences that build competent and confident movers through acquisition, performance, and refinement of movement skills in a variety of developmental, tactical, and cooperative activities. Movement competence is defined as the development of sufficient skill and ability to ensure successful performance in a variety of physical activities. In the elementary years, students develop maturity and

adaptability in the use of fundamental motor skills and patterns that are then further refined and combined during the middle school years. As motor patterns become more refined and proficient throughout the middle years, they can be transitioned into specialized skills and patterns and used in more complex learning settings. High school students will demonstrate a level of competence in several physical activities that they are likely to continue beyond graduation.

2. *Apply knowledge of the structures and functions of the body and how they relate to and are affected by human movement to learning and developing motor skills and specialized movement forms. (Anatomical Basis of Movement)*

This strand focuses student learning on understanding basic anatomy and physiology along with movement concepts and principles, to improve motor skills. While the skilled-movement goal involves learning how to perform physical activities skillfully, this goal directs students toward learning about movement. Concepts and principles from various fields of study support skillful movement performance. These fields of study include motor control, exercise physiology, and biomechanics/kinesiology. Active learning experiences will connect the anatomical content with activities being performed. Elementary students establish basic musculoskeletal vocabulary and use simple concepts as they develop their movements. Middle school students learn and apply more complex concepts of human movement. High school students develop a working knowledge of human anatomy and physiology concepts and principles, enabling them to independently apply concepts in order to acquire new skills or enhance existing skills.

3. *Achieve and maintain a health-enhancing level of personal fitness. (Fitness Planning)*

This strand focuses student learning on understanding the relationship between a health-enhancing level of physical fitness and the prevention of chronic disease. The intent is for students to explain the importance of fitness and active lifestyles, to be able to evaluate personal fitness levels, and to create an appropriate fitness plan with goals, activities, and timelines that will maintain and improve their levels of physical fitness. Recommended criterion-referenced wellness testing includes Progressive Aerobic Cardiovascular Endurance Run (PACER), cadence push-ups, cadence curl-ups, back-saver sit and reach, and trunk lift. Elementary students become aware of health-related fitness components (aerobic capacity, muscular strength and endurance, flexibility, and body composition), engage in a variety of physical activities, and develop a basic fitness plan. Middle school students continue to learn about the components of fitness: how they are developed and improved, how they interrelate, and how they contribute to overall fitness to develop and implement a personal fitness plan. High school students plan, implement, evaluate, and modify a

personal, goal-driven fitness plan that enables them to achieve and maintain the level of fitness needed to meet their personal goals for various work-related, sport, and leisure activities.

4. *Demonstrate the aptitude, attitude, and skills to lead responsible, fulfilling, and respectful lives. (Social and Emotional Development)*

This strand focuses student learning on the skills and behaviors that lead to personal and group success in physical activity, both in school and in settings outside school. Students will explain and apply skills for communication, cooperation, conflict resolution, goal setting and attainment, critical and creative thinking, resilience, and self-directed learning. Students will explain and demonstrate the importance of and ability to be safe in a variety of activities. Students will understand that inclusion is a social and emotional experience associated with feelings of belonging, acceptance, and value that creates a supportive environment for all students. Elementary students recognize and use rules and procedures, focus on safety, respect similarities and dissimilarities, and cooperate with others. Middle school students participate cooperatively with others and understand reasons for rules and procedures. High school students initiate and exhibit responsible behaviors and positively affect the behaviors of others in physical activity settings inside and outside school.

5. *Explain the importance of energy balance and the nutritional needs of the body to maintain optimal health and prevent chronic disease. (Energy Balance)*

This strand focuses student learning on energy balance (nutrition and fitness concepts – functional fitness) and explains the importance of energy balance for physical health and chronic disease prevention. This includes physical activity guidelines, types of physical activity needed for energy balance, importance of physical activity, health-related components of fitness, nutrition guidelines, meal planning, screen time, and sleep. Elementary students understand the basic nutrition and fitness concepts of energy balance. The middle school student will extend learning of energy balance, including nutrition, fitness concepts, physical activity, health-related components of fitness, nutrition guidelines, meal planning, screen time, and sleep and will explain the connection to personal health and fitness. The high school student will explain the importance of energy balance and nutritional needs of the body to maintain optimal health and prevent chronic disease for the present and into the adult years.

The combination of these five strands leads students toward being able to lead an active, healthy lifestyle skillfully, knowledgeably, responsibly, and vigorously.

The proposed 2022 Physical Education Standards of Learning Curriculum Framework, a companion document to the 2022 Physical Education Standards of Learning amplifies and supports the Physical Education Standards of Learning and further defines the content knowledge, skills, and understandings. The standards and curriculum framework are not intended to encompass the entire curriculum for a given grade level or course. School divisions are encouraged to incorporate the standards and curriculum framework into a broader, locally designed or selected curriculum. The curriculum framework delineates in greater specificity the minimum content that all teachers should teach and all students should learn.

Each topic in the proposed 2022 Physical Education Standards of Learning Curriculum Framework is developed around the Standards of Learning. The format of the Curriculum Framework facilitates teacher planning by identifying the key concepts, knowledge, and skills that should be the focus of instruction for each standard. The Curriculum Framework is divided into two sections: Essential Understandings and Knowledge and Skills. The purpose of each section is explained below.

Essential Understandings

This section includes content and key concepts that assist teachers in planning instruction.

Essential Knowledge and Skills

This section provides an expansion of the physical education knowledge and skills that each student should know and be able to demonstrate. This is not meant to be an exhaustive list of student expectations. This section also includes resources to assist with locally designed or selected curriculum.

KINDERGARTEN

Participating in a variety of movement experiences to develop fundamental movement patterns is the primary focus of the kindergarten physical education curriculum. While children at this level vary in development across all movement skills, they should demonstrate continuous improvement in movement under very simple conditions. While developing fundamental skill patterns, students begin to learn key movement concepts that help them perform in a variety of educational games, dances, and gymnastics. Students are introduced to a few critical elements (i.e., small, isolated parts of the whole skill or movement). They learn how their bodies react to vigorous physical activity. Students learn to use safe practices, cooperate with and respect others, and follow classroom rules. Experiences in physical education help them develop a positive attitude for leading a healthy, active lifestyle.

Motor Skill Development

- K.1 The student will demonstrate progress toward the developmentally appropriate form of selected locomotor, non-locomotor, and manipulative skills to understand the various ways the body can move.
- a) Demonstrate and differentiate between walking, jogging, running, hopping, galloping, and jumping.
 - b) Demonstrate bending, pushing, pulling, turning, and balancing on one foot.
 - c) Demonstrate moving forward, sideways, and side to side.
 - d) Demonstrate moving at low, medium, and high levels.
 - e) Demonstrate traveling in straight, curving, and zigzagging pathways.
 - f) Demonstrate moving fast, slow, and at moderate speeds.
 - g) Demonstrate simple educational gymnastic skills, including one roll (narrow or curled).
 - h) Demonstrate at least two critical elements used in eye-hand coordination skills while stationary (e.g., bouncing and catching a ball, tossing, catching a ball/beanbag, volleying a balloon, tossing and rolling underhand to targets, and striking stationary objects with a long or short implement or noodle.)
 - i) Demonstrate at least two critical elements used in eye-foot coordination skills (e.g., dribbling [small taps], kicking a stationary ball).
 - j) Demonstrate moving to a beat and to rhythmic patterns using basic locomotor and non-locomotor rhythmic patterns in personal and general space.
 - k) Demonstrate jumping over a stationary rope and a self-turn single jump.

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>Movement competency involves a variety of movement forms.</u></p> <ul style="list-style-type: none"> • <u>Locomotor skills - walking, jogging, running, hopping, galloping, and jumping. (K.1.a)</u> • <u>Non-locomotor skills that include bending, pushing, pulling, turning, and balancing on one foot. (K.1.b)</u> • <u>Moving and changing directions - forward, sideways, and side-to-side. (K.1.c)</u> • <u>Moving and changing levels - low, medium, and high. (K.1.d)</u> • <u>Moving and changing pathways - straight, curved, and zigzag. (K.1.e)</u> • <u>Moving and changing speeds - fast, slow, and moderate. (K.1.f)</u> • <u>Exploring body shapes and movements to include rolls (narrow or curled.) (K.1.g)</u> • <u>Manipulative skills to include bounce and catch, toss and catch, volleying with hand, tossing and rolling a ball underhand to target, and striking stationary objects with an implement. (K.1.h)</u> • <u>Manipulative skills to include dribbling with foot/feet and kicking stationary ball to target, and jumping over a stationary and self-turn rope. (K.1.i, K.1.k)</u> • <u>Moving to beats and rhythmic patterns using instruments and music in personal and general space. (K.1.j)</u> <p><u>There are basic critical elements associated with the performance of manipulative skills. (K.1.h, K.1.i)</u></p> <ul style="list-style-type: none"> • <u>Bounce</u> <ul style="list-style-type: none"> ○ <u>Knees slightly bent;</u> ○ <u>Use finger pads;</u> ○ <u>Firm contact with top of ball;</u> ○ <u>Push straight down;</u> 	<p><u>In order to meet these standards, it is expected that students will</u></p> <ul style="list-style-type: none"> • <u>demonstrate locomotor skills in relation to self and various obstacles and equipment that may include moving under/over, on/off, in front/behind near/away, around, and alongside (K.1.a, K.1.c, K.1.d, K.1.e);</u> • <u>label pictures of walking, running, hopping, galloping, and jumping (K.1.a);</u> • <u>demonstrate different body shapes such as letters of the alphabet, while bending, pushing, pulling, and turning while maintaining balance (K.1.b);</u> • <u>demonstrate locomotor skills while changing directions, levels, pathways, and speed (K.1.c, K.1.d, K.1.e, K.1.f);</u> • <u>demonstrate simple educational gymnastic skills, including rolls (i.e., log roll, pencil roll, egg roll) while maintaining balance (K.1.g);</u> • <u>demonstrate bouncing and catching a ball, individually or with a partner (K.1.h);</u> • <u>demonstrate tossing and catching to self, with partner, and/or to a stationary target (K.1.h);</u> • <u>demonstrate volleying a light weight ball/balloon up using two hands (K.1.h);</u>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> o <u>Waist level height.</u> • <u>Catch from a bounce</u> <ul style="list-style-type: none"> o <u>Eyes on the ball;</u> o <u>Fingers apart;</u> o <u>Catch with hands only; no cradling against the body</u> o <u>Make eye contact with passer (catching a bounced ball from passer);</u> o <u>Show hands (catching a bounced ball from passer.)</u> • <u>Toss, Underhand Throw, Underhand Roll to partner/target</u> <ul style="list-style-type: none"> o <u>Face and look at the target;</u> o <u>Swing throwing arm backward to begin a backward-forward arm (tick-tock) swing;</u> o <u>Step with opposite foot as tossing/throwing/rolling arm moves forward;</u> o <u>Point to the target and release ball between knee and waist level during upward swing for underhand throw;</u> o <u>Bend at hip and release ball under knee for underhand roll;</u> o <u>Follow through with hand pointing to the target with the palm facing upward.</u> • <u>Catch from throw</u> <ul style="list-style-type: none"> o <u>Watch the ball all the way into the hands;</u> o <u>Places body in the path of the object;</u> o <u>Extend arms outward to reach for ball;</u> o <u>Thumbs in for catch above the waist;</u> o <u>Thumbs out for catch at or below the waist;</u> o <u>One foot slightly in front of the other (balanced stance);</u> 	<ul style="list-style-type: none"> • <u>demonstrate tossing and rolling underhand to a partner, and/or to a stationary target (K.1.h);</u> • <u>demonstrate striking off a tee or striking with a bat using a suspended ball (K.1.h);</u> • <u>demonstrate dribbling in general space using different pathways (K.1.e, K.1.i);</u> • <u>demonstrate kicking/passing to a stationary target (K.1.i);</u> • <u>demonstrate rhythmic activities with manipulatives (e.g., parachutes, rhythm sticks) (K.1.j);</u> • <u>demonstrate movements with a partner, such as leading/following and mirroring/matching (K.1.j);</u> • <u>demonstrate jump rope skills using a line, stationary rope, and a self-turn single rope (K.1.k).</u> <p><u>Additional resources:</u> SHAPE America National Standards and Grade-Level Outcomes OPEN Online Physical Education Network Health Smart Virginia PE Central Dynamic PE ASAP</p>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> o <u>Catch with hands only; no cradling against the body;</u> o <u>Pull the ball in to the body as the catch is made;</u> o <u>Relax and absorb the force of the object.</u> • <u>Volley</u> <ul style="list-style-type: none"> o <u>Watch the ball/balloon; and face the target in preparation of volley</u> o <u>Strike the ball/balloon with flat surface of hand;</u> o <u>Swing to strike low with palm; and make contact with ball/balloon between knee and waist?</u> o <u>Push up to strike high using finger pads;</u> o <u>Follow through straight upward and towards target.</u> • <u>Strike stationary objects with long handled implements</u> <ul style="list-style-type: none"> o <u>Non-dominant hand grips the bottom of the long handled implement with dominant hand stacked above with knuckles in line with each other;</u> o <u>Side to target (non-throwing arm closest to target);</u> o <u>Knees slightly bent;</u> o <u>Eyes follow ball to center of striking implement from start to finish;</u> o <u>Step towards target with opposite foot;</u> o <u>Striking arm way back;</u> o <u>Weight transfer from back foot to front foot;</u> o <u>Rotate hips;</u> o <u>Wrist unlocks on follow-through for completion of striking action.</u> • <u>Strike stationary objects with short handled implement</u> 	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> o <u>Shake hands with the paddle;</u> o <u>Firm grip and wrist;</u> o <u>Hit with a flat surface at center of paddle or racket;</u> o <u>Follow through toward target.</u> • <u>Dribble (foot)</u> <ul style="list-style-type: none"> o <u>Ready stance/knees slightly bent;</u> o <u>Contact behind the center of a <i>partially deflated</i> ball with shoelaces, inside of the foot, or outside of foot;</u> o <u>Contact behind the center of the ball;</u> o <u>Ball stays close to feet/soft touches;</u> o <u>Ball moves forward with gentle taps;</u> o <u>Eyes looking forward;</u> o <u>Tap with both feet.</u> • <u>Kick toward a target</u> <ul style="list-style-type: none"> o <u>Focus eyes on stationary ball</u> o <u>Step and plant the non-kicking foot beside the ball;</u> o <u>Pendulum swing with kicking leg;</u> o <u>Contact the ball with shoelaces (not toes);</u> o <u>Contact behind the center of the ball with the inside of the foot for balls that will stay on the ground low level kick;</u> o <u>Contact ball below the center of the ball with shoelaces for balls that will travel in air;</u> o <u>Kicking foot follows through in the direction of the kick with opposite arm stretched forward for balance.</u> 	

Anatomical Basis of Movement

K.2 The student will identify basic structures of the body and basic spatial awareness concepts.

- a) Explain that the body has muscles and bones that help the body move.
- b) Identify that the heart is a special muscle that pumps blood throughout the body.
- c) Demonstrate the concept of personal and general space.

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>Parts of the body work together to help the body move.</u></p> <ul style="list-style-type: none"> • <u>Muscles and bones work together to create movement. (K.2.a)</u> • <u>The heart is a muscle needed for all movement. (K.2.a)</u> • <u>The main role of the heart is to move blood throughout the body. (K.2.b)</u> <p><u>Moving in personal space helps everyone be safer. (K.2.c)</u></p> <ul style="list-style-type: none"> • <u>Performing isolated/stationary skills in personal space (with and without equipment) is important for safe play.</u> • <u>Maintaining personal space while moving throughout general space (with and without equipment) is important for safe play.</u> 	<p><u>In order to meet these standards, it is expected that students will</u></p> <ul style="list-style-type: none"> • <u>identify pictures of bones and muscles (K.2.a);</u> • <u>identify picture of the heart (K.2.b);</u> • <u>identify where heart is located (K.2.b);</u> • <u>demonstrate moving safely (without touching others) when in personal space or when moving in general space (K.2.b);</u> • <u>compare heart beat while stationary and moving (K.2.c);</u> • <u>identify picture of activities that make the heart beat faster (K.2.c);</u> • <u>demonstrate personal space during stationary skills/movements (K.2.c);</u> • <u>demonstrate personal space (away from others) while moving and performing skills (K.2.c).</u> <p><u>Additional resources:</u> <u>SHAPE America National Standards and Grade-Level Outcomes</u></p>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
	OPEN Online Physical Education Network Health Smart Virginia PECentral Dynamic PE ASAP KidsHealth.org

Fitness Planning

K.3 The student will identify physical activities that promote fitness.

- a) Explain that physical activity helps the body become stronger.
- b) Identify physical activities that can be done at home, individually and with family and friends to keep the body healthy.
- c) Explain that moving faster makes the heart beat faster.
- d) Explain that fitness requires staying physically active.

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>Physical activity keeps the body healthy and can be done at home with friends and family.</u></p> <ul style="list-style-type: none"> • <u>Physical activity is any bodily movement that results in increased energy expenditure. (K.3.a)</u> • <u>Physical activities help the body grow. (K.3.a)</u> • <u>Physical activities can be done at school and at home. (K.3.b)</u> • <u>Physical activity can be done with family and friends. (K.3.b)</u> <p><u>The faster the body moves, the faster the heart beats. (K.3.c)</u></p> <p><u>Fitness activities need to be done in order to stay physically active. (K.3.d)</u></p>	<p><u>In order to meet these standards, it is expected that students will</u></p> <ul style="list-style-type: none"> • <u>recognize that physical activity helps the body grow (K.3.a);</u> • <u>identify/draw pictures of physical activities that can be done at school and at home (K.3.b);</u> • <u>identify/draw pictures of physical activities that can be done with family and friends (K.3.b);</u> • <u>compare heart beat while stationary and moving (K.3.c);</u> • <u>identify pictures of activities that make the heart beat faster (K.3.c);</u> • <u>explain the relationship between fitness and physical activity (K.3.d).</u> <p><u>Additional resources:</u> <u>SHAPE America National Standards and Grade-Level Outcomes</u> <u>OPEN Online Physical Education Network</u></p>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
	Health Smart Virginia PECentral Dynamic PE ASAP KidsHealth.org American Heart Association

Social and Emotional Development

K.4 The student will demonstrate appropriate behaviors and safe practices in physical activity settings.

- a) Demonstrate cooperative and safe behaviors during play.
- b) Identify three classroom (procedural) rules.

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>Safe participation is needed in all physical activity settings when participating alone or with others.</u></p> <ul style="list-style-type: none"> • <u>Maintaining personal space while moving makes everyone feel safe. (K.4.a)</u> • <u>Following rules when playing with others, keeps everyone safe. (K.4.b)</u> 	<p><u>In order to meet these standards, it is expected that students will</u></p> <ul style="list-style-type: none"> • <u>demonstrate how to follow safety rules (K.4.a);</u> • <u>demonstrate sharing space, sharing equipment, taking turns, and helping others (K.4.a);</u> • <u>identify three class safety rules (K.4.b).</u> <p><u>Additional resources:</u> <u>SHAPE America National Standards and Grade-Level Outcomes</u> <u>OPEN Online Physical Education Network</u> <u>Health Smart Virginia</u> <u>PE Central</u> <u>Dynamic PE ASAP</u> <u>EverFi</u> <u>KidsHealth.org</u></p>

Energy Balance

K.5 The student will identify basic concepts of energy balance.

- a) Explain how food provides energy for the body.
- b) Identify one fruit and one vegetable.
- c) Explain that fruits and vegetables provide energy for the body.

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>Energy for the body comes from food.</u></p> <ul style="list-style-type: none">• <u>The body needs energy to move. (K.5.a)</u>• <u>Fruits and vegetables provide nutrients and vitamins to help the body grow and function. (K.5.c)</u> <p><u>There are many types of fruits and vegetables that provide energy for the body.</u></p> <ul style="list-style-type: none">• <u>Examples of vegetables include carrots, parsnips, radishes, onions, potatoes, pumpkins, peas, cucumbers, squash, asparagus, broccoli, lettuce. (K.5.b)</u>• <u>Examples of fruits include apples, peaches, bananas, strawberries, grapes, watermelons, tomatoes, blueberries, raspberries. (K.5.b)</u> <p><u>Note: Include fruits and vegetables that may be more familiar to various cultures.</u></p>	<p><u>In order to meet these standards, it is expected that students will</u></p> <ul style="list-style-type: none">• <u>identify what gives the body energy to move (K.5.a);</u>• <u>label/identify pictures of fruits and vegetables (K.5.b);</u>• <u>explain the relationship between fruits and vegetables and energy (K.5.c).</u> <p><u>Additional resources:</u> <u>SHAPE America National Standards and Grade-Level Outcomes</u> <u>OPEN Online Physical Education Network</u> <u>Health Smart Virginia</u> <u>PE Central</u> <u>American Heart Association</u> <u>KidsHealth.org</u> <u>MyPlate.gov</u></p>

GRADE ONE

Students in grade one refine locomotor skills and further develop fundamental non-locomotor and manipulative skills in educational games, dance, and gymnastics. They identify some critical elements (i.e., small, isolated parts of the whole skill) and start to practice applying them to improve movement skills. They continue to develop an understanding of key concepts and anatomical basis of movement principles and link these concepts and principles to their movement. Students explore and experiment with a range of movement experiences in a variety of environmental contexts, with the goal of becoming confident and competent movers. Students relate participation in vigorous physical activity to changes in the body, to enjoyment, and to improving their health and wellness. They further their understanding of the importance of physical activity and energy balance (nutrition) in their lives. As students increase their understanding of movement, they gain a deeper understanding of how the body moves. Students continue to develop socially as they work safely alone and in groups. The natural enjoyment of physical activity should be reinforced and complemented by educational games, dance, and gymnastic activities in which students learn and are successful.

Motor Skill Development

- 1.1 The student will demonstrate developmentally appropriate form and at least two correct critical elements (i.e., small, isolated parts of the whole skill or movement) of locomotor, non-locomotor, and manipulative skills.
- a) Demonstrate critical elements used and distinguish between walking, jogging, running, galloping, leaping, skipping, and sliding.
 - b) Demonstrate non-locomotor skills of twisting, curling, bending, stretching, and balancing on different body parts.
 - c) Demonstrate forward, sideways, backward (slow), and side-to-side movement.
 - d) Demonstrate jogging, running, skipping, galloping, sliding and leaping using pathways (straight, curving, and zigzagging) and speeds (fast, slow, and moderate).
 - e) Demonstrate simple educational gymnastic skills, including balancing at different levels, two different rolls (narrow or curled), moving in two different directions, and transfer of weight.
 - f) Demonstrate developmentally appropriate form with at least two critical elements used in eye-hand coordination skills while stationary and moving (e.g., dribbling a ball with the hand, underhand tossing and catching a ball/beanbag to self and with a partner, throwing and rolling underhand to targets, volleying a balloon upward with various body parts, volleying a balloon in the air with a short implement or noodle, striking a stationary object with the hand or with a short-handled implement or noodle.)

- g) Demonstrate developmentally appropriate form with at least two critical elements used in eye-foot coordination skills (e.g., dribbling a ball, kicking a moving or stationary ball to a target.)
- h) Perform a teacher-led rhythmic pattern or dance in personal space and general space.
- i) Demonstrate consecutive jumps (more than one) with a short rope (self-turn), long rope (student-turn), and forward, backward, zigzag, hopping, and leaping over a stationary rope.

Essential Understandings	Essential Knowledge and Skills
<p><u>Skilled movements can be broken down into smaller parts/critical elements. Movement proficiency can be improved by performing critical elements of locomotor skills including walking, jogging, running, galloping, leaping, skipping, and sliding. (1.1.a)</u></p> <ul style="list-style-type: none"> • <u>Walking</u> <ul style="list-style-type: none"> ○ <u>Toes pointed in direction of movement;</u> ○ <u>Upright torso;</u> ○ <u>Arms move in opposition of legs;</u> ○ <u>No flight phase (one foot is always in contact with the ground.)</u> • <u>Jogging/Running</u> <ul style="list-style-type: none"> ○ <u>Look ahead and not at feet during movement;</u> ○ <u>Bend knees at right angles during recovery phase;</u> ○ <u>Arms bent at elbows;</u> ○ <u>Arms drive forward and backward in opposition of legs;</u> ○ <u>Foot lands heel to toe</u> ○ <u>Flight phase present between steps;</u> ○ <u>Travel at a steady, gentle pace when jogging.</u> • <u>Galloping</u> <ul style="list-style-type: none"> ○ <u>Eyes facing direction of movement;</u> 	<p><u>In order to meet these standards, it is expected that students will</u></p> <ul style="list-style-type: none"> • <u>label pictures of people galloping, leaping, skipping, and sliding (1.1.a);</u> • <u>demonstrate at least two critical elements for locomotor skills (walking, jogging, running, galloping, leaping, skipping, and sliding (1.1.a);</u> • <u>demonstrate twisting, curling, bending, stretching, and balancing on different body parts (1.1.b);</u> • <u>demonstrate moving and changing directions and speed (1.1.c,1.1.d);</u> • <u>demonstrate balancing at different levels, rolls (narrow or curled), moving in different directions, and movements that involve transfer of weight (e.g., donkey kick) (1.1.e);</u> • <u>demonstrate at least two critical elements for dribbling a ball with the hand, underhand tossing and catching a ball/beanbag to self and with a partner, throwing and rolling underhand to targets, volleying a balloon upward with various body parts, volleying a balloon in the air with a short implement or noodle, striking a stationary object</u>

Essential Understandings	Essential Knowledge and Skills
<ul style="list-style-type: none"> ○ <u>Establish lead leg with both feet facing forward;</u> ○ <u>Start with lead leg moving in direction of movement;</u> ○ <u>Trail leg pointed in direction of movement and does not pass lead leg;</u> ○ <u>Turn shoulders and hips in direction of movement.</u> • <u>Leaping</u> <ul style="list-style-type: none"> ○ <u>Look ahead;</u> ○ <u>Flight from one foot to the other;</u> ○ <u>Take off on one foot;</u> ○ <u>Land on the other foot;</u> ○ <u>Straight legs during flight;</u> ○ <u>Arms move in opposition;</u> ○ <u>Controlled and balanced landing.</u> • <u>Skipping</u> <ul style="list-style-type: none"> ○ <u>Look ahead and step forward and hop on the same foot;</u> ○ <u>Repeat with the other foot and move in an alternating step-hop pattern;</u> ○ <u>Lift knee sharply upward;</u> ○ <u>Swing arms in opposition to feet;</u> ○ <u>Maintain balance.</u> • <u>Sliding</u> <ul style="list-style-type: none"> ○ <u>Establish lead leg;</u> ○ <u>Trail leg stays behind;</u> ○ <u>Legs open then close;</u> ○ <u>Rhythmic arm movements;</u> 	<p><u>with the hand or with a short-handled implement or noodle (1.1.f);</u></p> <ul style="list-style-type: none"> • <u>demonstrate at least two critical elements for eye-foot coordination skills (dribbling and kicking) while moving in low organized games (1.1.g);</u> • <u>demonstrate moving to a beat or rhythmic pattern in personal and general space (1.1.h);</u> • <u>perform a teacher-led dance sequence (1.1.h);</u> • <u>demonstrate consecutive jumps with a self-turn rope and student-turned long rope (1.1.i);</u> • <u>demonstrate hopping and leaping over a stationary rope (1.1.i).</u> <p><u>Additional resources:</u></p> <p><u>SHAPE America National Standards and Grade-Level Outcomes</u></p> <p><u>OPEN Online Physical Education Network</u></p> <p><u>Health Smart Virginia</u></p> <p><u>PE Central</u></p> <p><u>Dynamic PE ASAP</u></p>

Essential Understandings	Essential Knowledge and Skills
<ul style="list-style-type: none"> ○ <u>Keep body sideways;</u> ○ <u>Look in direction of movement.</u> <p><u>Movement competency involves a variety of non-locomotor skills, movement forms, directions, and speeds in personal and general space. (1.1.b., 1.1.c., 1.1.d)</u></p> <p><u>Movement proficiency includes maintaining balance in a variety of movements to include balancing at different levels rolls (narrow or curled) moving in different directions, and movements that involve transfer of weight (e.g., donkey kick.) (1.1.e)</u></p> <p><u>Developmentally appropriate form includes performance of at least two critical elements. Developmentally appropriate form for eye-hand coordination manipulative skills include dribbling a ball with the hand, underhand tossing and catching a ball/beanbag to self and with a partner, throwing and rolling underhand to targets, volleying a balloon upward with various body parts, volleying a balloon in the air with a short implement or noodle, striking a stationary object with the hand or with a short-handled implement or noodle. (1.1.f)</u></p> <ul style="list-style-type: none"> • <u>Dribbling with hands</u> <ul style="list-style-type: none"> ○ <u>Knees slightly bent/opposite foot forward when dribbling in self space;</u> ○ <u>Use finger pads and not the palm of the hand;</u> ○ <u>Firm contact with top of ball using wrist flexion to push (not strike) the ball to the floor;</u> ○ <u>Look in space ahead and not down at the ball;</u> ○ <u>Waist height bounce;</u> 	

Essential Understandings	Essential Knowledge and Skills
<ul style="list-style-type: none"> ○ <u>Keep the ball close to dribbling hand side of the body.</u> • <u>Toss, Underhand Throw, Underhand Roll to partner/target</u> <ul style="list-style-type: none"> ○ <u>Face and look at the target;</u> ○ <u>Swing throwing arm backward to begin a backward-forward arm (tick-tock) swing;</u> ○ <u>Step with opposite foot as tossing/throwing/rolling arm moves forward;</u> ○ <u>Point to the target and release ball between knee and waist level during upward swing for underhand throw;</u> ○ <u>Bend at hip and release ball under knee for underhand roll;</u> ○ <u>Follow through with hand pointing to the target with the palm facing upward.</u> • <u>Volley</u> <ul style="list-style-type: none"> ○ <u>Watch the ball/balloon;</u> ○ <u>Strike the ball/balloon with flat surface;</u> ○ <u>Swing to strike low with palm;</u> ○ <u>Push up to strike high using finger pads;</u> ○ <u>Follow through upwards.</u> • <u>Strike stationary objects with long handled implements</u> <ul style="list-style-type: none"> ○ <u>Non-dominant hand grips the bottom of the long handled implement with dominant hand stacked above with knuckles in line with each other;</u> ○ <u>Side to target (non-throwing arm closest to target);</u> ○ <u>Knees slightly bent;</u> 	

Essential Understandings	Essential Knowledge and Skills
<ul style="list-style-type: none"> ○ <u>Eyes follow ball to center of striking implement from start to finish;</u> ○ <u>Step towards target with opposite foot;</u> ○ <u>Striking arm way back;</u> ○ <u>Weight transfer from back foot to front foot;</u> ○ <u>Rotate hips;</u> ○ <u>Wrist unlocks on follow-through for completion of striking action.</u> <ul style="list-style-type: none"> • <u>Strike stationary objects with short handled implement</u> <ul style="list-style-type: none"> ○ <u>Shake hands with the paddle;</u> ○ <u>Firm grip and wrist;</u> ○ <u>Hit with a flat surface at center of paddle or racket;</u> ○ <u>Follow through toward target.</u> <p><u>Developmentally appropriate skills include the ability to perform of at least two critical elements proficiently. Developmentally appropriate performance for eye-foot coordination manipulative skills include dribbling a ball with feet and kicking a moving or stationary ball to a target (1.1.g).</u></p> <ul style="list-style-type: none"> • <u>Dribble (foot)</u> <ul style="list-style-type: none"> ○ <u>Knees slightly bent;</u> ○ <u>Push the center of the ball with shoelaces, inside of the foot, or outside of foot;</u> ○ <u>Contact behind the center of the ball;</u> ○ <u>Ball stays close to feet/soft touches;</u> ○ <u>Tap with both feet-to move ball forward;</u> 	

Essential Understandings	Essential Knowledge and Skills
<ul style="list-style-type: none"> ○ <u>Head up, eyes looking forward using peripheral vision to see the ball;</u> ○ <u>Stay light on your feet with weight on toes.</u> <ul style="list-style-type: none"> • <u>Kick toward a target</u> <ul style="list-style-type: none"> ○ <u>Eyes focused on ball throughout kick;</u> ○ <u>Contact the ball with shoelaces (not toes);</u> ○ <u>Contact behind the center of the ball for low level kick;</u> ○ <u>Contact ball below the center of the ball for travel in air;</u> ○ <u>Non-kicking foot beside the ball;</u> ○ <u>Forward and sideward swing of arm opposite kicking leg;</u> ○ <u>Hips and shoulders rotate forward;</u> ○ <u>Kicking foot follows through towards target area.</u> <p><u>Movement involves patterns. Patterns include a beat or rhythmic pattern. (1.1.h)</u></p> <p><u>Jumping rope promotes cardiorespiratory endurance, strengthening the heart muscle, and motor coordination. Jumping rope can include consecutive jumps (more than one) with a self-turn rope or a long rope (student-turn), and leaping, hopping, and jumping over a stationary rope in multiple directions. (1.1.i)</u></p>	

Motor Skill Development

1.1 The student will demonstrate developmentally appropriate form and at least two correct critical elements (i.e., small, isolated parts of the whole skill or movement) of locomotor, non-locomotor, and manipulative skills.

- j) Demonstrate critical elements used and distinguish between walking, jogging, running, galloping, leaping, skipping, and sliding.
- k) Demonstrate non-locomotor skills of twisting, curling, bending, stretching, and balancing on different body parts.
- l) Demonstrate forward, sideways, backward (slow), and side-to-side movement.
- m) Demonstrate jogging, running, skipping, galloping, sliding and leaping using pathways (straight, curving, and zigzagging) and speeds (fast, slow, and moderate).
- n) Demonstrate simple educational gymnastic skills, including balancing at different levels, two different rolls (narrow or curled), moving in two different directions, and transfer of weight.
- o) Demonstrate developmentally appropriate form with at least two critical elements used in eye-hand coordination skills while stationary and moving (e.g., dribbling a ball with the hand, underhand tossing and catching a ball/beanbag to self and with a partner, throwing and rolling underhand to targets, volleying a balloon upward with various body parts, volleying a balloon in the air with a short implement or noodle, striking a stationary object with the hand or with a short-handled implement or noodle.)
- p) Demonstrate developmentally appropriate form with at least two critical elements used in eye-foot coordination skills (e.g., dribbling a ball, kicking a moving or stationary ball to a target.)
- q) Perform a teacher-led rhythmic pattern or dance in personal space and general space.
- r) Demonstrate consecutive jumps (more than one) with a short rope (self-turn), long rope (student-turn), and forward, backward, zigzag, hopping, and leaping over a stationary rope.

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>Skilled movements can be broken down into smaller parts/critical elements. Movement proficiency can be improved by performing critical elements of locomotor skills including walking, jogging, running, galloping, leaping, skipping, and sliding. (1.1.a)</u></p> <ul style="list-style-type: none"> • <u>Walking</u> <ul style="list-style-type: none"> ○ <u>Toes pointed in direction of movement;</u> 	<p><u>In order to meet these standards, it is expected that students will</u></p> <ul style="list-style-type: none"> • <u>label pictures of people galloping, leaping, skipping, and sliding (1.1.a);</u>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> ○ <u>Upright torso;</u> ○ <u>Arms move in opposition of legs;</u> ○ <u>No flight phase (one foot is always in contact with the ground.)</u> • <u>Jogging/Running</u> <ul style="list-style-type: none"> ○ <u>Look ahead during movement;</u> ○ <u>Bend knees at right angles during recovery phase;</u> ○ <u>Arms bent at elbows;</u> ○ <u>Arms move in opposition of legs;</u> ○ <u>Lean body slightly ;</u> ○ <u>Front part of foot contacts ground;</u> ○ <u>Flight phase present between steps;</u> ○ <u>Travel at a steady and gentle pace when jogging.</u> • <u>Galloping</u> <ul style="list-style-type: none"> ○ <u>Establish lead leg;</u> ○ <u>Lead leg pointed in direction of movement;</u> ○ <u>Trail leg pointed in direction of movement;</u> ○ <u>Trail leg does not pass lead leg;</u> ○ <u>Turn shoulders in direction of movement;</u> ○ <u>Turn hips in direction of movement;</u> ○ <u>Turn eyes in direction of movement.</u> • <u>Leaping</u> <ul style="list-style-type: none"> ○ <u>Look ahead;</u> ○ <u>Flight from one foot to the other;</u> ○ <u>Take off on one foot;</u> 	<ul style="list-style-type: none"> • <u>demonstrate at least two critical elements for locomotor skills (walking, jogging, running, galloping, leaping, skipping, and sliding (1.1.a);</u> • <u>demonstrate twisting, curling, bending, stretching, and balancing on different body parts (1.1.b);</u> • <u>demonstrate moving and changing directions and speed (1.1.c,1.1.d);</u> • <u>demonstrate balancing at different levels, rolls (narrow or curled), moving in different directions, and movements that involve transfer of weight (e.g., donkey kick) (1.1.e);</u> • <u>demonstrate at least two critical elements for dribbling a ball with the hand, underhand tossing and catching a ball/beanbag to self and with a partner, throwing and rolling underhand to targets, volleying a balloon upward with various body parts, volleying a balloon in the air with a short implement or noodle, striking a stationary object with the hand or with a short-handled implement or noodle (1.1.f);</u> • <u>demonstrate at least two critical elements for eye-foot coordination skills (dribbling and kicking) while moving in low organized games (1.1.g);</u> • <u>demonstrate moving to a beat or rhythmic pattern in personal and general space (1.1.h);</u> • <u>perform a teacher-led dance sequence (1.1.h);</u> • <u>demonstrate consecutive jumps with a self-turn rope and student-turned long rope (1.1.i);</u>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> ○ <u>Land on the other foot;</u> ○ <u>Straight legs during flight;</u> ○ <u>Arms move in opposition;</u> ○ <u>Controlled and balanced landing.</u> <ul style="list-style-type: none"> • <u>Skipping</u> <ul style="list-style-type: none"> ○ <u>Look ahead;</u> ○ <u>Move in an alternating step-hop pattern;</u> ○ <u>Lift knees;</u> ○ <u>Swing arms in opposition to feet;</u> ○ <u>Maintain balance.</u> • <u>Sliding</u> <ul style="list-style-type: none"> ○ <u>Establish lead leg;</u> ○ <u>Trail leg stays behind;</u> ○ <u>Legs open then close;</u> ○ <u>Rhythmic arm movements;</u> ○ <u>Keep body sideways;</u> ○ <u>Look in direction of movement.</u> <p><u>Movement competency involves a variety of non-locomotor skills, movement forms, directions, and speeds in personal and general space. (1.1.b., 1.1.c., 1.1.d)</u></p> <p><u>Movement proficiency includes maintaining balance in a variety of movements to include balancing at different levels rolls (narrow or curled) moving in different directions, and movements that involve transfer of weight (e.g., donkey kick.) (1.1.e)</u></p>	<ul style="list-style-type: none"> • <u>demonstrate hopping and leaping over a stationary rope (1.1.i).</u> <p><u>Additional resources:</u> <u>SHAPE America National Standards and Grade-Level Outcomes</u> <u>OPEN Online Physical Education Network</u> <u>Health Smart Virginia</u> <u>PE Central</u> <u>Dynamic PE ASAP</u></p>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>Developmentally appropriate form includes performance of at least two critical elements. Developmentally appropriate form for eye-hand coordination manipulative skills include dribbling a ball with the hand, underhand tossing and catching a ball/beanbag to self and with a partner, throwing and rolling underhand to targets, volleying a balloon upward with various body parts, volleying a balloon in the air with a short implement or noodle, striking a stationary object with the hand or with a short-handled implement or noodle. (1.1.f)</u></p> <ul style="list-style-type: none"> • <u>Dribbling with hands</u> <ul style="list-style-type: none"> ○ <u>Knees slightly bent/opposite foot forward when dribbling in self-space;</u> ○ <u>Use finger pads and not the palm of the hand;</u> ○ <u>Firm contact with top of ball using wrist flexion to push (not strike) the ball to the floor;</u> ○ <u>Look in space ahead and not down at the ball;</u> ○ <u>Waist height bounce;</u> ○ <u>Keep the ball close to dribbling hand side of the body.</u> • <u>Toss, Underhand Throw, Underhand Roll to partner/target</u> <ul style="list-style-type: none"> ○ <u>Face and look at the target;</u> ○ <u>Swing throwing arm backward to begin a backward-forward arm (tick-tock) swing;</u> ○ <u>Step with opposite foot as tossing/throwing/rolling arm moves forward;</u> ○ <u>Point to the target and release ball between knee and waist level during upward swing for underhand throw;</u> ○ <u>Bend at hip and release ball under knee for underhand roll;</u> 	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> ○ <u>Follow through with hand pointing to the target with the palm facing upward.</u> • <u>Volley</u> <ul style="list-style-type: none"> ○ <u>Watch the ball/balloon;</u> ○ <u>Strike the ball/balloon with flat surface;</u> ○ <u>Swing to strike low with palm;</u> ○ <u>Push up to strike high using finger pads;</u> ○ <u>Follow through upwards.</u> • <u>Strike stationary objects with long handled implements</u> <ul style="list-style-type: none"> ○ <u>Non-dominant hand grips the bottom of the long handled implement with dominant hand stacked above with knuckles in line with each other;</u> ○ <u>Side to target (non-throwing arm closest to target);</u> ○ <u>Knees slightly bent;</u> ○ <u>Eyes follow ball to center of striking implement from start to finish;</u> ○ <u>Step towards target with opposite foot;</u> ○ <u>Striking arm way back;</u> ○ <u>Weight transfer from back foot to front foot;</u> ○ <u>Rotate hips;</u> ○ <u>Wrist unlocks on follow-through for completion of striking action.</u> • <u>Strike stationary objects with short handled implement</u> <ul style="list-style-type: none"> ○ <u>Shake hands with the paddle;</u> ○ <u>Firm grip and wrist;</u> 	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> ○ <u>Hit with a flat surface at center of paddle or racket;</u> ○ <u>Follow through toward target.</u> <p><u>Developmentally appropriate skills include the ability to perform of at least two critical elements proficiently. Developmentally appropriate performance for eye-foot coordination manipulative skills include dribbling a ball with feet and kicking a moving or stationary ball to a target. (1.1.g)</u></p> <ul style="list-style-type: none"> • <u>Dribble (foot)</u> <ul style="list-style-type: none"> ○ <u>Knees slightly bent;</u> ○ <u>Push the center of the ball with shoelaces, inside of the foot, or outside of foot;</u> ○ <u>Contact behind the center of the ball;</u> ○ <u>Ball stays close to feet/soft touches;</u> ○ <u>Tap with both feet-to move ball forward;</u> ○ <u>Head up, eyes looking forward using peripheral vision to see the ball;</u> ○ <u>Stay light on your feet with weight on toes.</u> • <u>Kick toward a target</u> <ul style="list-style-type: none"> ○ <u>Eyes focused on ball throughout kick;</u> ○ <u>Contact the ball with shoelaces (not toes);</u> ○ <u>Contact behind the center of the ball for low level kick;</u> ○ <u>Contact ball below the center of the ball for travel in air;</u> ○ <u>Non-kicking foot beside the ball;</u> ○ <u>Forward and sideward swing of arm opposite kicking leg;</u> ○ <u>Hips and shoulders rotate forward;</u> ○ <u>Kicking foot follows through towards target area;</u> 	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p data-bbox="201 280 1134 358"><u>Movement involves patterns. Patterns include a beat or rhythmic pattern. (1.1.h)</u></p> <p data-bbox="201 407 1127 610"><u>Jumping rope promotes cardiorespiratory endurance, strengthening the heart muscle, and motor coordination. Jumping rope can include consecutive jumps (more than one) with a self-turn rope or a long rope (student-turn), and leaping, hopping, and jumping over a stationary rope in multiple directions. (1.1.i)</u></p>	

Anatomical Basis of Movement

1.2 The student will identify basic anatomical structures and basic spatial awareness concepts.

- a) Identify where the brain is located.
- b) Explain that muscles attach to bones to help the body move.
- c) Describe how the heart and lungs work together to keep the body moving.
- d) Explain that the heart is a muscle that grows stronger with movement.
- e) Demonstrate the appropriate use of personal and general space.

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>Movement involves many body parts working together.</u></p> <ul style="list-style-type: none"> • <u>The brain controls thoughts, memory, speech and movement, and is located in the head and protected by the skull. (1.2.a)</u> • <u>Muscles attach to two bones to help move a joint. (1.2.b)</u> • <u>Two lungs in your chest take in oxygen from the air to pass into the heart. The heart pumps oxygen in the blood to every cell in the body needed for movement. (1.2.c)</u> <p><u>The heart is a muscle that needs exercise/movement like all other muscles.</u></p> <p><u>The heart grows stronger with exercise/movement. (1.2.d)</u></p> <p><u>Performing isolated/stationary skills in personal space and keeping personal space while moving (with and without equipment) is important for safe play. (1.1.e)</u></p>	<p><u>In order to meet these standards, it is expected that students will</u></p> <ul style="list-style-type: none"> • <u>identify a picture of the brain and show where it is located (1.2.a);</u> • <u>identify that muscles are attached to two bones to move a joint (1.2.b);</u> • <u>identify the path of air and oxygen from lungs to heart to blood to the body (1.2.c);</u> • <u>identify/draw pictures of activities that help the heart grow stronger (1.2.d);</u> • <u>describe why the heart beats faster during exercise (1.2.d);</u> • <u>demonstrate isolated/stationary skills in personal space and maintain personal space while moving (with and without equipment) (1.2.e).</u> <p><u>Additional Resources:</u></p> <p><u>SHAPE America National Standards and Grade-Level Outcomes</u></p> <p><u>OPEN Online Physical Education Network</u></p>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
	Health Smart Virginia PECentral Dynamic PE ASAP KidsHealth.org

Fitness Planning

- 1.3 The student will identify changes in the body that occur during moderate to vigorous physical activity.
- Identify physical activities to do at home, individually and with others, to help the body move and grow.
 - Identify one cardiorespiratory activity that increases heart and breathing rates to make the heart stronger.
 - Identify and demonstrate physical activity at two or more intensity levels that increase heart rate and breathing.

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>Physical activity keeps the body healthy and makes the heart stronger.</u></p> <ul style="list-style-type: none"> • <u>Home activities may include walking, biking, skating, jumping rope, running, and exercises (e.g., push-ups, curl ups, jumping jacks). (1.3.a.)</u> <p><u>Activities such as running, jump roping and biking increase the heart rate and breathing rates. (1.3.b)</u></p> <p><u>Intensity: how hard a person is working during an activity. (1.3.c)</u></p> <ul style="list-style-type: none"> • <u>Intensity Levels Examples:</u> <ul style="list-style-type: none"> ○ <u>Intensity Level 1 – Standing</u> ○ <u>Intensity Level 2 – Slow, such as walking</u> ○ <u>Intensity Level 3 – Medium, such as skipping, galloping</u> ○ <u>Intensity Level 4 – Fast, such as jogging/running</u> ○ <u>Intensity Level 5 – Sprinting</u> 	<p><u>In order to meet these standards, it is expected that students will</u></p> <ul style="list-style-type: none"> • <u>select/draw pictures of physical activities that can be done at home (1.3.a);</u> • <u>select/draw pictures of activities that increase heart rate and breathing rates (1.3.b);</u> • <u>demonstrate activities that increase heart rate and breathing rates (1.3.b., 1.3.c);</u> • <u>participate in a variety of stations that vary in intensity levels (1.3.c).</u> <p><u>Additional Resources:</u></p> <p><u>SHAPE America National Standards and Grade-Level Outcomes</u></p> <p><u>OPEN Online Physical Education Network</u></p> <p><u>Health Smart Virginia</u></p> <p><u>PECentral</u></p> <p><u>Dynamic PE ASAP</u></p> <p><u>KidsHealth.org</u></p> <p><u>American Heart Association</u></p>

Social and Emotional Development

1.4 The student will demonstrate basic knowledge and skills for safe and cooperative play, individually and with others, without reminders from the teacher.

- a) Work cooperatively with peers and demonstrate safe equipment use when working individually or with peers.
- b) Demonstrate safety rules for physical activities.
- c) Demonstrate the safe and respectful use of space.
- d) Participate in developing classroom (procedural) rules that promote relationship skills and support a positive and safe learning environment during physical activity.
- e) Demonstrate the use of self-management skills to control emotions during physical activity.
- f) Explain that physical activity helps improve mood and brain function for learning.
- g) Participate in activities that are constructed to support inclusion.

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>Class rules, procedures, and cooperating with others helps to ensure a safe learning and playing environment.</u></p> <ul style="list-style-type: none"> • <u>Cooperation includes encouraging others, sharing, showing concern, and working together. (1.4.a)</u> • <u>Safety rules for activity include specifics for different equipment (distribution, use, and collection) and ways to move during activity. (1.4.a., 1.4.b)</u> • <u>Safe use of space includes boundaries and moving in personal and general space. (1.4.c)</u> • <u>Classroom rules may include how to enter class, follow directions, exit class, and how to participate safely in emergency drills (1.4.d)</u> • <u>Self-management during physical activity includes control of the body for safety and emotions for enjoyment. (1.4.e)</u> • <u>Regular exercise helps a person’s brain process information and manage emotions more easily. (1.4.f)</u> 	<p><u>In order to meet these standards, it is expected that students will</u></p> <ul style="list-style-type: none"> • <u>demonstrate cooperative skills (1.4.a);</u> • <u>demonstrate safe equipment use (1.4.a);</u> • <u>name and demonstrate activity safety rules (1.4.b);</u> • <u>name and demonstrate safe use of indoor and outdoor space (1.4.c);</u> • <u>name/select/draw pictures of class rules (1.4.d);</u> • <u>demonstrate the ability to transition from one activity to another (1.4.e);</u> • <u>list and demonstrate calming activities that may include mindfulness practices (1.4.f);</u> • <u>demonstrate the ability to participate safely in group activities with peer-selected and teacher-selected groups (1.4.g);</u>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> • <u>Activities support inclusion when students feel accepted, valued, and a sense of belonging. (1.4.g)</u> 	<p><u>Additional Resources:</u></p> <p><u>SHAPE America National Standards and Grade-Level Outcomes</u></p> <p><u>OPEN Online Physical Education Network</u></p> <p><u>Health Smart Virginia</u></p> <p><u>PE Central</u></p> <p><u>Dynamic PE ASAP</u></p> <p><u>EverFi</u></p> <p><u>KidsHealth.org</u></p>

Energy Balance

1.5 The student will identify basic nutrition concepts of energy balance.

- a) Name the food groups as identified by the U.S. Department of Agriculture (USDA).
- b) Name one food from each (USDA) food group.
- c) Explain why the body needs water.
- d) Explain that food provides energy for physical activity.

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>There are five USDA food groups. The groups are fruits, vegetables, protein, grains, and dairy. (1.5.a)</u></p> <p><u>There are many types of fruits, vegetables, protein, grains, and dairy that provide energy for the body. (1.5.b)</u></p> <ul style="list-style-type: none"> • <u>Examples of fruits include apples, peaches, bananas, strawberries, grapes, watermelons, tomatoes, blueberries, and raspberries (1.5.b)</u> • <u>Examples of vegetables include carrots, parsnips, radishes, onions, potatoes, pumpkins, peas, cucumbers, squash, asparagus, broccoli, and lettuce (1.5.b)</u> • <u>Examples of protein include beef, chicken, pork, turkey, fish, nuts, and eggs (1.5.b)</u> • <u>Examples of grains include bread, bagels, rice, pasta, oatmeal, cereal, and crackers (1.5.b)</u> • <u>Examples of dairy include milk, yogurt, and cheese (1.5.b)</u> <p><u>Note: Include foods that may be more familiar to various cultures.</u></p> <p><u>Water is essential for good health. (1.5.c)</u></p> <ul style="list-style-type: none"> • <u>Water helps keep the body temperature normal, aides in digestion, and helps get rid of waste.</u> 	<p><u>In order to meet these standards, it is expected that students will</u></p> <ul style="list-style-type: none"> • <u>list the USDA food groups (1.5.a);</u> • <u>match pictures of foods to its corresponding USDA food group (1.5.b);</u> • <u>list an example of a food from each of the USDA food groups (1.5.b);</u> • <u>explain why the body needs water (1.5.c);</u> • <u>identify what gives the body energy to move (1.5.d).</u> <p><u>Additional Resources:</u></p> <p><u>SHAPE America National Standards and Grade-Level Outcomes</u></p> <p><u>OPEN Online Physical Education Network</u></p> <p><u>Health Smart Virginia</u></p> <p><u>PE Central</u></p> <p><u>American Heart Association</u></p> <p><u>KidsHealth.org</u></p> <p><u>MyPlate.gov</u></p>

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<ul style="list-style-type: none">• <u>Water is also the main ingredient in perspiration or sweat.</u> <p><u>The food we consume provides energy for the body to move and be physically active. (1.5.d)</u></p>	
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GRADE TWO

Students in grade two focus on correct movement patterns, not on traditional games, while participating in a variety of movement experiences to develop fundamental motor skills and patterns. Students identify some critical elements (i.e., small, isolated parts of the whole skill or movement) and apply them in their movement. They vary movement patterns and begin to combine skills in educational game, dance, and gymnastic activities. Students progress in skill development and in understanding key elements of fundamental movement skills, including movement concepts, major muscles and bones, health-related fitness concepts, energy balance concepts, and the benefits of physical activity. Students work cooperatively and responsibly in groups and begin to build skills to meet movement challenges. They participate in physical activities at school and identify opportunities to participate in regular physical activity outside school.

Motor Skill Development

2.1 The student will demonstrate developmentally appropriate form using at least two critical elements or all correct critical elements of locomotor, non-locomotor, and manipulative skills.

- a) Demonstrate developmentally appropriate form for jogging, running, skipping, galloping, sliding, hopping, jumping, and leaping.
- b) Demonstrate a simple educational gymnastic sequence, including balance, roll, and transfer of weight from feet to hands, and jumping and landing horizontally (distance) and vertically.
- c) Demonstrate at least two critical elements of eye-hand coordination skills for dribbling with the dominant/preferred hand while walking, overhand throwing, underhand throwing and catching individually and with a partner, underhand throwing and rolling to a target, and consecutive upward volleying with hand(s), with a short/long-handled implement or noodle and striking/batting a ball off a tee using hard and soft force with control.
- d) Demonstrate at least two critical elements of eye-foot coordination skills while kicking a moving ball, foot dribbling with control while walking to open spaces, and kicking/passing to a partner or a stationary target.
- e) Demonstrate moving to a rhythm by performing basic dance sequences (teacher- or student-led dances).
- f) Demonstrate at least two critical elements for jumping forward and backward with a short rope (self-turn) and jumping with long rope (student-turn).

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>Skilled movements can be broken down into smaller parts/critical elements. Movement proficiency can be improved by performing the critical elements of locomotor skills. (2.1.a)</u></p> <ul style="list-style-type: none"> • <u>Jogging/Running</u> <ul style="list-style-type: none"> ○ <u>Look ahead and not at feet during movement;</u> ○ <u>Bend knees at right angles during recovery phase;</u> ○ <u>Arms bent at elbows;</u> ○ <u>Arms drive forward and backward in opposition of legs;</u> ○ <u>Foot lands heel to toe</u> ○ <u>Flight phase present between steps;</u> ○ <u>Travel at a steady, gentle pace when jogging.</u> • <u>Skipping</u> <ul style="list-style-type: none"> ○ <u>Look ahead and step forward and hop on the same foot;</u> ○ <u>Repeat with the other foot and move in an alternating step-hop pattern;</u> ○ <u>Lift knee sharply upward;</u> ○ <u>Swing arms in opposition to feet;</u> ○ <u>Maintain balance.</u> • <u>Galloping</u> <ul style="list-style-type: none"> ○ <u>Eyes facing direction of movement;</u> ○ <u>Establish lead leg with both feet facing forward;</u> ○ <u>Start with lead leg moving in direction of movement;</u> ○ <u>Trail leg pointed in direction of movement and does not pass lead leg;</u> ○ <u>Turn shoulders and hips in direction of movement.</u> 	<p><u>In order to meet these standards, it is expected that students will</u></p> <ul style="list-style-type: none"> • <u>demonstrate critical elements for jogging, running, skipping, galloping, sliding, hopping, jumping, and leaping (2.1.a);</u> • <u>identify differences between jogging and running (2.1.a);</u> • <u>identify differences between skipping and galloping (2.1.a);</u> • <u>demonstrate an educational gymnastics sequence that includes a balance, roll, transfer of weight from feet to hands, and flight movement (2.1.b);</u> • <u>demonstrate two or more critical elements for dribbling with the dominant/preferred hand while walking, overhand throwing, underhand throwing and catching individually and with a partner, underhand throwing and rolling to a target, and consecutive upward volleying with hand(s), with a short/long-handled implement or noodle and striking/batting a ball off a tee using hard and soft force with control (2.1.c);</u> • <u>explain the difference between and effects of hard and soft force (2.1.c);</u> • <u>demonstrate at least two critical elements while kicking a moving ball (2.1.d);</u> • <u>demonstrate at least two critical elements when dribbling with feet while traveling in space (2.1.d);</u>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> • <u>Sliding</u> <ul style="list-style-type: none"> ○ <u>Establish lead leg, knees slightly bent, weight on balls of feet;</u> ○ <u>Look in direction of movement;</u> ○ <u>Lead foot slides sideways and other foot moves quickly to lead foot</u> ○ <u>Weight shifts sideways as legs open then close;</u> ○ <u>Rhythmic arm movements; arms forward for balance.</u> • <u>Hopping</u> <ul style="list-style-type: none"> ○ <u>Take off on one foot;</u> ○ <u>arms extend upwards for lift;</u> ○ <u>Land on same foot;</u> ○ <u>Hold opposite knee at 90 degree angle;</u> ○ <u>Knee and ankle flex upon contact with floor to maintain balance.</u> • <u>Jumping</u> <ul style="list-style-type: none"> ○ <u>Focus eyes ahead;</u> ○ <u>Bend knees in preparatory phase with feet shoulder-width apart;</u> ○ <u>Bend at waist in preparatory phase;</u> ○ <u>Swing arms in full backward-forward motion;</u> ○ <u>Take off on two feet;</u> ○ <u>Explode up and forward;</u> ○ <u>Extend body in flight phase;</u> ○ <u>Land on two feet heels contact first;</u> ○ <u>Soft landing/bend knees when landing.</u> 	<ul style="list-style-type: none"> • <u>demonstrate at least two critical elements while passing a ball to a target/partner (2.1.d);</u> • <u>demonstrate rhythm in a teacher- or student-led basic dance sequence (2.1.e)</u> • <u>demonstrate consecutive jumps with self-turn rope and consecutive jumps with a long rope (student-turn) (2.1.f);</u> • <u>demonstrate critical elements for jumping forward and backward with a self-turn short rope (2.1.f);</u> • <u>demonstrate critical elements for jumping with a student-turn long rope (2.1.f);</u> <p><u>Additional resources:</u> <u>SHAPE America National Standards and Grade-Level Outcomes</u> <u>OPEN Online Physical Education Network</u> <u>Health Smart Virginia</u> <u>PE Central</u> <u>Dynamic PE ASAP</u></p>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>Jogging and running are physical activities that make the heart stronger. (2.1.a)</u></p> <ul style="list-style-type: none"> • <u>Jogging is low to moderate intensity at low speed. Knees may not come up as high when jogging and arms do not swing as much.</u> • <u>Running is done at moderate to vigorous intensity and higher speed. Knees come up higher and arms swing more to build momentum and speed.</u> <p><u>Movement proficiency includes maintaining balance in a variety of movements during an educational gymnastics sequence including rolling, transferring of weight from feet to hands, and flight. (2.1.b)</u></p> <p><u>Manipulative skills can be broken down into smaller parts/critical elements to improve proficiency. Approaching developmentally appropriate form in eye-hand and eye-foot coordination skills includes performance of two or more critical elements. (2.1.c, 2.1.d)</u></p> <ul style="list-style-type: none"> • <u>Dribble with hands while walking</u> <ul style="list-style-type: none"> ○ <u>Head up looking for open space;</u> ○ <u>Pads of fingers contact top of ball;</u> ○ <u>Firm and flexible wrist as hand pushes ball to floor;</u> ○ <u>Hand absorbs ball slightly on return;</u> ○ <u>Waist height bounce;</u> ○ <u>Ball slightly in front of body;</u> ○ <u>Knees bent slightly with dribbling arm close to the body.</u> • <u>Overhand throw</u> <ul style="list-style-type: none"> ○ <u>Non-throwing shoulder toward target;</u> 	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> o <u>Step to target with opposite foot;</u> o <u>Throwing arm raised in backswing;</u> o <u>Rotate hips during throw;</u> o <u>Weight shifts from back to front foot;</u> o <u>Throwing arm follows through to target with wrist to opposite knee.</u> • <u>Catch from underhand throw</u> <ul style="list-style-type: none"> o <u>Watch the ball all the way into the hands;</u> o <u>Arms in front of body, elbows flexed;</u> o <u>Place body in the path of the object;</u> o <u>Arms extend to reach for ball;</u> o <u>Thumbs in for catch above the waist;</u> o <u>Thumbs out for catch at or below the waist;</u> o <u>One foot slightly in front of the other (balanced stance);</u> o <u>Catch with hands only; no cradling against the body;</u> o <u>Pull the ball in to the body as the catch is made;</u> o <u>Relax and absorb the force of the object.</u> • <u>Toss, Underhand Throw, Underhand Roll to partner/target</u> <ul style="list-style-type: none"> o <u>Face the target;</u> o <u>Eye on target;</u> o <u>Use a backward-forward arm swing (tick-tock swing);</u> o <u>Step with opposite foot as tossing/throwing/rolling arm moves forward;</u> o <u>Release ball between knee and waist level during upward swing for throw;</u> o <u>Bend at hip (roll);</u> 	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> o <u>Release ball under knee for roll;</u> o <u>Follow through with hand pointing to the target.</u> • <u>Volley with hand</u> <ul style="list-style-type: none"> o <u>Shoulders facing target;</u> o <u>One foot slightly ahead of other;</u> o <u>Tick tock swing movement with volleying hand;</u> o <u>Contact ball with palm;</u> o <u>Contact occurs at waist-level;</u> o <u>Follow through upwards;</u> o <u>Track the ball with eyes;</u> o <u>Move body into position for next contact;</u> o <u>Continuous volley.</u> • <u>Strike stationary objects with long handled implements</u> <ul style="list-style-type: none"> o <u>Non-dominant hand grips the bottom of the long handled implement with dominant hand stacked above with knuckles in line with each other;</u> o <u>Side to target (non-throwing arm closest to target);</u> o <u>Knees slightly bent;</u> o <u>Eyes follow ball to center of striking implement from start to finish;</u> o <u>Step towards target with opposite foot;</u> o <u>Striking arm way back;</u> o <u>Weight transfer from back foot to front foot;</u> o <u>Rotate hips;</u> o <u>Wrist unlocks on follow-through for completion of striking action.</u> 	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> • <u>Strike stationary objects with short handled implement</u> <ul style="list-style-type: none"> ○ <u>Shake hands with the paddle;</u> ○ <u>Firm grip and wrist;</u> ○ <u>Hit with a flat surface at center of paddle or racket;</u> ○ <u>Follow through toward target.</u> • <u>Kick toward a target</u> <ul style="list-style-type: none"> ○ <u>Eyes focused on ball throughout kick;</u> ○ <u>Contact the ball with shoelaces (not toes);</u> ○ <u>Contact behind the center of the ball for low level kick;</u> ○ <u>Contact ball below the center of the ball for travel in air;</u> ○ <u>Non-kicking foot plants beside the ball;</u> ○ <u>Forward and sideward swing of arm opposite kicking leg;</u> ○ <u>Hips and shoulders rotate forward;</u> ○ <u>Kicking foot follows through towards target area.</u> • <u>Dribble (foot)</u> <ul style="list-style-type: none"> ○ <u>Knees slightly bent;</u> ○ <u>Push the center of the ball with shoelaces, inside of the foot, or outside of foot;</u> ○ <u>Contact behind the center of the ball;</u> ○ <u>Ball stays close to feet/soft touches;</u> ○ <u>Tap with both feet-to move ball forward;</u> ○ <u>Head up, eyes looking forward using peripheral vision to see the ball;</u> ○ <u>Stay light on your feet with weight on toes.</u> 	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> • <u>Passing to a partner</u> <ul style="list-style-type: none"> ◦ <u>Non-kicking foot beside the ball;</u> ◦ <u>Use inside of foot;</u> ◦ <u>Step to the target;</u> ◦ <u>Contact behind the center of the ball;</u> ◦ <u>Firm and controlled pass;</u> ◦ <u>Follow through toward target.</u> <p><u>Force is strength or energy exerted. (2.1.c)</u></p> <ul style="list-style-type: none"> • <u>Using increased force (hard) with manipulatives may include throwing for a farther distance or striking harder to make the ball go farther.</u> • <u>Using decreased force (soft) with manipulatives may include throwing easier over a shorter distance or to improve accuracy to a target.</u> • <u>Control includes ability to use more or less force as needed for intended target or outcome.</u> <p><u>Movement competency involves patterns. . (2.1.e)</u></p> <ul style="list-style-type: none"> • <u>Basic dance sequences that are teacher- or student-led.</u> • <u>Moving to a beat or rhythmic pattern in personal and general space.</u> <p><u>Jumping rope helps with cardiorespiratory endurance, strengthening the heart, and helps with coordination. Progression toward developmentally appropriate form helps with jumping efficiency. (2.1.f)</u></p> <ul style="list-style-type: none"> • <u>Critical elements of jumping forward and backward with a short rope (self-turn) include</u> 	

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<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> ○ <u>Elbows close to body;</u> ○ <u>Loose grip on handles;</u> ○ <u>Wrists move in small circles;</u> ○ <u>Bend knees;</u> ○ <u>Quiet feet when landing;</u> ○ <u>Jump on balls of the feet;</u> ○ <u>Jump to a rhythm.</u> <ul style="list-style-type: none"> • <u>Critical elements of jumping forward and backward with a long rope (student-turn) include</u> <ul style="list-style-type: none"> ○ <u>Face the turner;</u> ○ <u>Watch rope;</u> ○ <u>Small jumps;</u> ○ <u>Bend knees;</u> ○ <u>Quiet feet during landing;</u> ○ <u>Jump on balls of the feet;</u> ○ <u>Keep the rhythm.</u> 	

Anatomical Basis of Movement

2.2 The student will identify major musculoskeletal structures and the cardiorespiratory system and explain the importance of spatial awareness while moving.

- a) Describe the concept of relationships (e.g., over, under, around, in front of, behind, through) in dynamic movement situations.
- b) Explain the importance of spatial awareness (personal and general space) in static and dynamic movement situations.
- c) Explain that the brain sends messages to the body through the spinal cord for movement and other and other activities.
- d) Identify major muscles, including the quadriceps, biceps, abdominals, and heart.
- e) Explain that muscles contract (tense or tighten) to keep the body in a balanced position.
- f) Identify major bones, including the skull, ribs, and spine.
- g) Identify the major structures of the cardiorespiratory system (heart and lungs).

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>Spatial awareness is knowing where the body is in space in relation to objects and other people.</u></p> <ul style="list-style-type: none"> • <u>Spatial concepts include over, under, on, in, around, in front of, behind, and through. (2.2.a)</u> • <u>Ability to move without touching other people or objects (static) and change movements as people or objects change position (dynamic) is important for safety and participation in physical activities. (2.2.b)</u> <p><u>The brain is the communication center for the body and sends messages to the body for movement. Muscles and bones work together for physical movement.</u></p> <ul style="list-style-type: none"> • <u>The brain sends messages through nerves in the spinal cord to the body to move. (2.2.c)</u> • <u>Major muscles include quadriceps, biceps, abdominals, and heart. (2.2.d)</u> 	<p><u>In order to meet these standards, it is expected that students will</u></p> <ul style="list-style-type: none"> • <u>identify spatial relationships (2.2.a);</u> • <u>state/identify that moving with others and objects is important for safety and for participation in activities (2.2.b);</u> • <u>identify the function of the brain for movement as sending signals/messages through the spinal cord to the rest of the body (2.2.c);</u> • <u>identify pictures of the quadriceps, biceps, abdominals, and heart, and where the muscles are located on the body (2.2.d);</u> • <u>identify a function of muscles while balancing (2.2.e);</u> • <u>identify pictures of the skull, ribs, and spine and where the bones are located on the body (2.2.f);</u>

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<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none">• <u>Muscles contract to keep the body in a balanced position. (2.2.e)</u>• <u>Major bones include skull, ribs, and spine. (2.2.f)</u> <p><u>Note: additional bones and muscles may be included.</u></p> <p><u>The cardiorespiratory system includes the heart and lungs. (2.2.g)</u></p>	<ul style="list-style-type: none">• <u>identify pictures of the lungs and where they are located on the body (2.2.g);</u>• <u>describe that the cardiorespiratory system is the heart and lungs working together to get oxygen to the body (2.2.g).</u> <p><u>Additional resources:</u></p> <p><u>SHAPE America National Standards and Grade-Level Outcomes</u></p> <p><u>OPEN Online Physical Education Network</u></p> <p><u>Health Smart Virginia</u></p> <p><u>PECentral</u></p> <p><u>Dynamic PE ASAP</u></p> <p><u>KidsHealth.org</u></p>

Fitness Planning

2.3 The student will describe the components of fitness and identify physical activities that promote aerobic capacity, muscular strength, endurance, flexibility, and body composition.

- a) Describe muscular strength as important in lifting/moving heavy objects.
- b) Describe muscular endurance as important in moving throughout the day.
- c) Describe flexibility as important in moving in many directions.
- d) Describe cardiorespiratory endurance as important for maintaining a healthy heart and lungs.
- e) Describe body composition as the components that make up a person’s body weight (percentages of fat, bone, water, and muscle in the human body).
- f) Identify one activity to promote each component of fitness (i.e., cardiorespiratory endurance, muscular strength, muscular endurance, flexibility, and body composition).
- g) Identify opportunities to participate in regular physical activity inside and outside school, individually and with others.
- h) Identify and demonstrate three different physical activities that increase heart rate and breathing.

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>Physical activities are needed for physical fitness. Muscular strength, muscular endurance, flexibility, and cardiorespiratory endurance are important for daily activities and for good health.</u></p> <ul style="list-style-type: none"> • <u>Muscular strength is the maximum force that muscles can exert in a single effort including getting up out of a chair and lifting /moving heavy objects. (2.3.a)</u> • <u>Muscular endurance is the ability to sustain or repeat muscular activity over a long period of time including running, biking, and walking. (2.3.b)</u> • <u>Flexibility is range of motion of muscles at the joint and is important in moving in many directions including bending and reaching. (2.3.c)</u> <p><u>The heart is a muscle that gets stronger with physical activity. (2.3.d)</u></p>	<p><u>In order to meet these standards, it is expected that students will</u></p> <ul style="list-style-type: none"> • <u>describe muscular strength (2.3.a);</u> • <u>describe muscular endurance (2.3.b);</u> • <u>describe flexibility (2.3.c);</u> • <u>describe cardiorespiratory endurance (2.3.d);</u> • <u>describe body composition (2.3.e);</u> • <u>list/identify one activity for each component of fitness and body composition (2.3.f);</u> • <u>list/identify physical activities that can be done inside and outside of school individually and with others (2.3.g);</u> • <u>identify and demonstrate three physical activities and increase heart rate and breathing (2.3.h);</u>

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<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> • <u>Cardiorespiratory endurance (taking in oxygen and using it throughout the body for energy for movement over sustained activity) is important for maintaining a healthy heart.</u> <p><u>Body composition is the components that make up a person’s body weight (percentages of fat, bone, water, and muscle in the human body.) (2.3.e)</u></p> <p><u>Improving muscular strength and endurance, flexibility, and cardiorespiratory endurance will also improve body composition. (2.3.e)</u></p> <p><u>Activities to promote/improve fitness include (2.3.f, 2.3.h)</u></p> <ul style="list-style-type: none"> • <u>cardiorespiratory endurance – biking, walking, running, dance;</u> • <u>muscular strength – resistance activities (bands, weights), dance;</u> • <u>muscular (strength) endurance - plank, push-ups, curl ups, burpees;</u> • <u>flexibility – stretching activities such as yoga;</u> • <u>body composition – whole body activities such as burpees, jumping rope.</u> <p><u>Physical activity should be done daily (60 minutes each day) to include inside and outside of school activities.</u></p> <ul style="list-style-type: none"> • <u>Outside of school activities may include biking, walking, running, dancing, skating, canoeing, kayaking, and swimming. (2.3.g)</u> 	<p><u>Additional Resources:</u></p> <p><u>SHAPE America National Standards and Grade-Level Outcomes</u></p> <p><u>OPEN Online Physical Education Network</u></p> <p><u>Health Smart Virginia</u></p> <p><u>PECentral</u></p> <p><u>Dynamic PE ASAP</u></p> <p><u>KidsHealth.org</u></p> <p><u>American Heart Association</u></p>

Social and Emotional Development

2.4 The student will identify, demonstrate, and apply cooperative, respectful, and safe behaviors in physical activity settings.

- a) Identify one activity that is enjoyed and done with friends outside the physical education class.
- b) Identify one collaborative group activity that is challenging, and demonstrate one way to improve communication skills.
- c) Demonstrate cooperative skills, including taking turns and sharing equipment.
- d) Demonstrate safe participation and proper care of equipment individually and with others.
- e) Demonstrate an understanding of established classroom safety rules and procedures.
- f) Demonstrate the use of responsible decision-making steps to resolve conflict in physical activity settings.
- g) Identify the characteristics of inclusion as belonging, acceptance, and value.

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>Physical activity is good for physical, emotional, and social health.</u></p> <ul style="list-style-type: none"> • <u>Choosing a variety of physical activities that are enjoyable help people be physically active every day. (2.4.a)</u> <p><u>Physical activities and skills can be improved through practice, experience, and feedback. (2.4.b)</u></p> <ul style="list-style-type: none"> • <u>Communication skills in a collaborative activity include active listening, speaking one at a time, speaking directly to each other, speaking honestly and kind, sharing ideas, trying different ideas, and working together for a common goal.</u> • <u>Collaborative activities may include cooperative games and group activities (e.g., student-created dance segment).</u> <p><u>Class rules, procedures, and cooperating with others helps to ensure a safe learning and playing environment. Students demonstrate cooperative skills by not only being responsible for learning the material for the day but also for helping their group-mates learn. (2.4.c)</u></p> <ul style="list-style-type: none"> • <u>Cooperation includes</u> 	<p><u>In order to meet these standards, it is expected that students will</u></p> <ul style="list-style-type: none"> • <u>identify/draw a physical activity done outside of physical education class that they enjoy (2.4.a);</u> • <u>identify/draw an activity/skill that may be challenging and state a way to improve (2.4.b);</u> • <u>identify way(s) to improve communication skills in a collaborative activity (2.4.b);</u> • <u>demonstrate cooperative skills (2.4.c);</u> • <u>demonstration safe participation and proper care of equipment (2.4.d);</u> • <u>identify two safety rules for physical education class (2.4.e);</u> • <u>demonstrate responsible decision making skills to resolve simple conflicts (2.4.f);</u> • <u>describe situations that need adult intervention to resolve (2.4.f);</u> • <u>explain what it means to respect others (2.4.g);</u>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> • <u>encouraging others;</u> • <u>sharing;</u> • <u>showing concern;</u> • <u>working together.</u> <p><u>Safe participation includes good listening skills, including the student’s ability to follow rules and directions for all activities and equipment use.</u></p> <ul style="list-style-type: none"> • <u>Safe participation includes following rules for the activity/game, rules for equipment (distribution, use, and collection), and use of space (boundaries, spatial awareness, and moving in personal and general space). (2.4.d)</u> • <u>Classroom rules may include how to enter class, follow directions, exit class, activity-specific rules, and how to participate safely in emergency drills. (2.4.e)</u> <p><u>Learning to resolve conflicts allows all students to participate safely, participate fully and enjoy activities. Steps to resolve conflict may include: (2.4.f)</u></p> <ul style="list-style-type: none"> • <u>remaining calm;</u> • <u>using respectful language;</u> • <u>identifying the conflict;</u> • <u>creating solutions;</u> • <u>agreeing on a solution to try;</u> • <u>understanding when adult intervention is necessary and telling the proper adult.</u> <p><u>When children feel included in physical activity, they are more likely to fully participate and enjoy the activity. (2.4.g)</u></p>	<ul style="list-style-type: none"> • <u>demonstrate encouraging words and giving positive feedback (2.4.g).</u> <p><u>Additional Resources:</u></p> <p><u>SHAPE America National Standards and Grade-Level Outcomes</u></p> <p><u>OPEN Online Physical Education Network</u></p> <p><u>Health Smart Virginia</u></p> <p><u>PE Central</u></p> <p><u>Dynamic PE ASAP</u></p> <p><u>EverFi</u></p> <p><u>KidsHealth.org</u></p>

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<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"><li data-bbox="247 238 1066 310">• <u>Inclusion is a feeling that they have, that is characterized by belonging, acceptance, and value.</u>	

Energy Balance

2.5 The student will describe the impact of balancing energy intake and physical activity output.

- a) Explain that calcium is important for bone growth.
- b) Identify examples of healthy snacks.
- c) Identify different hydration choices.
- d) Explain that choosing nutritious foods and being physically active are components of being healthy.
- e) Explain how fruits and vegetables provide energy for physical activity.

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>Calcium, most often found in the dairy food group, is vital for health and maintenance of the body, especially improved bone health. (2.5.a)</u></p> <p><u>Healthy snacks may include yogurt, string cheese, whole grain granola, fruits, and vegetables. (2.5.b)</u></p> <p><u>Hydration choices may include (2.5.c)</u></p> <ul style="list-style-type: none"> • <u>Water: A clear liquid that has zero calories and contains no sugar;</u> • <u>Milk: A dairy drink that helps build strong teeth and bones;</u> • <u>Unhealthy drink choices that contain too much sugar and calories are sports drinks, sodas, juice drinks, and energy drinks.</u> <p><u>Physical activity and choosing nutritious foods/drinks are important for good health. (2.5.d)</u></p> <ul style="list-style-type: none"> • <u>Energy balance involves the consumption of food and drinks from the five food groups that provide the body the energy it needs in order to perform physical activity/movement</u> <p><u>Fruits and vegetables contain fiber and important nutrients for growth and development that help provide vital energy for physical activity/movement. (2.5.e)</u></p>	<p><u>In order to meet these standards, it is expected that students will</u></p> <ul style="list-style-type: none"> • <u>explain how calcium supports bone growth (2.5.a);</u> • <u>identify/select examples of healthy snacks (2.5.b);</u> • <u>identify/select examples of healthy and unhealthy hydration choices (2.5.c);</u> • <u>explain that the body needs healthy foods, healthy drinks, and physical activity to grow and be healthy (2.5.d);</u> • <u>describe the impact of energy intake on physical activity output (2.5.d);</u> • <u>explain how fruits and vegetables provide healthy energy for physical activity (2.5.e).</u> <p><u>Additional resources:</u></p>

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GRADE THREE

Skill development remains a central focus for students in grade three as they begin to accept feedback from and provide appropriate feedback to others. Students refine, vary, and combine skills in complex situations and demonstrate more proficient movement patterns in educational games, dance, and gymnastic activities to become confident and competent movers. Students identify critical elements (small, isolated parts of the whole skill or movement) and apply them in their movement. They develop fitness knowledge and can relate regular physical activity to energy balance and health benefits. Students continue to build knowledge of body structures and systems. They know safe practices, rules, and procedures and apply them with little or no reinforcement. Students work cooperatively with peers and understand that there are many differences in movement skill and ability levels among their classmates.

Motor Skill Development

3.1 The student will demonstrate progression toward the use of all critical elements for various skills and apply skills in increasingly complex movement activities.

- a) Demonstrate the critical elements of eye-hand coordination skills for dribbling with dominant/preferred hand while finding open spaces, overhand/underhand throwing and catching with a partner, underhand throwing and rolling at a target, and volleying consecutive upward with hand(s) or with a short/long implement/noodle and striking/batting a ball off a tee using hard and soft force with control.
- b) Demonstrate progress toward the use of all critical elements used in eye-foot coordination skills while kicking a moving ball, foot dribbling with control while walking to open spaces, and kicking/passing to a partner or a stationary target.
- c) Perform an educational gymnastic sequence with balance, transfer of weight, travel, and change of direction.
- d) Demonstrate dance patterns for a variety of dance movements and create a pattern/combination of movements into a repeatable sequence.
- e) Demonstrate at least two critical elements for four different jumps with a short rope (self-turn) or long rope (student turn) and jumping/landing horizontally (distance) and vertically (height) using proper takeoff and landing form).

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<u>Manipulative and movement skills can be broken down into smaller parts/critical elements to improve proficiency. Developmentally appropriate movement includes progression toward use of all critical elements. Eye-hand</u>	<u>In order to meet these standards, it is expected that students will</u>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>and eye-foot coordination skills should be proficient in isolation before engaging in low organized activities. (3.1.a., 3.1.b)</u></p> <ul style="list-style-type: none"> • <u>Dribble with hands while finding space</u> <ul style="list-style-type: none"> ○ <u>Head up looking for open space;</u> ○ <u>Pads of fingers contact top of ball;</u> ○ <u>Firm and flexible wrist as hand pushes ball to floor;</u> ○ <u>Hand absorbs ball slightly on return;</u> ○ <u>Waist height bounce;</u> ○ <u>Ball slightly in front of body;</u> ○ <u>Knees bent slightly with dribbling arm close to the body.</u> • <u>Overhand throw</u> <ul style="list-style-type: none"> ○ <u>Non-throwing shoulder toward target;</u> ○ <u>Step to target with opposite foot;</u> ○ <u>Throwing arm raised in backswing;</u> ○ <u>Rotate hips during throw;</u> ○ <u>Weight shifts from back to front foot;</u> ○ <u>Throwing arm follows through to target with wrist to opposite knee.</u> • <u>Catch from underhand throw</u> <ul style="list-style-type: none"> ○ <u>Watch the ball all the way into the hands;</u> ○ <u>Arms in front of body, elbows flexed;</u> ○ <u>Place body in the path of the object;</u> ○ <u>Arms extend to reach for ball;</u> ○ <u>Thumbs in for catch above the waist;</u> ○ <u>Thumbs out for catch at or below the waist;</u> ○ <u>One foot slightly in front of the other (balanced stance);</u> 	<ul style="list-style-type: none"> • <u>demonstrate critical elements in isolation and in low organized activities for dribbling with dominant/preferred hand while finding open spaces, overhand/underhand throwing and catching with a partner, underhand throwing and rolling at a target, and volleying consecutive upward with hand(s) or with a short/long implement/noodle and striking/batting a ball off a tee using hard and soft force with control (3.1.a);</u> • <u>explain the relationship between force and energy (3.1.a);</u> • <u>explain the impact force has on manipulative skills (3.1.a);</u> • <u>demonstrate use of force needed to throw/strike to a target or for distance (3.1.a);</u> • <u>demonstrate critical elements used in eye-foot coordination skills while kicking a moving ball, foot dribbling with control while walking to open spaces, and kicking/passing to a partner or a stationary target (3.1.b);</u> • <u>create and perform an educational gymnastic sequence with balance, transfer of weight, travel, and change of direction (3.1.c);</u>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> ○ <u>Catch with hands only; no cradling against the body;</u> ○ <u>Pull the ball in to the body as the catch is made;</u> ○ <u>Relax and absorb the force of the object.</u> • <u>Toss, Underhand Throw, Underhand Roll to partner/target</u> <ul style="list-style-type: none"> ○ <u>Face the target;</u> ○ <u>Eye on target;</u> ○ <u>Use a backward-forward arm swing (tick-tock swing);</u> ○ <u>Step with opposite foot as tossing/throwing/rolling arm moves forward;</u> ○ <u>Release ball between knee and waist level during upward swing for throw;</u> ○ <u>Bend at hip (roll);</u> ○ <u>Release ball under knee for roll;</u> ○ <u>Follow through with hand pointing to the target.</u> • <u>Volley with hand</u> <ul style="list-style-type: none"> ○ <u>Shoulders facing target;</u> ○ <u>One foot slightly ahead of other;</u> ○ <u>Tick tock swing movement with volleying hand;</u> ○ <u>Contact ball with palm;</u> ○ <u>Contact occurs at waist-level;</u> ○ <u>Follow through upwards;</u> ○ <u>Track the ball with eyes;</u> ○ <u>Move body into position for next contact;</u> ○ <u>Continuous volley.</u> • <u>Volley objects with short handled implement</u> 	<ul style="list-style-type: none"> • <u>demonstrate simple dances in various formations (3.1.d);</u> • <u>create and perform a dance sequence with different locomotor patterns, levels, shapes, pathways, and flow (3.1.d);</u> • <u>perform a self-turn jump rope sequence containing four different types of jumps (3.1.e);</u> • <u>demonstrate at least two critical elements for jumping with a short self-turn rope (3.1.e);</u> • <u>demonstrate proper takeoff and landing form when jumping and landing horizontally for distance and vertically for height (3.1.e).</u> <p><u>Additional resources:</u> <u>SHAPE America National Standards and Grade-Level Outcomes</u> <u>OPEN Online Physical Education Network</u> <u>Health Smart Virginia</u> <u>PE Central</u> <u>Dynamic PE ASAP</u></p>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> ○ <u>Shake hands with the paddle;</u> ○ <u>Firm grip and wrist;</u> ○ <u>Contact occurs at waist-level;</u> ○ <u>Hit with a flat surface at center of paddle or racket;</u> ○ <u>Follow through toward target.</u> ○ <u>Track the ball with eyes;</u> ○ <u>Move body into position for next contact;</u> ○ <u>Continuous volley.</u> • <u>Strike/bat a ball off a tee</u> <ul style="list-style-type: none"> ○ <u>Non-dominant hand grips the bottom of the long handled implement with dominant hand stacked above with knuckles in line with each other;</u> ○ <u>Side to target (non-throwing arm closest to target);</u> ○ <u>Knees slightly bent;</u> ○ <u>Eyes follow ball to center of striking implement from start to finish;</u> ○ <u>Step towards target with opposite foot;</u> ○ <u>Striking arm way back;</u> ○ <u>Weight transfer from back foot to front foot;</u> ○ <u>Rotate hips;</u> ○ <u>Wrist unlocks on follow-through for completion of striking action.</u> • <u>Performance in isolation and in low organized activities to include eye-foot coordination skills while kicking a moving ball, foot dribbling with control while walking to open spaces, and kicking/passing to a partner or a stationary target. (3.1.b)</u> 	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> • <u>Kick a moving ball</u> <ul style="list-style-type: none"> ○ <u>Eyes focused on ball throughout kick;</u> ○ <u>Contact the ball with shoelaces (not toes);</u> ○ <u>Contact behind the center of the ball for low level kick;</u> ○ <u>Contact ball below the center of the ball for travel in air;</u> ○ <u>Non-kicking foot plants beside the ball;</u> ○ <u>Forward and sideward swing of arm opposite kicking leg;</u> ○ <u>Hips and shoulders rotate forward;</u> ○ <u>Kicking foot follows through towards target area.</u> • <u>Dribble (foot)</u> <ul style="list-style-type: none"> ○ <u>Knees slightly bent;</u> ○ <u>Push the center of the ball with shoelaces, inside of the foot, or outside of foot;</u> ○ <u>Contact behind the center of the ball;</u> ○ <u>Ball stays close to feet/soft touches;</u> ○ <u>Tap with both feet to move ball forward;</u> ○ <u>Head up, eyes looking forward using peripheral vision to see the ball;</u> ○ <u>Stay light on your feet with weight on toes.</u> • <u>Passing to a partner/stationary target</u> <ul style="list-style-type: none"> ○ <u>Non-kicking foot beside the ball;</u> ○ <u>Use inside of foot;</u> ○ <u>Step to the target;</u> ○ <u>Contact behind the center of the ball;</u> ○ <u>Firm and controlled pass;</u> ○ <u>Follow through toward target.</u> 	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>Force is strength or energy exerted. (3.1.a, 3.1.b)</u></p> <ul style="list-style-type: none"> • <u>Using increased force (hard) with manipulatives may include throwing for a farther distance or striking harder to make the ball go farther.</u> • <u>Using decreased force (soft) with manipulatives may include throwing easier over a shorter distance or to improve accuracy to a target.</u> • <u>Control includes ability to use more or less force as needed for intended target or outcome.</u> <p><u>Movement proficiency includes maintaining balance, transfer of weight, travel, and change of directions in a variety of movements during an educational gymnastics sequence. (3.1.c)</u></p> <ul style="list-style-type: none"> • <u>Movement sequences can be teacher-led or student-created and include elements of balance, transfer of weight, travel, and change in direction.</u> <p><u>Movement competency involves patterns and combinations of different movement concepts. These patterns and combinations can be performed in a repeatable sequence.(3.1.d)</u></p> <ul style="list-style-type: none"> • <u>Basic dances occur in different formations (e.g., line, square, circle)</u> • <u>Dance sequences can include locomotor patterns, levels, shapes, pathways, and directions.</u> <p><u>Jumping rope helps with cardiorespiratory endurance, strengthening the heart, and helps with coordination. Progression toward developmentally appropriate form helps with jumping efficiency. Developmentally appropriate form includes execution of critical elements within different types of jumps. (3.1.e)</u></p> <ul style="list-style-type: none"> • <u>Critical elements of jumping forward and backward with a short rope (self-turn) include</u> 	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> ○ <u>Keeping elbows close to body;</u> ○ <u>Gripping the handles loosely;</u> ○ <u>Moving wrists in small circles;</u> ○ <u>Bending knees;</u> ○ <u>Feet are ‘quiet’ when landing;</u> ○ <u>Jumping on balls of the feet;</u> ○ <u>Looking forward;</u> ○ <u>Initiating jump when rope passes over head;</u> ○ <u>Jumping to a rhythm.</u> • <u>Critical elements of jumping forward and backward with a long rope (student-turn) include</u> <ul style="list-style-type: none"> ○ <u>Face the turner;</u> ○ <u>Watch rope;</u> ○ <u>Small jumps;</u> ○ <u>Bend knees;</u> ○ <u>Quiet feet during landing;</u> ○ <u>Jump on balls of the feet;</u> ○ <u>Keep the rhythm.</u> • <u>Critical elements of jumping and landing horizontally for distance and vertically for height include</u> <ul style="list-style-type: none"> ○ <u>Focus eyes ahead;</u> ○ <u>Bend knees in preparatory phase;</u> ○ <u>Bend at waist in preparatory phase;</u> ○ <u>Swing arms in full backward-forward motion;</u> ○ <u>Take off on two feet;</u> ○ <u>Explode forward (horizontal/distance);</u> 	

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<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none">○ <u>Explode up (vertical/height);</u>○ <u>Extend body in flight phase;</u>○ <u>Land on two feet;</u>○ <u>Soft landing/bend knees when landing.</u>	

Anatomical Basis of Movement

3.2 The student will identify major structures of the body, including body systems, muscles, and bones, and identify basic movement principles.

- a) Apply the concept of creating space while moving.
- b) Identify major muscles, including the hamstrings and triceps.
- c) Describe the components and function of the cardiorespiratory system, including the heart, lungs, and blood vessels.
- d) Identify major bones, including the femur, tibia, fibula, humerus, radius, and ulna.
- e) Identify one activity and the muscles and bones that help the body perform the activity.

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>Spatial awareness is knowing where the body is in space in relation to objects and other people. (3.2.a)</u></p> <ul style="list-style-type: none"> • <u>Moving to open space requires awareness and planning.</u> <p><u>Major muscles are important for movement and balance. (3.2.b)</u></p> <ul style="list-style-type: none"> • <u>Major muscles include</u> <ul style="list-style-type: none"> ○ <u>hamstrings;</u> ○ <u>triceps;</u> ○ <u>quadriceps;</u> ○ <u>biceps;</u> ○ <u>abdominals;</u> ○ <u>heart.</u> <p><u>Cardiorespiratory system includes heart, lungs, and blood vessels (3.2.c)</u></p> <ul style="list-style-type: none"> • <u>The heart beats to pump blood through the blood vessels to and from the lungs to carry oxygen to the organs of the body and waste products.</u> <p><u>Major bones are important for movement and balance. (3.2.d)</u></p> <ul style="list-style-type: none"> • <u>Major bones include</u> 	<p><u>In order to meet these standards, it is expected that students will</u></p> <ul style="list-style-type: none"> • <u>demonstrate moving to open spaces during low organized activity and/or skill development (3.2.a);</u> • <u>identify pictures of hamstrings and triceps and where the muscles are located on the body (3.2.b);</u> • <u>identify the parts of the cardiorespiratory system (3.2.c);</u> • <u>describe the path of oxygen through the cardiorespiratory system (3.2.c);</u> • <u>identify pictures of the femur, tibia, fibula, humerus, radius, and ulna and where the bones are located on the body (3.2.d);</u>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> ○ <u>skull;</u> ○ <u>ribs;</u> ○ <u>spine;</u> ○ <u>femur;</u> ○ <u>tibia;</u> ○ <u>fibula;</u> ○ <u>humerus;</u> ○ <u>radius;</u> ○ <u>ulna.</u> <ul style="list-style-type: none"> • <u>Additional bones and muscles may be included.</u> <p><u>Bones work with muscles to produce movement. (3.2.e)</u></p> <ul style="list-style-type: none"> • <u>Examples:</u> <ul style="list-style-type: none"> ○ <u>hopping involves leg muscles and bones quadriceps, hamstrings, femur, tibia, and fibula;</u> ○ <u>curl-ups involve abdominals and spine.</u> 	<ul style="list-style-type: none"> • <u>select one activity and list the muscles and bones that help the body perform the activity (3.2.e).</u> <p><u>Additional resources:</u> <u>SHAPE America National Standards and Grade-Level Outcomes</u> <u>OPEN Online Physical Education Network</u> <u>Health Smart Virginia</u> <u>PECentral</u> <u>Dynamic PE ASAP</u> <u>KidsHealth.org</u></p>

Fitness Planning

3.3 The student will describe and explain how to measure each of the components of health-related fitness.

- a) Explain the health-related components of fitness (i.e., cardiorespiratory endurance, muscular strength, muscular endurance, flexibility, and body composition).
- b) Identify one physical activity to improve each component of health-related fitness.
- c) Demonstrate one activity for each component of health-related fitness.
- d) Participate in four or more activities and reach a moderate to vigorous physical activity (MVPA) range for each activity.
- e) Identify the carotid artery and the radial artery for measuring heart rate.

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>Physical fitness can be evaluated by measuring each component (3.3.a).</u> <u>Each health-related component of fitness can be maintained or improved by physical activity. (3.3.a)</u></p> <p><u>Health-related components of fitness are important for disease prevention and functional health. (3.3.a)</u></p> <ul style="list-style-type: none"> • <u>Cardiorespiratory endurance is the ability of the heart, lungs, and blood vessels to deliver oxygen to muscles during prolonged exercise.</u> • <u>Muscular strength is the ability to exert a maximal amount of force for a short period of time such as lifting objects.</u> • <u>Muscular endurance is the ability to do something over and over for an extended period of time without getting tired like jogging/running and biking.</u> • <u>Flexibility allows joints to move through range of motion (muscles work with bones for movement.)</u> • <u>Body composition includes body weight and the relative amounts of muscle, fat, bone, and other vital tissues of the body.</u> <p><u>Health-related fitness tests or assessments include (3.3.b)</u></p>	<p><u>In order to meet these standards, it is expected that students will</u></p> <ul style="list-style-type: none"> • <u>describe/identify the health-related components of fitness (3.3.a);</u> • <u>identify/name/list one measure for each component of health-related fitness (3.3.b);</u> • <u>participate in fitness tests to practice form and make connections to the importance of health-related fitness components (NOTE: Test results should not be a focus; it is an inappropriate practice to grade students on fitness test results.);</u> • <u>demonstrate one activity for each component of health-related fitness (3.3.c);</u> • <u>identify/describe three levels of exercise intensity for at least 4 different activities (3.3.d);</u> • <u>identify and describe physiological changes as intensity increases such as sweating,</u>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> • <u>Cardiorespiratory endurance</u> <ul style="list-style-type: none"> ◦ <u>step test</u> ◦ <u>PACER</u> • <u>Muscular strength and muscular endurance</u> <ul style="list-style-type: none"> ◦ <u>plank</u> ◦ <u>push-ups</u> ◦ <u>curl ups</u> • <u>Flexibility</u> <ul style="list-style-type: none"> ◦ <u>sit and reach</u> ◦ <u>shoulder stretch</u> • <u>Body composition</u> <ul style="list-style-type: none"> ◦ <u>Body Mass Index (BMI) based on height and weight; a high BMI can be an indicator of high body fatness; can be used to screen for weight categories that may lead to health problems, but it is not diagnostic of the body fatness or health of an individual (CDC)</u> ◦ <u>Body circumference measurements – may include neck, waist, and hips</u> ◦ <u>Bioelectrical Impedance Analysis - person places hands on a device for about 20 seconds that runs a small current of electricity through the body to gauge body composition</u> ◦ <u>Waist Hip Ratio - calculated by dividing waist measurement by hip measurement; WHR= waist circumference / hip circumference</u> ◦ <u>Waist circumference</u> <p><u>Activities for components of health-related fitness may include (3.3.c)</u></p> <ul style="list-style-type: none"> • <u>Cardiorespiratory endurance</u> 	<p><u>increased heart rate and increased respiration (3.3.d);</u></p> <ul style="list-style-type: none"> • <u>use heart rate to distinguish between moderate and vigorous activities (3.3.d, 3.3.e).</u> <p><u>Additional resources:</u> <u>SHAPE America National Standards and Grade-Level Outcomes</u> <u>OPEN Online Physical Education Network</u> <u>Health Smart Virginia</u> <u>PECentral</u> <u>Dynamic PE ASAP</u> <u>KidsHealth.org</u> <u>American Heart Association</u></p>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> o <u>walking</u> o <u>jogging</u> o <u>running</u> o <u>biking</u> • <u>Muscular strength and muscular endurance</u> <ul style="list-style-type: none"> o <u>plank</u> o <u>push-ups</u> o <u>curl ups</u> o <u>resistance activities</u> • <u>Flexibility</u> <ul style="list-style-type: none"> o <u>static stretching</u> o <u>yoga exercises</u> • <u>Body composition</u> <ul style="list-style-type: none"> o <u>burpees</u> o <u>jumping jacks</u> o <u>other full-body exercises</u> <p><u>Moderate to vigorous physical activity is needed for energy balance and overall physical health. (3.3.d)</u></p> <p><u>Intensity levels help a person understand how hard their body is working during physical activity. (3.3.d)</u></p> <p><u>Sixty minutes of moderate to vigorous physical activity (MVPA) is recommended for children and refers to the level of exercise intensity. (3.3.d)</u></p> <ul style="list-style-type: none"> • <u>Exercise intensity levels may include low (walking slowly, you can talk and sing), moderate (walking briskly, you can talk but not sing during</u> 	

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<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>the activity), and vigorous (jumping rope; not be able to say more than a few words without pausing for a breath.)</u></p> <p><u>Blood vessels such as arteries supply oxygen to the body when the heart pumps the blood. The more intense the exercise, the more the heart pumps, the faster blood is pumped through the arteries. This is called a pulse. (3.3.e)</u></p> <ul style="list-style-type: none"> • <u>The pulse can be measured at the carotid artery or the radial artery.</u> <ul style="list-style-type: none"> ○ <u>The carotid artery is in the neck and supplies blood to the brain, neck, and face.</u> ○ <u>The radial artery is in the wrist.</u> 	

Social and Emotional Development

3.4 The student will demonstrate an understanding of the purposes for rules, procedures, and respectful behaviors while in various physical activity settings.

- a) Explain the importance of rules for activities.
- b) Participate in the development of classroom rules and guidelines for appropriate behavior that support a positive, safe, and inclusive environment in physical activity settings.
- c) Describe the importance of cooperating and working with peers to achieve a goal.
- d) Implement teacher feedback to improve performance.
- e) Provide clear and specific feedback to a classmate to improve performance in an individually selected physical activity opportunity.
- f) Describe how group and individual physical activity can bring enjoyment to self and peers.
- g) Differentiate between inclusive and non-inclusive activities/environments.

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>Activity rules are important for safe participation, safe learning, and inclusion of all students. (3.4.a)</u></p> <p><u>Student input for class rules and procedures for a positive environment may include (3.4.b)</u></p> <ul style="list-style-type: none"> • <u>appropriate language use</u> • <u>how to enter and exit class</u> <p><u>Student input for class rules and procedures for a safe environment may include (3.4.b)</u></p> <ul style="list-style-type: none"> • <u>how to enter and exit class;</u> • <u>following directions;</u> • <u>activity-specific rules;</u> • <u>how to participate safely in emergency drills;</u> • <u>rules for equipment (distribution, use, and collection);</u> 	<p><u>In order to meet these standards, it is expected that students will</u></p> <ul style="list-style-type: none"> • <u>provide/identify reasons that rules for activities are important (3.4.a);</u> • <u>provide teacher with recommendations for class rules and procedures (3.4.b);</u> • <u>demonstrate class rules and procedures (3.4.b);</u> • <u>describe cooperation (3.4.c);</u> • <u>demonstrate cooperative skills (3.4.c);</u> • <u>describe how teacher feedback was used to improve performance of a skill (3.4.d);</u> • <u>use critical skill elements to provide appropriate feedback to a classmate (3.4.e);</u>

<ul style="list-style-type: none">• <u>use of space (boundaries, spatial awareness, and moving in personal and general space.)</u> <p><u>Student input for class rules and procedures for an inclusive environment may include (3.4.b)</u></p> <ul style="list-style-type: none">• <u>how to greet people;</u>• <u>how to choose partners or groups;</u>• <u>steps for showing respect.</u> <p><u>Cooperation is important when achieving a goal. Cooperation includes but is not limited to (3.4.c)</u></p> <ul style="list-style-type: none">• <u>encouraging others;</u>• <u>sharing showing concern;</u>• <u>working together.</u> <p><u>Feedback is information about performance of a skill or task that may include what is done well and what may need improvement. Feedback is important to learning and improvement of challenging skills. (3.4.d, 3.4.e)</u></p> <p><u>Choosing a variety of physical activities that are enjoyable help people be physically active every day. (3.4.f)</u></p> <p><u>Practicing identifying the needs of others and asking respectful questions of peers can help create an environment and activities that are inclusive. (3.4.g)</u></p> <ul style="list-style-type: none">• <u>Students will learn to look for signs that an environment or activity is inclusive such as:</u><ul style="list-style-type: none">○ <u>whether all students are participating;</u>○ <u>if anyone is in an unsafe situation.</u>	<ul style="list-style-type: none">• <u>describe one group physical activity to participate in for enjoyment (3.4.f);</u>• <u>reflect about whether they felt accepted, belonging, and valued during activities or in environments (3.4.g);</u>• <u>identify and describe inclusive and non-inclusive environments (3.4.g).</u> <p><u>Additional resources:</u></p> <p><u>SHAPE America National Standards and Grade-Level Outcomes</u></p> <p><u>OPEN Online Physical Education Network</u></p> <p><u>Health Smart Virginia</u></p> <p><u>PE Central</u></p> <p><u>Dynamic PE ASAP</u></p> <p><u>EverFi</u></p> <p><u>KidsHealth.org</u></p>
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Energy Balance

3.5 The student will describe energy balance.

- a) Explain that energy balance relates to good nutrition (energy in) and physical activity (energy out).
- b) Identify one food per group to create a healthy meal that meets USDA guidelines.
- c) Identify healthy hydration choices and the amount of water needed for the body to function, using the formula of one ounce of water per two pounds of body weight.
- d) Identify the macronutrients (i.e., fat, protein, carbohydrates).
- e) Identify foods that are beneficial before and after physical activity.

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>Energy balance relates to good nutrition (energy in) and physical activity (energy out.) (3.5.a)</u></p> <ul style="list-style-type: none"> • <u>Energy balance involves the consumption of food and drinks from the five food groups that provide the body the energy it needs in order to perform physical activity/movement.</u> <p><u>A healthy meal contains one food from each food group. An example of a healthy meal could be (3.5.b)</u></p> <ul style="list-style-type: none"> • <u>Peanut butter and banana sandwich (whole-wheat bread [grain], peanut butter [protein], banana slices [fruit]), celery sticks [vegetables], and low-fat milk [dairy].</u> <p><u>Drinking enough water every day is good for overall health. (3.5.c)</u></p> <ul style="list-style-type: none"> • <u>Although daily fluid intake can come from a variety of foods and beverages, drinking plain water is the healthiest form of hydration as it has zero calories and no added sugar.</u> • <u>The amount of water needed varies by person. Following the formula of an ounce of water per two pounds of body weight, a 70lb child would need at least 35oz of water per day.</u> 	<p><u>In order to meet these standards, it is expected that students will</u></p> <ul style="list-style-type: none"> • <u>explain energy balance as it relates to good nutrition and physical activity (3.5.a);</u> • <u>identify/select one food per USDA food group to design a healthy meal (3.5.b);</u> • <u>identify/select healthy hydration choices (3.5.c);</u> • <u>identify the amount of water needed for the body to function (3.5.c);</u> • <u>identify/select the macronutrients (fat, protein, carbohydrates) (3.5.d);</u> • <u>identify/select foods that are beneficial before and after physical activity (3.5.e).</u> <p><u>Additional resources:</u></p>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>Macronutrients are nutrients the body needs in larger amounts to function properly and include fat (avocados, walnuts), protein (eggs, beans fish), and carbohydrates (oatmeal, bread, pasta.) (3.5.d, 3.5.e)</u></p> <p><u>Foods that are beneficial for before activity are quickly digested. Foods that are beneficial for after activity are lower in sugar. Foods that are more beneficial before and after physical activity may include (3.5.e):</u></p> <ul style="list-style-type: none"> • <u>Before</u> <ul style="list-style-type: none"> ○ <u>granola bars,</u> ○ <u>trail mix,</u> ○ <u>unsweetened applesauce.</u> • <u>After</u> <ul style="list-style-type: none"> ○ <u>protein bars,</u> ○ <u>peanut butter and banana sandwich,</u> ○ <u>turkey and cheese sandwich.</u> 	<p><u>SHAPE America National Standards and Grade-Level Outcomes</u></p> <p><u>OPEN Online Physical Education Network</u></p> <p><u>Health Smart Virginia</u></p> <p><u>PE Central</u></p> <p><u>American Heart Association</u></p> <p><u>KidsHealth.org</u></p> <p><u>MyPlate.gov</u></p>

GRADE FOUR

In grade four, students make continuous progress across all fundamental motor patterns. Proficient movement patterns are possible as students combine locomotor and manipulative skills in increasingly complex situations. Students create sequences in educational dances and gymnastics. They apply movement concepts and principles and knowledge of anatomical structures in individual movement performances, and tactical strategies in modified activities. Fitness assessment is appropriate at this grade level, and students interpret the results of their assessments and set personal goals based on the results. Student’s exhibit appropriate etiquette, integrity, and conflict-resolution skills, and they apply proper rules and procedures.

Motor Skill Development

4.1 The student will refine movement skills and demonstrate the ability to combine them in increasingly complex movement environments/activities.

- a) Demonstrate progression toward the use of all critical elements for specialized locomotor, non-locomotor, and manipulative skill combinations in small-sided games, modified sports activities, and lifetime activities, including overhand and underhand throwing and catching with a partner while moving to open spaces, overhand and underhand throwing to a target for distance, dribbling with non-dominant/non-preferred hand while walking at various speeds to open spaces, underhand volleying, catching thrown objects, striking a ball with short and long implement with force and control, and underhand volleying/striking, dribbling and passing a soccer ball with varying speed while moving to open spaces with control.
- b) Create and perform an educational gymnastic sequence that combines four or more of the following movements: traveling, balancing, rolling, and other types of weight transfer with smooth transitions from one movement to the other.
- c) Create and perform a routine to music that has smooth transitions with an apparent beginning, middle, and end, and integrate shapes, levels, pathways, and locomotor patterns.
- d) Perform a jump rope routine/challenge (e.g., self-turn, long rope, jump bands).
- e) Demonstrate the use of pacing, speed, and endurance in a variety of activities.

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<u>Manipulative and movement skills can be broken down into smaller parts/critical elements to improve proficiency. Developmentally appropriate movement includes performance of all critical elements. Eye-hand and eye-</u>	<u>In order to meet these standards, it is expected that students will</u> <ul style="list-style-type: none"> • <u>demonstrate critical elements for specialized locomotor, non-locomotor, and</u>

<p><u>foot skills are performed in isolation, games, and modified sports activities. (4.1.a, 4.1.b)</u></p> <ul style="list-style-type: none"> • <u>Overhand throw</u> <ul style="list-style-type: none"> ○ <u>Non-throwing shoulder toward target;</u> ○ <u>Step to target with opposite foot;</u> ○ <u>Throwing arm raised in backswing;</u> ○ <u>Rotate hips during throw;</u> ○ <u>Weight shifts from back to front foot;</u> ○ <u>Throwing arm follows through to target with wrist to opposite knee.</u> • <u>Catch from throw</u> <ul style="list-style-type: none"> ○ <u>Watch the ball all the way into the hands;</u> ○ <u>Arms in front of body, elbows flexed;</u> ○ <u>Place body in the path of the object;</u> ○ <u>Arms extend to reach for ball;</u> ○ <u>Thumbs in for catch above the waist;</u> ○ <u>Thumbs out for catch at or below the waist;</u> ○ <u>One foot slightly in front of the other (balanced stance);</u> ○ <u>Catch with hands only; no cradling against the body;</u> ○ <u>Pull the ball in to the body as the catch is made;</u> ○ <u>Relax and absorb the force of the object.</u> • <u>Toss, Underhand Throw, Underhand Roll to partner/target</u> <ul style="list-style-type: none"> ○ <u>Face the target;</u> ○ <u>Eye on target;</u> ○ <u>Use a backward-forward arm swing (tick-tock swing);</u> ○ <u>Step with opposite foot as tossing/throwing/rolling arm moves forward;</u> 	<p><u>manipulative skill combinations in small-sided games, modified sports activities, and lifetime activities, including overhand and underhand throwing and catching with a partner while moving to open spaces, overhand and underhand throwing to a target for distance, dribbling with non-dominant/non-preferred hand while walking at various speeds to open spaces, underhand volleying, catching thrown objects, striking a ball with short and long implement with force and control, and underhand volleying/striking, dribbling and passing a soccer ball with varying speed while moving to open spaces with control (4.1.a);</u></p> <ul style="list-style-type: none"> • <u>explain the relationship between force and speed (4.1.a);</u> • <u>explain the impact force has on manipulative skills such as striking, throwing, and dribbling with feet (4.1.a);</u> • <u>demonstrate use of force needed to dribble with non-dominant/non-preferred hand while maintaining control (4.1.a);</u> • <u>create and perform a continuous educational gymnastic sequence that combines four or more of the following movements: traveling, balancing, rolling, and other types of weight transfer (4.1.b);</u>
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<ul style="list-style-type: none"> ○ <u>Release ball between knee and waist level during upward swing for throw;</u> ○ <u>Bend at hip (roll);</u> ○ <u>Release ball under knee for roll;</u> ○ <u>Follow through with hand pointing to the target.</u> • <u>Dribble with hands while finding space at different speeds</u> <ul style="list-style-type: none"> ○ <u>Head up looking for open space;</u> ○ <u>Pads of fingers contact top of ball;</u> ○ <u>Firm and flexible wrist as hand pushes ball to floor;</u> ○ <u>Hand absorbs ball slightly on return;</u> ○ <u>Waist height bounce;</u> ○ <u>Ball slightly in front of body;</u> ○ <u>Knees bent slightly with dribbling arm close to the body.</u> • <u>Underhand volley</u> <ul style="list-style-type: none"> ○ <u>Shoulders facing target;</u> ○ <u>One foot slightly ahead of other;</u> ○ <u>Tick tock swing movement with volleying hand;</u> ○ <u>Contact ball with palm;</u> ○ <u>Contact occurs at waist-level;</u> ○ <u>Follow through upwards;</u> ○ <u>Track the ball with eyes;</u> ○ <u>Move body into position for next contact;</u> ○ <u>Continuous volley.</u> • <u>Volley objects with short handled implement</u> <ul style="list-style-type: none"> ○ <u>Shake hands with the paddle;</u> ○ <u>Firm grip and wrist;</u> 	<ul style="list-style-type: none"> • <u>create and perform a partner dance sequence with an apparent beginning, middle, and end that integrates shapes, levels, pathways, and locomotor patterns (4.1.c);</u> • <u>create and perform a jump-rope routine (self-turn or long rope) (4.1.d);</u> • <u>demonstrate the use of pacing, speed, and endurance in a variety of activities (4.1.e);</u> • <u>demonstrate the ability to self-pace in a cardiovascular endurance activity (4.1.e).</u> <p><u>Additional resources:</u> <u>SHAPE America National Standards and Grade-Level Outcomes</u> <u>OPEN Online Physical Education Network</u> <u>Health Smart Virginia</u> <u>PE Central</u> <u>Dynamic PE ASAP</u></p>
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<ul style="list-style-type: none">○ <u>Contact occurs at waist-level;</u>○ <u>Hit with a flat surface at center of paddle or racket;</u>○ <u>Follow through toward target.</u>○ <u>Track the ball with eyes;</u>○ <u>Move body into position for next contact;</u>○ <u>Continuous volley.</u> • <u>Strike/bat a ball off a tee</u><ul style="list-style-type: none">○ <u>Non-dominant hand grips the bottom of the long handled implement with dominant hand stacked above with knuckles in line with each other;</u>○ <u>Side to target (non-throwing arm closest to target);</u>○ <u>Knees slightly bent;</u>○ <u>Eyes follow ball to center of striking implement from start to finish;</u>○ <u>Step towards target with opposite foot;</u>○ <u>Striking arm way back;</u>○ <u>Weight transfer from back foot to front foot;</u>○ <u>Rotate hips;</u>○ <u>Wrist unlocks on follow-through for completion of striking action.</u> • <u>Kick a moving ball</u><ul style="list-style-type: none">○ <u>Eyes focused on ball throughout kick;</u>○ <u>Contact the ball with shoelaces (not toes);</u>○ <u>Contact behind the center of the ball for low level kick;</u>○ <u>Contact ball below the center of the ball for travel in air;</u>○ <u>Non-kicking foot plants beside the ball;</u>○ <u>Forward and sideward swing of arm opposite kicking leg;</u>	
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<ul style="list-style-type: none">○ <u>Hips and shoulders rotate forward;</u>○ <u>Kicking foot follows through towards target area.</u>• <u>Dribble (foot)</u><ul style="list-style-type: none">○ <u>Knees slightly bent;</u>○ <u>Push the center of the ball with shoelaces, inside of the foot, or outside of foot;</u>○ <u>Contact behind the center of the ball;</u>○ <u>Ball stays close to feet/soft touches;</u>○ <u>Tap with both feet-to move ball forward;</u>○ <u>Head up, eyes looking forward using peripheral vision to see the ball;</u>○ <u>Stay light on your feet with weight on toes.</u>• <u>Passing to a partner/stationary target</u><ul style="list-style-type: none">○ <u>Non-kicking foot beside the ball;</u>○ <u>Use inside of foot;</u>○ <u>Step to the target;</u>○ <u>Contact behind the center of the ball;</u>○ <u>Firm and controlled pass;</u>○ <u>Follow through toward target.</u> <p><u>Force is strength or energy exerted. (4.1.a)</u></p> <ul style="list-style-type: none">• <u>Using increased force (hard) with manipulatives may include throwing for a farther distance or striking harder to make the ball go farther.</u>• <u>Using decreased force (soft) with manipulatives may include throwing easier over a shorter distance or to improve accuracy to a target.</u>• <u>Control includes ability to use more or less force as needed for intended target or outcome.</u>	
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Movement proficiency includes maintaining balance in a variety of movements such as traveling, rolling, and weight transfer, during an educational gymnastics sequence. (4.1.b)

Movement competency involves patterns. Patterns include dance sequences with a beginning, middle, and end that integrates shapes, levels, pathways, and locomotor patterns. (4.1.c)

Jumping rope helps with cardiorespiratory endurance, strengthening the heart, and helps with coordination. Jump rope activities can include short and long ropes and a variety of types of jumps. (4.1.d)

Pacing is the rate of movement or performance usually in reference to achieving a goal of time or distance. Speed is the rate at which someone is able to move; swiftness or rate of performance or action. Endurance is the ability to sustain a prolonged stressful effort or activity; relates to an activity or sporting event that takes place over a long distance. (4.1.e)

Anatomical Basis of Movement

4.2 The student will identify major structures and begin to apply knowledge of anatomy to explain movement patterns.

- a) Identify the major components of the cardiorespiratory system and describe the relationship between the heart, lungs, and blood vessels.
- b) Identify the major muscle groups, including the deltoid and gluteal.
- c) Identify the major components of the skeletal system, including the sternum, vertebrae, patellae, and phalanges.
- d) Locate the radial and/or carotid pulse.
- e) Identify the bones and muscles needed to perform one fitness activity and one skilled movement.
- f) Apply the concept of closing space during movement sequences.

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>The cardiorespiratory system carries oxygen to the muscles and organs of the body and removes waste products. (4.2.a)</u></p> <ul style="list-style-type: none"> • <u>Components of the cardiorespiratory system include</u> <ul style="list-style-type: none"> o <u>the heart;</u> <ul style="list-style-type: none"> ▪ <u>acts as a pump to send blood to the lungs for oxygen</u> ▪ <u>pumps oxygenated blood to muscles and organs.</u> o <u>lungs;</u> <ul style="list-style-type: none"> ▪ <u>take in oxygen through breathing</u> ▪ <u>put oxygen in blood vessels</u> o <u>blood vessels.</u> <ul style="list-style-type: none"> ▪ <u>arteries that carry blood with oxygen from the heart to muscles</u> ▪ <u>organs and veins that carry blood without oxygen back to heart</u> <p><u>Major muscles are important for movement. (3.2.b)</u></p> <ul style="list-style-type: none"> • <u>Major muscles include</u> <ul style="list-style-type: none"> o <u>hamstrings;</u> 	<p><u>In order to meet these standards, it is expected that students will</u></p> <ul style="list-style-type: none"> • <u>identify the major components of the cardiorespiratory system, to include heart, lungs, and blood vessels and describe how they function together (4.2.a);</u> • <u>identify major muscle groups, to include deltoid and gluteal (4.2.b);</u> • <u>identify major components of the skeletal system, to include sternum, vertebrae, patella, and phalange (4.2.c);</u> • <u>locate radial and/or carotid pulse (4.2.d);</u> • <u>identify the bones and muscles needed to perform one fitness activity and one skilled movement (4.2.e);</u> • <u>approach a defender using a controlled movement pattern to close space (4.2.f).</u>

Proposed 2022 Physical Education Standards of Learning Curriculum Framework

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> ○ <u>triceps;</u> ○ <u>quadriceps;</u> ○ <u>biceps;</u> ○ <u>abdominals;</u> ○ <u>heart;</u> ○ <u>deltoid;</u> ○ <u>gluteal</u> <p><u>Bones provide shape and support for the body, as well as protection for some organs. (4.2.c)</u></p> <ul style="list-style-type: none"> • <u>Major bones include</u> <ul style="list-style-type: none"> ○ <u>skull;</u> ○ <u>ribs;</u> ○ <u>spine;</u> ○ <u>femur;</u> ○ <u>tibia;</u> ○ <u>fibula;</u> ○ <u>humerus;</u> ○ <u>radius;</u> ○ <u>ulna;</u> ○ <u>sternum;</u> ○ <u>vertebrae;</u> ○ <u>patella;</u> ○ <u>phalange.</u> • <u>Additional bones and muscles may be included.</u> <p>pulse can be found on different places of the body</p>	<p><u>Additional resources:</u></p> <p><u>SHAPE America National Standards and Grade-Level Outcomes</u></p> <p><u>OPEN Online Physical Education Network</u></p> <p><u>Health Smart Virginia</u></p> <p><u>PECentral</u></p> <p><u>Dynamic PE ASAP</u></p> <p><u>KidsHealth.org</u></p>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>The pulse in a measure of heart rate, or the number of times your heart beats in one minute. This can be measured through the radial and carotid artery. The pulse can be found on different places of the body. (4.2.d)</u></p> <ul style="list-style-type: none"> • <u>The radial artery is located on the inside of the wrist near the side of the thumb.</u> • <u>The carotid artery found in the neck between the windpipe and neck muscle, and just under the lower jawbone.</u> <p><u>Bones work with muscles to produce movement. (4.2.e) Examples include but are not limited to</u></p> <ul style="list-style-type: none"> • <u>running.</u> <ul style="list-style-type: none"> o <u>leg muscles (quadriceps, hamstrings);</u> o <u>bones (femur, tibia, fibula, and patella);</u> o <u>abdominals and vertebrae help provide balance.</u> <p><u>The ability to stop/confront/tag/play defense in an activity or game requires the ability to move and close spaces. (4.2.f)</u></p> <ul style="list-style-type: none"> • <u>Closing space requires awareness and planning.</u> • <u>Spatial awareness is knowing where the body is in space in relation to objects and other people.</u> • <u>Small-side games allow students to learn how to guard a peer for defense and not guard a peer while on offense.</u> 	

Fitness Planning

4.3 The student will apply knowledge of health-related fitness, gather and analyze data, and set measurable goals to improve fitness levels.

- a) Describe the components of health-related fitness (i.e., cardiorespiratory endurance/aerobic capacity, muscular strength and endurance, flexibility, body composition) and list at least three physical activities associated with each component.
- b) Analyze personal baseline data using data from a standardized health-related criterion-referenced test (e.g., Virginia wellness-related criterion-referenced fitness standards).
- c) Create a SMART (specific, measurable, attainable, realistic, timely) goal for at least one health-related component of fitness to improve or maintain fitness level.
- d) Identify two physical activities that can be done at school and two physical activities that can be done at home to meet fitness goals.
- e) Analyze post-fitness testing results and reflect on goal progress/attainment.
- f) Define the FITT (frequency, intensity, time, and type of exercise) principles.
- g) Calculate resting and activity heart rate during a variety of physical activities.

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>Health-related components of fitness are important for disease prevention and functional health. (4.3.a) Activities to support each component can be done at home and/or at school. (4.3.d)</u></p> <ul style="list-style-type: none"> • <u>Cardiorespiratory endurance is the ability of the heart, lungs, and blood vessels to deliver oxygen to muscles during prolonged exercise. Activities may include</u> <ul style="list-style-type: none"> ○ <u>running;</u> ○ <u>jogging;</u> ○ <u>swimming;</u> ○ <u>cycling.</u> • <u>Muscular strength is the ability to exert a maximal amount of force for a short period of time such as lifting objects. Activities may include</u> <ul style="list-style-type: none"> ○ <u>lifting weights;</u> 	<p><u>In order to meet these standards, it is expected that students will</u></p> <ul style="list-style-type: none"> • <u>describe the components of health-related fitness and list associated measurements (4.3.a);</u> • <u>analyze baseline data from a standardized health-related criterion-referenced test (Virginia wellness-related criterion-referenced fitness standards, CDC guidelines) (4.3.b);</u> • <u>student-created SMART goal for at least one health-related component of fitness to improve or maintain fitness level (4.3.c)</u>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> ○ <u>resistance band activities;</u> ○ <u>weighted squats;</u> ○ <u>walking up a steep hill.</u> • <u>Muscular endurance is the ability to do something over and over for an extended period of time without getting tired. Activities may include</u> <ul style="list-style-type: none"> ○ <u>elongated time in a static hold such as a plank;</u> ○ <u>high repetitions of a dynamic activity such as push-ups, squats and curl-ups.</u> • <u>Flexibility allows joints to move through range of motion as muscles work with bones for movement. Activities may include</u> <ul style="list-style-type: none"> ○ <u>stretching;</u> ○ <u>yoga;</u> ○ <u>tai chi.</u> • <u>Body composition includes body weight and the relative amounts of muscle, fat, bone, and other vital tissues of the body. Activities may include</u> <ul style="list-style-type: none"> ○ <u>burpees;</u> ○ <u>jumping jacks;</u> ○ <u>other full-body exercises.</u> • <u>Body Mass Index (BMI) based on height and weight.</u> <p><u>Baseline and post data can be analyzed and compared to determine areas of improvement/progress as well as design future programs. (4.3.b)</u></p> <p><u>SMART goals can be used to target and improve one or multiple areas of health-related fitness. (4.3.c)</u></p> <ul style="list-style-type: none"> • <u>SMART goal statements are specific, measurable, attainable, realistic, and timely.</u> 	<ul style="list-style-type: none"> • <u>identify/list activities that can be done at school and activities that can be done at home to meet fitness goals (4.3.d)</u> • <u>analyze post-fitness testing results and reflect (written or oral) on goal progress/attainment (4.3.e)</u> • <u>describe the FITT principle:</u> <ul style="list-style-type: none"> ○ <u>Frequency: How often you do the physical activity (days per week)?</u> ○ <u>Intensity: How hard your body is working during physical activity (light, moderate, vigorous)?</u> ○ <u>Time: How long you spend doing the physical activity?</u> ○ <u>Type: The kind of activity you choose to gain a specific benefit (example, jogging, swimming, biking, body weight exercises, yoga, etc.) (4.3.f)</u> • <u>measure active and resting heart rate using the carotid or radial pulse during a variety of exercises (4.3.g)</u> <p><u>Additional resources:</u> <u>Health Smart Virginia</u> <u>OpenPhyzed</u> <u>Focused Fitness</u> <u>American Heart Association</u></p>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p>Baseline and post data can be analyzed and compared to determine areas of improvement/progress as well as design future programs. <u>(4.3.e)</u></p> <ul style="list-style-type: none"> • <u>Note: Fitness assessments should be conducted at the end of the school year for the purposes of student reflection on goal progress/attainment and state reporting.</u> <p><u>FITT principle - frequency, intensity, time, and type – is a “formula” for planning what kind of physical activity/activities, how often to do the activities, how hard, and for how long to meet fitness goals. (4.3.f)</u></p> <p><u>Heart rate can be calculated by measuring the pulse at the carotid or radial artery. (4.3.g)</u></p> <ul style="list-style-type: none"> • <u>The pulse can be measured at the carotid artery or the radial artery.</u> <ul style="list-style-type: none"> ○ <u>The carotid artery is in the neck and supplies blood to the brain, neck, and face.</u> ○ <u>The radial artery is in the wrist.</u> 	

Social and Emotional Development

4.4 The student will demonstrate positive interactions with others in cooperative and competitive physical activities.

- a) Identify a group goal and the strategies needed for successful completion while working-productively and respectfully with others.
- b) Identify and demonstrate conflict-resolution strategies for positive solutions in resolving disagreements in physical activity settings.
- c) Define *etiquette* and demonstrate appropriate behavior when participating in physical activity settings as well as application of rules and procedures.
- d) Define *integrity* and describe its importance in a physical activity setting.
- e) Identify how participation in physical activity improves mood and positively impacts the brain.
- f) Differentiate and communicate about activities that facilitate feelings of inclusion and those that do not.

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>Cooperative strategies for groups may include verbalizing and justifying ideas, active listening, being respectful of others, considering others’ perspectives, handling conflicts, collaborating, building consensus, and accepting responsibility (4.4.a).</u></p> <p><u>Conflict resolution skills may include (4.4.b)</u></p> <ul style="list-style-type: none"> • <u>ability to reduce own stress quickly – calming oneself before addressing the conflict;</u> • <u>being emotionally aware of the feelings of self and the other person;</u> • <u>stating what the conflict;</u> • <u>communication skills;</u> <ul style="list-style-type: none"> ○ <u>listening carefully to others;</u> ○ <u>speaking directly to each other;</u> ○ <u>speaking honestly, and kind;</u> • <u>proposing solutions or compromises;</u> • <u>agreeing on solution or compromise to try.</u> 	<p><u>In order to meet these standards, it is expected that students will</u></p> <ul style="list-style-type: none"> • <u>list a group goal and the strategies used for successfully meeting the goal (4.4.a);</u> • <u>list conflict-resolution strategies and one example for using the strategies (4.4.b);</u> • <u>define etiquette (4.4.c);</u> • <u>demonstrate appropriate etiquette and application of rules and procedures for physical activities (4.4.c);</u> • <u>define integrity and describe the importance of integrity in a physical activity setting (4.4.d);</u>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>Etiquette is the rules indicating the proper and polite way to behave. (4.4.c)</u></p> <ul style="list-style-type: none"> • <u>Example: Taking turns when playing golf.</u> • <u>Demonstrating etiquette looks like:</u> <ul style="list-style-type: none"> ○ <u>following established rules for an activity;</u> ○ <u>allowing full participation by all individuals;</u> ○ <u>using appropriate language during the activity.</u> <p><u>Integrity is the quality of being honest and fair. Integrity in physical activity settings allow for inclusive, fair, and safe participation for all participants. (4.4.d)</u></p> <p><u>Regular exercise helps a person’s brain process information and emotions more easily (4.4.e).</u></p> <p><u>Self-reflection allows students to identify whether they felt acceptance, belonging and valued during activities or in environments. (4.4.f)</u></p>	<ul style="list-style-type: none"> • <u>evaluate through self-reflection mood and focus before and after physical activity (4.4.e);</u> • <u>define inclusion (4.4.f);</u> • <u>define the three tenets of inclusion: acceptance, belonging, and value (4.4.f);</u> • <u>reflect on personal experiences when they felt, and did not feel, included (4.4.f).</u> <p><u>Additional resources:</u> Health Smart Virginia OpenPhyzed EverFi</p>

Energy Balance

4.5 The student will explain the nutrition and activity components of energy balance.

- a) Define *calorie* and identify the number of calories per gram of fat (nine), protein (four), and carbohydrates (four).
- b) Explain the uses of salt and sugar and the harm of excessive salt and sugar intake.
- c) Identify examples of each macronutrient (i.e., fat, protein, carbohydrates).
- d) Calculate the calories per gram of macronutrients for various foods.
- e) Explain the importance of hydration.
- f) Compare and contrast a variety of different hydration choices.
- g) Explain the role of moderate to vigorous physical activity (MVPA) for energy balance.
- h) Identify different portion sizes for each food group.

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>Calories in food provide energy in the form of heat. The body stores and “burns” calories as fuel for body functions. (4.5.a)</u></p> <ul style="list-style-type: none"> • <u>A calorie is a unit of measurement or unit of energy; an amount of food having a heat-producing or energy-producing value in food when oxidized in the body.</u> • <u>Number of calories per gram of each macronutrient: fat - 9, protein - 4, and carbohydrates – 4.</u> <p><u>Salt and sugar are often added to foods and drinks to enhance flavor (4.5.b).</u></p> <ul style="list-style-type: none"> • <u>Salt/sodium is used by the body to maintain fluid levels and is necessary for the health of the heart, liver, and kidneys. Too much salt/sodium can increase risk for high blood pressure and can lead to heart and other diseases.</u> • <u>Sugars are carbohydrates and serve as the main energy source for the body. Excess sugar can lead to unhealthy cravings and obesity, which puts a child at risk for developing high blood pressure, elevated cholesterol levels and type 2 diabetes.</u> 	<p><u>In order to meet these standards, it is expected that students will</u></p> <ul style="list-style-type: none"> • <u>define calorie and identify the number of calories per gram of each macronutrient (4.5.a);</u> • <u>explain how the body uses salt and sugar (4.5.b);</u> • <u>describe the effects of excessive salt and sugar intake (4.5.b);</u> • <u>identify/select examples of each macronutrient (4.5.c);</u> • <u>use food labels to calculate the calories per gram of macronutrients for a variety of foods (4.5.d);</u> • <u>explain the importance of hydration (4.5.e);</u> • <u>compare different hydration choices (4.5.f);</u>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>Macronutrients are nutrients the body needs in larger amounts to function properly and include fat (avocados, walnuts), protein (eggs, beans fish), and carbohydrates (oatmeal, bread, pasta) (4.5.c).</u></p> <ul style="list-style-type: none"> • <u>Carbohydrates provide sugar needed for energy; sugar from carbohydrates is broken down into glucose; glucose is released into the bloodstream for energy for the body; limited amounts of carbohydrates can be stored.</u> • <u>Fat is used for energy; any unused energy is stored; the body can store unlimited amounts of fat.</u> • <u>Protein is broken down into amino acids, used to build muscle, and to make other proteins that are essential for the body to function.</u> <p><u>Each macronutrient provides the body a different amount of energy (calories) per gram. (4.5.d)</u></p> <ul style="list-style-type: none"> • <u>Calories per gram of macronutrients example: cereal label</u> <ul style="list-style-type: none"> ○ <u>Total fat – 2 grams x 9 calories per gram = 18 calories from fat</u> ○ <u>Total carbohydrates – 30 grams x 4 calories per gram = 120 calories from carbohydrates</u> ○ <u>Protein – 3 grams x 4 calories per gram = 12 calories from protein</u> <p><u>Hydration/drinking water is important for the body. Without enough water (dehydration), a person can feel sick. (4.5.e) Water helps</u></p> <ul style="list-style-type: none"> • <u>regulate body temperature;</u> • <u>keep joints lubricated;</u> • <u>prevent infections;</u> • <u>deliver nutrients to cells.</u> 	<ul style="list-style-type: none"> • <u>explain the role of moderate to vigorous physical activity for energy balance (4.5.g);</u> • <u>identify/select portion sizes for each food group (4.5.h).</u> <p><u>Additional resources:</u> http://www.healthsmartva.org/MyPlate.gov https://openphysed.org/KidsHealth.org SHAPE America National Standards and Grade-Level Outcomes</p>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>Water is the best choice for hydration. (4.5.f)</u></p> <ul style="list-style-type: none"> • <u>Milk is important for children because of calcium and vitamin D.</u> • <u>It is best to limit sugary drinks.</u> • <u>Unhealthy drink choices that contain too much sugar and calories are sports drinks, sodas, juice drinks, and energy drinks.</u> <p><u>Energy is another word for calories. Energy balance is the balance between calories consumed (energy in) and calories expended (energy out). Moderate to vigorous physical activity (MVPA) is important for balancing the energy from calories consumed. Energy balance in children supports natural growth without promoting excess weight gain. (4.5.g).</u></p> <ul style="list-style-type: none"> • <u>Moderate physical activity refers to activities equivalent in intensity to brisk walking or bicycling. Vigorous physical activity produces large increases in breathing or heart rate, such as jogging, aerobic dance or bicycling uphill.</u> <p><u>Portion sizes range for each food group as the body requires varying amounts for optimal health. (4.5.h)</u></p> <ul style="list-style-type: none"> • <u>Portion size is the amount of food or drink that is served. Children are smaller, so their portion sizes are also smaller. The closed fist of a child is equal to a cup for their age. Recommended daily amounts vary by age but on average are (4.5.g):</u> <ul style="list-style-type: none"> ○ <u>Fruit: 1-2 cups</u> ○ <u>Vegetables: 1.5-2.5 cups</u> ○ <u>Grains: 2-3 ounce equivalent</u> ○ <u>Protein: 3-6 ounce equivalent</u> ○ <u>Dairy: 2.5-3 cups</u> 	

GRADE FIVE

Students in grade five apply movement principles and concepts and knowledge of anatomical structures and functions to enhance their movement performance, personal fitness, and game strategy and tactics. They develop proficiency in physical activities, dances, and educational gymnastics. Students demonstrate specialized skills alone, with a partner, or in a small group. They access and use resources to plan and improve personal fitness as they exhibit a physically active lifestyle. Students continue to develop responsible personal and social behaviors as they work with others in safe and respectful ways.

Motor Skill Development

5.1 The student will demonstrate movement forms, create movement patterns, and begin to describe movement principles.

- a) Demonstrate progress toward the use of all critical elements in locomotor, non-locomotor, and manipulative skill combinations in dynamic environments, modified sports activities, small-sided games, and lifetime activities, including overhand and underhand throwing and catching, execution to a target with accuracy, hand dribbling with non-dominant/dominant hand at various speeds and control to open spaces, consecutive volleying with a partner over a net or against a wall with proper force, striking a ball with short- and long-handled implements while stationary or moving with the proper force, direction, and accuracy, dribbling and passing a soccer ball with the dominant foot with varying speed while moving to open spaces with proper control and accuracy.
- b) Create and perform an educational gymnastic sequence that combines three or more of the following movements: traveling, rolling, balancing, and other types of weight transfer, with smooth transitions and changes of direction, shape, speed, and flow.
- c) Create and perform individual or group rhythm/dance sequences.
- d) Perform multicultural and social dances.
- e) Create and perform a jump rope routine/challenge (self-turn, long rope, or jump bands).

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<u>Manipulative and movement skills can be broken down into smaller parts/critical elements to improve proficiency. Developmentally appropriate movement includes performance of all critical elements. Manipulative skills are performed in isolation, and then in more</u>	<u>In order to meet these standards, it is expected that students will</u> <ul style="list-style-type: none"> • <u>demonstrate critical elements in dynamic situations for overhand</u>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>complex and dynamic environments within modified sports activities, small-sided games, and lifetime activities. (5.1.a)</u></p> <ul style="list-style-type: none"> • <u>Manipulative skills in more complex and dynamic environments include overhand and underhand throw and catch, execution to a target with accuracy, dribbling with hands and feet at varying speeds, consecutive striking and volleying with a partner over a net or against a wall with proper force, striking a ball while stationary and moving, and passing a soccer ball with the dominant foot with varying speed.</u> <ul style="list-style-type: none"> ○ <u>Overhand throw</u> <ul style="list-style-type: none"> ▪ <u>Side of body set up toward target;</u> ▪ <u>Non-throwing hand toward target;</u> ▪ <u>Throwing arm way back;</u> ▪ <u>Step to target with opposite foot;</u> ▪ <u>Rotate hips during throw;</u> ▪ <u>Weight shifts from back to front foot;</u> ▪ <u>Throwing arm follows through to target with wrist to opposite knee.</u> ○ <u>Toss, Underhand Throw, to partner</u> <ul style="list-style-type: none"> ▪ <u>Face the target;</u> ▪ <u>Eye on target;</u> ▪ <u>Use a backward-forward arm swing (tick-tock swing);</u> ▪ <u>Step with opposite foot as tossing/throwing/rolling arm moves forward;</u> ▪ <u>Release ball between knee and waist level during upward swing for throw;</u> ▪ <u>Bend at hip (roll);</u> ▪ <u>Release ball under knee for roll;</u> ▪ <u>Follow through with hand pointing to the target.</u> ○ <u>Catch from throw</u> <ul style="list-style-type: none"> ▪ <u>Watch the ball all the way into the hands;</u> 	<ul style="list-style-type: none"> • <u>and underhand throw and catch, execution to a target, hand dribble, foot dribble, consecutive striking and volleying with a partner over a net or against a wall, and striking a ball while stationary and moving (5.1.a);</u> • <u>demonstrate moving to open space between players as appropriate in a variety of activities (5.1.a);</u> • <u>demonstrate accuracy using manipulatives in a variety of activities (5.1.a);</u> • <u>demonstrate use of more or less force for accuracy of manipulatives in a variety of activities (5.1.a);</u> • <u>demonstrate accuracy, direction, and use of force to strike an object with a pre-determined purpose (placement to a target or general area) (5.1.a);</u> • <u>create and perform an educational gymnastic sequence to include traveling, rolling, and weight transfer, with smooth</u>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> ▪ <u>Places body in the path of the object;</u> ▪ <u>Extend arms outward to reach for ball;</u> ▪ <u>Thumbs in for catch above the waist;</u> ▪ <u>Thumbs out for catch at or below the waist;</u> ▪ <u>One foot slightly in front of the other (balanced stance);</u> ▪ <u>Catch with hands only; no cradling against the body;</u> ▪ <u>Pull the ball in to the body as the catch is made;</u> ▪ <u>Relax and absorb the force of the object.</u> ○ <u>Volley with a partner or wall</u> <ul style="list-style-type: none"> ▪ <u>Set up square to partner/wall;</u> ▪ <u>Opposite foot forward;</u> ▪ <u>Tick tock swing movement with volleying hand;</u> ▪ <u>Contact ball with palm;</u> ▪ <u>Contact occurs at waist-level;</u> ▪ <u>Follow through upwards;</u> ▪ <u>Track the ball with eyes;</u> ▪ <u>Move body into position for receiving ball from partner/wall;</u> ▪ <u>Continuous volley.</u> ○ <u>Strike a ball with short handled implement</u> <ul style="list-style-type: none"> ▪ <u>Shake hands with the paddle;</u> ▪ <u>Soft squeeze grip;</u> ▪ <u>Firm wrist;</u> ▪ <u>Contact occurs at waist-level;</u> ▪ <u>Hit with a flat surface of implement;</u> ▪ <u>Follow through upwards;</u> ▪ <u>Track the ball with eyes;</u> ▪ <u>Move body into position for next contact.</u> ○ <u>Strike a ball with long-handled implement</u> 	<ul style="list-style-type: none"> <u>transitions, balance, and changes of direction, shape, speed, and flow (5.1.b);</u> • <u>create and perform individual or group rhythm/dance sequences including multicultural and social dances (5.1.c, 5.1.d);</u> • <u>create and perform a jump rope routine/challenge using long/short jump ropes and jump bands (5.1.e).</u> <p><u>Additional resources:</u> <u>SHAPE America National Standards and Grade-Level Outcomes</u> <u>OPEN Online Physical Education Network</u> <u>Health Smart Virginia</u> <u>PE Central</u> <u>Dynamic PE ASAP</u></p>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> ▪ <u>Non-dominant hand grips the bottom of the implement with dominant hand stacked above (line of knuckles);</u> ▪ <u>Side to target (non-throwing arm closest to target);</u> ▪ <u>Knees slightly bent;</u> ▪ <u>Eyes follow ball from start to finish;</u> ▪ <u>Step to target in opposition;</u> ▪ <u>Throwing arm way back;</u> ▪ <u>Weight transfer from back foot to front foot;</u> ▪ <u>Rotate hips;</u> ▪ <u>Follow through with wrist to opposite knee.</u> ○ <u>Dribble (foot)</u> <ul style="list-style-type: none"> ▪ <u>Ready stance/knees slightly bent;</u> ▪ <u>Contact the ball with shoelaces, inside of the foot, or outside of foot;</u> ▪ <u>Contact behind the center of the ball;</u> ▪ <u>Ball stays close to feet/soft touches when moving throughout space;</u> ▪ <u>Ball moves forward;</u> ▪ <u>Eyes looking forward in direction of travel;</u> ▪ <u>Tap ball with both feet.</u> ○ <u>Pass/kick to a partner</u> <ul style="list-style-type: none"> ▪ <u>Non-kicking foot beside the ball;</u> ▪ <u>Use inside of foot;</u> ▪ <u>Step to the target;</u> ▪ <u>Contact behind the center of the ball;</u> ▪ <u>Firm and controlled pass;</u> ▪ <u>Passing leg follows through toward target/partner.</u> <p><u>Movement in dynamic situations requires appropriate speed, accuracy, force, and control.</u> <u>(5.1.a)</u></p>	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> • <u>Speed is the rate of motion and ability to move swiftly</u> • <u>Accuracy is the quality of being precise or the ability to get an object where it is intended to go</u> • <u>Accuracy is impacted by the ability to use more or less force as needed for an intended target or outcome.</u> • <u>Using increased force (hard) with manipulatives may include throwing for a farther distance or striking harder to make the ball go farther.</u> • <u>Using decreased force (soft) with manipulatives may include throwing easier over a shorter distance or to improve accuracy to a target.</u> • <u>Control includes ability to use more or less force as needed for intended target or outcome.</u> <p><u>Spatial awareness is knowing where the body is in space in relation to objects and other people. Moving to open spaces and closing space between players can provide a strategic advantage. (5.1.a)</u></p> <p><u>Critical elements of manipulative skills can be used to create a strategic advantage. (5.1.a)</u></p> <ul style="list-style-type: none"> • <u>Accuracy requires precision of movement with the critical elements of skills such as follow through and aim in the desired direction when throwing to a target.</u> <p><u>Movement proficiency includes maintaining balance in a variety of movements such as traveling, rolling, and weight transfer, during an educational gymnastics sequence.</u> <u>Maintaining balance allows for smooth transitions and changes of direction, shape, speed, and flow within movement sequences (5.1.b).</u></p> <p><u>Movement competency involves patterns. Patterns are present in individual and group rhythm/dance sequences including multicultural and social dances. (5.1.c, 5.1.d)</u></p>	

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<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<u>Jumping rope helps with cardiorespiratory endurance, strengthening the heart, and helps with coordination. Jump rope activities include a variety of types of jumps with short ropes, long ropes and jump bands. (5.1.e)</u>	

Anatomical Basis of Movement

5.2 The student will apply anatomical knowledge and movement strategies in complex movement activities.

- a) Identify the major components of the cardiorespiratory, vascular, muscular, and skeletal systems.
- b) Apply knowledge of skeletal and muscular systems to accurately describe a variety of specific movements, such as a ball strike, overhand throw, or running.
- c) Understand the concept of flexibility as it relates to bones, muscles, and joints.

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>Review cardiorespiratory system components and all major muscles and bones and their locations on the body from previous grade levels (5.2.a).</u></p> <ul style="list-style-type: none"> • <u>Cardiorespiratory system</u> <ul style="list-style-type: none"> ○ <u>Heart</u> ○ <u>Lungs</u> ○ <u>Blood vessels</u> • <u>Vascular system</u> <ul style="list-style-type: none"> ○ <u>Veins</u> ○ <u>Arteries</u> • <u>Muscular system</u> <ul style="list-style-type: none"> ○ <u>Bicep</u> ○ <u>Triceps</u> ○ <u>Deltoid</u> ○ <u>Abdominal</u> ○ <u>Gluteal</u> ○ <u>Quadricep</u> ○ <u>Hamstring</u> • <u>Skeletal system</u> <ul style="list-style-type: none"> ○ <u>Skull</u> ○ <u>Ribs</u> ○ <u>Spine</u> 	<p><u>In order to meet these standards, it is expected that students will</u></p> <ul style="list-style-type: none"> • <u>identify/label components of cardiorespiratory, vascular, muscular, and skeletal systems (5.2.a)</u> • <u>describe a variety of specific movements to include the body systems, bones, and muscles involved in the movement (5.2.b)</u> • <u>describe and demonstrate how flexibility relates to different bones, muscles, and joints (5.2.c)</u> <p><u>Additional resources:</u> <u>Health Smart Virginia</u></p>

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- Sternum
- Humerus
- Radius
- Ulna
- Phalanges
- Patella
- Femur
- Tibia
- Fibula

Body systems work together to produce movement.

- running involves leg muscles and bones quadriceps, hamstrings, femur, tibia, fibula, and patella
- abdominals, vertebrae, and arms help provide balance; arm swing helps provide momentum using biceps, triceps, humerus, ulna, radius, and phalanges in the hands
- lungs provide oxygen to heart so that blood vessels can carry oxygen and energy to the muscles being used (5.2.b).

Flexibility includes muscles, bones and joints working together to help the body move through a full range of motion (5.2.c).

Fitness Planning

5.3 The student will use personal fitness assessment data to enhance understanding of physical fitness.

- a) Identify methods for evaluating and improving personal fitness, such as health-related criterion-referenced tests, heart rate, accelerometer, and pedometer data.
- b) Compare and analyze personal fitness data to health-related criterion-referenced standards (e.g., Virginia wellness-related fitness FitnessGram standards, Centers for Disease Control and Prevention guidelines) to assess levels of personal fitness and identify strengths and weaknesses.
- c) Explain the FITT (frequency, intensity, time, and type) principles and its relationship to a personal fitness plan.
- d) Calculate the resting, activity, and recovery heart rate and calculate heart rate during various physical activities.
- e) Explain the relationship between heart rate and cardiorespiratory fitness.

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>Methods for evaluating and improving personal fitness may include various sources of data such as health-related criterion referenced tests, heart rate, accelerometer, and pedometer data (5.3.a).</u></p> <p><u>SMART goals can be used to target and improve one or multiple areas of health-related fitness (5.3.b).</u></p> <p><u>Personal fitness planning should include SMART goal (based on data) for at least one health-related component of fitness, activities that will address the goal, log of activities inside and outside of school, plan to reassess fitness levels (post-data), and reflection of goal progress/attainment (5.3.b).</u></p> <p><u>FITT principle - frequency, intensity, time, and type – is a “formula” for planning what kind of physical activity/activities, how often to do the activities, how hard, and for how long to meet fitness goals (5.3.c).</u></p> <ul style="list-style-type: none"> • <u>The FITT principle can be used to design a personal fitness plan for achieving SMART goal (5.3.c).</u> <p><u>Heart rate can be used to help determine personal fitness levels.</u></p> <ul style="list-style-type: none"> • <u>As a person’s cardiorespiratory fitness levels increase, his/her their heart rate (and resting heart rate) will decrease (5.3.d).</u> 	<p><u>In order to meet these standards, it is expected that students will</u></p> <ul style="list-style-type: none"> • <u>identify methods for evaluating and improving personal fitness (5.3.a)</u> • <u>student-created personal fitness plan for at least one health-related component of fitness to include baseline fitness data, SMART goal, activities that will address the goal, log of activities inside and outside of school, reassessment data (post-data) and reflection of goal progress/attainment (5.3.b)</u> • <u>identify and explain each part of the FITT principle</u> • <u>apply the FITT principle when creating a SMART goal and wellness plan (5.3.c)</u>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> • <u>Resting heart rate should be taken after 10 minutes of rest using either the radial or carotid artery (be cautious to not press too hard on the carotid artery). Activity heart rate may be taken at different points of time during exercise/activity (5.3.d).</u> <p><u>In general, a lower heart rate at rest indicates more efficient heart function and better cardiorespiratory fitness (5.3.e).</u></p> <ul style="list-style-type: none"> • <u>Note: resting heart rates of above 100 or below 60 (unless the person is a trained athlete) may indicate an underlying problem.</u> 	<ul style="list-style-type: none"> • <u>calculate resting heart rate and heart rate during a variety of activities manually or using heart rate monitor (5.3.d)</u> • <u>explain the relationship between heart rate and cardiorespiratory fitness (5.3.e)</u> • <u>determine activities that may result in a higher active heart rate, perform those activities and then measure active heart rate to determine accuracy of prediction (5.3.e)</u> <p><u>Additional resources:</u> <u>Health Smart Virginia</u> <u>American Heart Association</u> <u>OpenPhyzed</u></p>

Social and Emotional Development

5.4 The student will participate in establishing and maintaining a safe environment for physical activities.

- a) Create and implement safety rules and responsibilities for one or more activities.
- b) Describe and demonstrate respectful behavior in physical activity settings.
- c) Implement etiquette for at least two activities.
- d) Identify how engaging in physical activity can improve mental health and reduce stress.
- e) Explain the importance of inclusion in physical activity settings.
- f) Participate in developing classroom activities led by the teacher that promote feelings of inclusion, which supports feelings of acceptance, belonging, and all students being valued.

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>Rules for activities/games allow for safe participation, safe learning, and inclusion of all students.</u></p> <ul style="list-style-type: none"> • <u>Examples - everyone taking a turn to strike/volley an object; consequence – not taking turns results in other team getting the ball) (5.4.a).</u> <p><u>Safety rules for activities may include rules for equipment (distribution, use, and collection), use of space (boundaries, spatial awareness, and moving in personal and general space), and activity-specific rules (5.4.a.).</u></p> <p><u>Respectful behavior in physical activity settings includes proper etiquette, safety and inclusion of all students (5.4.b).</u></p> <p><u>Etiquette is the rules indicating the proper and polite way to behave.</u></p> <p><u>Examples:</u></p> <ul style="list-style-type: none"> • <u>appropriate speed of play</u> • <u>shaking hands/giving high fives</u> • <u>congratulating other team at the end of a game</u> • <u>participating in the correct order, taking turns (5.4.c).</u> <p><u>Physical activity can be used to improve mood and reduce stress levels. Reduction in stress levels may be evident in slowed heart rate, calm breathing, and ability to think and communicate clearly (5.4.d).</u></p>	<p><u>In order to meet these standards, it is expected that students will</u></p> <ul style="list-style-type: none"> • <u>design a game or activity that facilitates feelings of acceptance, belonging, and value. In design, students must provide rules, safety guidelines, and etiquette. (5.4.a, 5.4.f)</u> • <u>describe and demonstrate respectful behavior used in all physical activity settings (5.4.b)</u> • <u>implement etiquette for two activities (5.4.c)</u> • <u>describe how physical activity at a variety of intensity levels can improve mental health and reduce the effects of stress (5.4.d)</u>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>Some methods of reducing stress include</u></p> <ul style="list-style-type: none"> • <u>Taking deep breaths</u> • <u>Making sure to get enough sleep</u> • <u>Going outside for a walk</u> • <u>Using a reflective journal (5.4.d)</u> <p><u>Inclusion can be defined as being a part of a group or a part of something. Inclusion can also be defined as learning to live together; treasuring diversity; and sharing gifts and abilities.</u></p> <ul style="list-style-type: none"> • <u>Inclusion is a subjective, personal experience (5.4.e).</u> • <u>Physical activity is important for everyone. Seeing and respecting each other’s capabilities and abilities helps to learn from others, understand and appreciate others, and build community (5.4.e).</u> <p><u>Respectful behaviors may include</u></p> <ul style="list-style-type: none"> • <u>trying to learn something from others</u> • <u>showing interest and appreciation for other people's cultures and backgrounds</u> • <u>not insulting, teasing, or making fun of others</u> • <u>actively listening to others when they speak</u> • <u>being considerate of other's likes and dislikes</u> • <u>not talking about others behind their backs</u> • <u>being sensitive to the feelings of others (5.4.e)</u> <p><u>All students, regardless of ability, when possible, should be included in physical activity settings. When rules and etiquette are created with inclusion in mind and followed by all participants, students can feel safer and more included in activities (5.4.f).</u></p>	<ul style="list-style-type: none"> • <u>explain the importance of understanding and accepting differences (5.4.e)</u> <p><u>Additional resources:</u> Health Smart Virginia OpenPhyzed EverFi</p>

Energy Balance

5.5 The student will identify and explain the nutrition component and activity guidelines for energy balance.

- a) Explain Recommended Dietary Allowance (RDA).
- b) Explain that there are different RDAs for children, teens, and adults.
- c) Explain the purpose of vitamins and minerals.
- d) Describe how the body uses each macronutrient (fat, protein, carbohydrates).
- e) Evaluate components of food labels for a variety of foods, including macronutrients, RDA, and portion size.
- f) Explain that physical activity guidelines recommend 60 minutes of moderate to vigorous physical activity (MVPA) every day.

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>RDA (Recommended Dietary Allowance) is the average daily level of intake sufficient to meet the nutrient requirements of nearly all (97%-98%) healthy people issued by the Food and Nutrition Board of the Institute of Medicine, National Academy of Sciences (5.5.a).</u></p> <p><u>RDA varies by age for children, teens, and adults. Variations are needed to help infants, children, and teens maintain calorie balance to support normal growth and development without promoting excess weight gain (5.5.b).</u></p> <p><u>Vitamins and minerals are considered essential nutrients the body needs in order to function properly (5.5.c).</u></p> <ul style="list-style-type: none"> • <u>Vitamins and minerals boost the immune system, support normal growth and development, and help cells and organs do their jobs (5.5.c).</u> • <u>Choosing healthy foods is especially important because the body needs a variety of vitamins and minerals to grow and stay healthy (5.5.c).</u> • <u>Eating a mix of foods from all five food groups is the best way to get all the vitamins and minerals you need each day. Fruits and vegetables, whole grains, low-fat dairy products, lean meats, fish, and poultry are the best choices for getting the nutrients your body needs (5.5.c).</u> 	<p><u>In order to meet these standards, it is expected that students will</u></p> <ul style="list-style-type: none"> • <u>explain RDA (Recommended Dietary Allowance) (5.5.a);</u> • <u>explain that there are different RDA recommendations for children, teens, and adults (5.5.b);</u> • <u>explain the purpose of vitamins and minerals (5.5.c);</u> • <u>describe how the body uses each macronutrient (5.5.d);</u> • <u>evaluate food labels for a variety of foods, to include macronutrients, RDA, and portion size (5.5.e);</u> • <u>describe the recommended physical activity guidelines for youth (5.5.f);</u> • <u>describe MVPA and its impact on the physical activity guidelines (5.5f).</u>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>Macronutrients are nutrients the body needs in larger amounts to function properly and include fat (avocados, walnuts), protein (eggs, beans fish), and carbohydrates (oatmeal, bread, pasta) (5.5.d).</u></p> <ul style="list-style-type: none"> • <u>Carbohydrates provide sugar needed for energy; sugar from carbohydrates is broken down into glucose; glucose is released into the bloodstream for energy for the body; limited amounts of carbohydrates can be stored (5.5.d).</u> • <u>Fat is used for energy; any unused energy is stored; the body can store unlimited amounts of fat (5.5.d).</u> • <u>Protein is broken down into amino acids, used to build muscle, and to make other proteins that are essential for the body to function (5.5.d).</u> • <u>Each macronutrient provides the body a different amount of energy (calories) per gram (5.5.d).</u> <p><u>Food labels help us evaluate the macronutrients, RDA, and portion sizes of the foods we consume (5.5.e):</u></p> <ul style="list-style-type: none"> • <u>Food labels indicate the serving size and number of servings included (5.5.e).</u> • <u>All nutrient amounts listed on the label are based on one serving size. It is important to note that a lot of packaged foods contain multiple serving sizes. (5.5.e).</u> • <u>Top section of the label contains product-specific information - serving size, calories, and nutrient information for fat, cholesterol, sodium, carbohydrates, protein, vitamin D, calcium, iron, and potassium, and % Daily Value (%DV) - the percentage of the Daily Value for each nutrient in a serving of the food. Daily Values are reference amounts (expressed in grams, milligrams, or micrograms) of nutrients to consume/not to exceed each day. (5.5.e).</u> 	<p><u>Additional resources:</u></p> <p>KidsHealth.gov http://www.healthsmartva.org/ https://www.myplate.gov https://openphysed.org/ https://health.gov/sites/default/files/2019-09/Physical_Activity_Guidelines_2nd_edition.pdf</p> <p><u>SHAPE America National Standards and Grade-Level Outcomes</u></p>

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<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> • <u>Bottom section contains a footnote that explains the % Daily Value and gives the number of calories used for general nutrition advice (5.5.e). In addition to maintaining a healthy eating pattern, regular physical activity is one of the most important things Americans can do to improve their health (5.5.f).</u> • <u>Physical Activity Guidelines for Americans released by the U.S. Department of Health and Human Services recommend that youth, ages 6 to 17 years, need at least 60 minutes of physical activity every day, including aerobic, muscle-strengthening, and bone-strengthening activities (5.5.f).</u> • <u>Most of the 60 minutes should be moderate to vigorous aerobic physical activity (MVPA) (5.5.f).</u> 	

GRADE SIX

Students in grade six apply fundamental skills and knowledge of anatomical structures and movement principles to build movement competence and confidence through acquisition, performance, and refinement of skills. Cooperative and competitive small-group games are appropriate as well as outdoor pursuits, fitness activities, dance and rhythmic activities, aquatics, individual performance activities, and sports (net/wall, striking/fielding, and goal/target), with an emphasis on developing skills and tactical understanding. Students use feedback to initiate and maintain practice to improve skill performance. Students assess their health-related fitness status and set reasonable and appropriate goals for development, maintenance, and improvement. Students in grade six will explain the connection between energy balance and nutrition guidelines, meal planning, and heart rate. Social interaction becomes more complex as peer pressure becomes increasingly pronounced, affecting individual performance. Students solve problems and make responsible decisions as they work together. They identify and seek opportunities to participate in regular physical activity at school and outside the school environment.

Motor Skill Development

- 6.1 The student will demonstrate all critical elements in movement forms in various activities and demonstrate the six components of skill-related fitness.
- a) Combine and apply manipulative skills into small-sided games for overhand and underhand throwing and catching, throwing and catching to a target with accuracy and control, and hand and/or foot dribbling with accuracy at varying speeds while applying spatial awareness within partner and small-group modified game-play.
 - b) Combine and apply the manipulative skills of volleying with a partner over a net or against a wall with changes in force, accuracy, and direction into small-sided games.
 - c) Combine and apply the manipulative skills of striking/batting an object with a short and long implement with changes in force, accuracy, direction in small-sided games.
 - d) Combine and apply manipulative skills in small-sided games, dribbling/passing a soccer ball with accuracy at varying speeds while applying spatial awareness to a partner or within a small group.
 - e) Create and perform a movement sequence in a jump rope or dance activity.
 - f) Demonstrate and apply the six components of skill-related fitness (i.e., agility, balance, coordination, power, reaction time, and speed).
 - g) Demonstrate basic offensive and defensive strategies in noncomplex, modified, and small-sided activities.

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
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Anatomical Basis of Movement

6.2 The student will apply both movement principles and concepts including the knowledge of anatomical structures to movement-skill performance.

- a) Refine and adapt individual and group activity skills by applying concepts of relationships, effort, spatial awareness, direction, speed, accuracy, and pathways to improve performance.
- b) Apply knowledge of the skeletal system by identifying major joints, associated bones, and types of joints, including ball-and-socket, and hinge joint.

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>Relationships, effort, spatial awareness, direction, speed, accuracy, and pathways affect performance (6.2.a)</u></p> <ul style="list-style-type: none"> • <u>Relationships – connections and impacts of movements (throwing a ball with accuracy, leading a running teammate, and enough force to ensure teammate can catch the ball)</u> • <u>Effort – work done to achieve a particular end/result, genuine attempt/try</u> • <u>Spatial awareness - knowing where the body is in space in relation to objects and other people; ability to move with and around others and objects;</u> • <u>Direction- the path along which something moves</u> • <u>Speed - rate of motion, ability to move swiftly</u> • <u>Accuracy – the quality of being precise, ability to get an object where it is intended to go</u> • <u>Pathways – straight, curved, zigzag, diagonal</u> <p><u>Muscles contract to produce movement at joints. Joints are the connections between two bones (6.2.b)</u></p>	<p><u>In order to meet these standards, it is expected that students will</u></p> <ul style="list-style-type: none"> • <u>refine and adapt individual and group activity skills by applying concepts of relationships, effort, spatial awareness, direction, speed, accuracy, and pathways to improve performance. (6.2.a)</u> • <u>apply knowledge of the skeletal system by identifying major joints, associated bones, and types of joints, including ball-and-socket, and hinge joint. (6.2.b)</u> <p><u>Additional resources:</u> <u>SHAPE America National Standards and Grade-Level Outcomes</u> <u>OPEN Online Physical Education Network</u> <u>Health Smart Virginia</u> <u>PE Central</u></p>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> • <u>Ball-and-socket joint – rounded surface of one bone moves within a depression on another bone; hip (head of femur and depression of pelvis); shoulder (humerus, scapula, clavicle)</u> • <u>Hinge joint – backward and forward swing motion; joints between bones of the fingers (phalanges); ankle (fibula, tibia, and talus of the foot); elbow (ulna and humerus); knee (femur, tibia, and patella)</u> 	<u>Dynamic PE ASAP</u>

Fitness Planning

6.3 The student will apply skills of measurement, analysis, goal setting, problem solving, and decision making to improve or maintain physical fitness.

- a) Create a basic personal fitness plan for at least one health-related component of fitness, including baseline fitness data, a SMART goal, activities that will address the goal, a log of activities inside and outside school, reassessment data (post-data) and reflection of goal progress/attainment.
- b) Identify resources, including available technology, to evaluate, monitor, and record activities for fitness improvement.
- c) Calculate resting, active, and recovery heart rate during a variety of physical activities, and identify the relationship between heart rate and rate of perceived exertion (RPE) levels.
- d) Describe how being physically active improves physical and mental health.
- e) Interpret fitness data, comparing individual scores to health-related criterion-referenced standards (Virginia wellness-related fitness standards, FitnessGram, Centers for Disease Control and Prevention guidelines).
- f) Create and implement an activity plan to meet the Centers for Disease Control and Prevention’s Physical Activity Guidelines for Americans and identify the necessary safety precautions for participation.
- g) Describe a rate of perceived exertion scale.

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>Self-assessments allow you to determine the factors that you can alter when creating a personal fitness plan to make changes toward a healthy lifestyle and fitness goals (6.3.a)</u></p> <p><u>SMART goals clarify exactly what to do and the measures needed to improve and maintain your fitness level and plans (6.3.a)</u></p> <ul style="list-style-type: none"> • <u>S – Specific - goals are straightforward and detail what is to be accomplished</u> • <u>M – Measurable - goals must be able to be measured for improvement, how much?, how many?, how will you know the goal is accomplished?</u> • <u>A – Attainable - goals require effort beyond what has been achieved before</u> • <u>R – Realistic - goals need to be achievable and reachable</u> • <u>T – Timely - goals should have a time element attached to keep you on track to accomplish in a given time period</u> <p><u>Physical fitness can be evaluated through a variety of methods including measurements and assessment tools, criterion-referenced health-related fitness standards, and available technology to evaluate, monitor, and record activities for fitness improvement (6.3.b)</u></p> <p><u>Heart rate can be used to help determine personal fitness levels. The more fit a person is, the more quickly the heart will recover after strenuous physical activity (6.3.c)</u></p> <ul style="list-style-type: none"> • <u>Resting heart rate (RHR) is best taken after 10 minutes of rest</u> • <u>Activity heart rate can be taken at multiple points during activity and include being taken immediately after stopping activity</u> 	<p><u>In order to meet these standards, it is expected that students will</u></p> <ul style="list-style-type: none"> • <u>create a basic personal fitness plan for at least one health-related component of fitness, including baseline fitness data, a SMART goal, activities that will address the goal, a log of activities inside and outside school, reassessment data (post-data) and reflection of goal progress/attainment. (6.3.a)</u> • <u>identify resources, including available technology (e.g., heart rate monitors, pedometers) to evaluate, monitor, and record activities for fitness improvement. (6.3.b)</u> • <u>calculate resting, active, and recovery heart rate during a variety of physical activities and identify the relationship between heart rate and rate of perceived exertion (RPE) levels. (6.3.c)</u> • <u>describe how being physically active leads to a healthy body (6.3.d)</u> • <u>interpret fitness data comparing individual scores to health-related criterion-referenced standards (Virginia wellness-related fitness standards, FitnessGram®, CDC guidelines). (6.3.e)</u>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> • <u>Recovery heart rate is the decrease in heart rate that occurs one minute after maximal exercise. A faster decrease in heart rate is associated with individuals with higher levels of fitness</u> <p><u>Regular participation in physical activity in childhood is associated with a decreased cardiovascular risk in youth and adulthood (6.3.d)</u></p> <p><u>Physical activity helps to maintain weight; reduce high blood pressure; reduce the risk for type 2 diabetes, heart attack, stroke, and several forms of cancer; reduce arthritis pain and associated disability; reduce the risk for osteoporosis and falls; and reduce symptoms of depression and anxiety (6.3.d)</u></p> <p><u>Comparing individual scores to health-related criterion-referenced standards (Virginia wellness-related fitness standards, FitnessGram®, CDC guidelines) assists in the analysis, goal setting, problem-solving, and decision making needed to improve or maintain physical fitness (6.3.e)</u></p> <ul style="list-style-type: none"> • <u>FitnessGram standards for the healthy fitness zones.</u> <ul style="list-style-type: none"> ○ <u>Scores are evaluated against criterion-referenced standards, called Healthy Fitness Zones. These zones are established to indicate levels of fitness corresponding with health. Standards have been set for boys and for girls based on age and what is optimal for good health. The use of health-related criteria helps to minimize comparisons between children and emphasizes personal fitness for health, rather than goals based solely on performance.</u> <p><u>Setting goals is a fundamental component to long-term success and preparing a written plan can improve your adherence to safely execute the plan. (6.3f)</u></p>	<ul style="list-style-type: none"> • <u>Create and implement an activity plan to meet the Centers for Disease Control and Prevention’s Physical Activity Guidelines for Americans and identify the necessary safety precautions for participation. (6.3.f)</u> • <u>describe a rate of perceived exertion scale (6.3.g)</u> <p><u>Additional resources:</u> Health Smart Virginia</p>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>Activity plans follow necessary fitness and physical activity safety precautions. (6.3.f)</u></p> <p><u>Perceived exertion is how hard a person feels like their body is working. A Rate of Perceived Exertion (RPE) scale is a way of measuring physical activity intensity level. Scales may range from 5 to 20 levels (6.3.g)</u></p> <p><u>Example (variation of Borg scale):</u></p> <ul style="list-style-type: none"> • <u>Level 1- Very light activity (watching TV)</u> • <u>Level 2 – Light activity (can maintain for hours, easy to breathe)</u> • <u>Level 3 – Moderate activity (breathing heavily, somewhat comfortable)</u> • <u>Level 4 – Vigorous activity (borderline uncomfortable, short of breath)</u> • <u>Level 5 – Very hard activity (difficult to maintain exercise intensity, barely breathe)</u> • <u>Level 6 – Max effort activity (almost impossible to keep going, out of breath)</u> 	

Social and Emotional Development

6.4 The student will demonstrate and apply skills of communication, conflict resolution, and cooperation to achieve individual and group goals that apply to working independently and with others in physical activity settings.

- a) Demonstrate effective communication and creative thinking skills to solve problems, make decisions and resolve conflict with others and promote safe participation in physical activities.
- b) Compare and critique rules, safety procedures, and etiquette for two different physical activities.
- c) Develop an improvement plan for a self-selected physical activity, discuss the challenges faced, and reflect on how these challenges were overcome.
- d) Describe the benefits of competitive and noncompetitive physical activities.
- e) Demonstrate integrity and apply rules/etiquette for a team-building activity.
- f) Participate in developing student-led classroom activities that promote feelings of inclusion, which supports feelings of acceptance, belonging, and being valued, for all students.

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>To maintain a positive learning environment, students must demonstrate effective communication skills, be safe, cooperative, and positively solve problems (6.4.a)</u></p> <p><u>Effective communication</u></p> <ul style="list-style-type: none"> • <u>Listen with eyes and ears</u> • <u>Be clear with describing a demonstration or when giving feedback</u> • <u>Keep information short and simple</u> <p><u>Creative thinking skills</u></p> <ul style="list-style-type: none"> • <u>Ability to come up with new solutions to problems</u> <p><u>Problem-solving</u></p> <ul style="list-style-type: none"> • <u>Identify/define the problem</u> • <u>Generate several solutions</u> • <u>Evaluate the pros and cons of each solution</u> • <u>Choose a solution</u> • <u>Implement, document, and reflect on the solution</u> <p><u>Conflict resolution skills</u></p>	<p><u>In order to meet these standards, it is expected that students will</u></p> <ul style="list-style-type: none"> • <u>demonstrate effective communication and creative thinking skills to solve problems, make decisions and resolve conflict with others and promote safe participation in physical activities. (6.4.a)</u> • <u>compare and critique rules, safety procedures, and etiquette for two different physical activities (6.4.b)</u> • <u>develop an improvement plan for a self-selected physical activity, discuss the challenges faced, and reflect on how these challenges were overcome (6.4.c)</u>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> • <u>Able to reduce own stress quickly – calming oneself before addressing the conflict</u> • <u>Be emotionally aware of yourself and the other person – how are you feeling, how is the other person feeling</u> • <u>State what the conflict is about</u> <ul style="list-style-type: none"> ○ <u>Communication skills</u> ○ <u>Listening carefully to others</u> ○ <u>Speaking directly to each other</u> ○ <u>Speaking honestly, and kind</u> • <u>Proposing solutions or compromises</u> • <u>Agree on a solution or compromise to try</u> <p><u>Decision-making skills</u></p> <ul style="list-style-type: none"> • <u>Identify the decision to be made</u> • <u>List all the possible options</u> • <u>Evaluate the pros and cons of each option, using criteria such as:</u> <ul style="list-style-type: none"> ○ <u>Is this option healthful and does it reflect my beliefs and values?</u> ○ <u>Is this option legal?</u> ○ <u>Is this option safe?</u> ○ <u>Is this option respectful to myself and my family?</u> ○ <u>Is this option responsible?</u> • <u>Make your decision based on the evaluation of each option</u> • <u>Reflect on the decision that was made</u> <p><u>Rules promote the safety of the players and the integrity of the game (6.4.b)</u></p> <ul style="list-style-type: none"> • <u>Safety rules for activities may include rules for equipment (distribution, use, and collection), use of space (boundaries, spatial awareness, and moving in personal and general space), and activity-specific rules</u> 	<ul style="list-style-type: none"> • <u>describe the benefits of competitive and noncompetitive physical activities (6.4.d)</u> • <u>demonstrate integrity and apply rules/etiquette for a team-building activity (6.4.e)</u> • <u>participate in developing student-led classroom activities that promote feelings of inclusion, which supports feelings of acceptance, belonging, and being valued, for all students. (6.4.f)</u> <p><u>Additional resources:</u> Health Smart Virginia</p>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>Safety procedures and etiquette allow for safe participation, safe learning, and inclusion of all students (6.4.b)</u></p> <ul style="list-style-type: none"> • <u>Etiquette is the rules indicating the proper and polite way to behave (e.g., shaking hands/giving high fives/congratulating other teams at the end of a game)</u> <p><u>Learning and practicing self-management skills and determination can help individuals develop a new way of thinking when developing an improvement plan for a personally challenging skill or activity (6.4.c)</u></p> <p><u>Reflecting on performance can assist in developing a plan for improvement (6.4.c)</u></p> <p><u>Non-competitive physical activities allow success without any losers, with teammates learning that the cooperative process is what is important (6.4.d)</u></p> <p><u>Competitive physical activities that allow individuals to work as a decision-making team that take risks, make decisions, succeed, and sometimes fails will prepare individuals to be confident adults, able to make decisions and work well within a group (6.4.d)</u></p> <p><u>Participation in physical activities/sports can provide an opportunity for developing an understanding and respect for differences among people (6.4.e)</u></p> <p><u>A responsible participant views behaving well and including others as important as playing safely (6.4.e, 6.4.f)</u></p> <p><u>Integrity is the quality of being honest and fair. Integrity in physical activity settings allow for inclusive, fair, and safe participation for all participants (6.4.f)</u></p> <p><u>Inclusive practices and safe participation strategies may include adapting rules to accommodate a variety of abilities, eliminating or adding time,</u></p>	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<u>modifications to an activity (e.g., use a beach ball for volleyball), and changing or eliminating scoring (6.4.f)</u>	

Energy Balance

- 6.5 The student will explain the relationship between energy balance and nutrition guidelines, meal planning, and exercise intensity.
- Create a one-day meal and snack plan based on Recommended Dietary Allowance (RDA), portions, hydration, and sugar.
 - Describe the relationship between resting heart rate and exercise intensity.
 - Explain the effects of physical activity guidelines on energy expenditure.

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>Meals and snacks, including beverages, should meet Recommended Dietary Allowance (RDA) for portions and meet hydration needs. RDA information is available at NIH</u> https://ods.od.nih.gov/HealthInformation/Dietary_Reference_Intakes.aspx (6.5.a)</p> <ul style="list-style-type: none"><u>Recommended Dietary Allowance (RDA): The recommended minimum amount of a nutrient needed for good health</u> <p><u>Planning healthy meals will help the body grow and develop normally and increase overall health and wellness (6.5.a)</u></p> <p><u>Energy for movement comes from the food we eat (animal and plant sources), which provides energy-rich nutrients (6.5.a)</u></p> <p><u>Resting pulse is a valuable metric to not only determine your fitness level but your cardiovascular health (6.5.b)</u></p> <p><u>Exercise heart rate and resting heart rate can be used to help determine personal fitness levels (6.5.b)</u></p> <ul style="list-style-type: none"><u>In general, a lower heart rate at rest indicates more efficient heart function and better cardiorespiratory fitness.</u> <p><u>Intensity level descriptions help a person understand what level of physical activity they are engaged in (6.5.b)</u></p>	<p><u>In order to meet these standards, it is expected that students will</u></p> <ul style="list-style-type: none"><u>create a one-day meal and snack plan based on Recommended Dietary Allowance (RDA), portions, hydration, and sugar. (6.5.a)</u><u>describe the relationship between resting heart rate and exercise intensity. (6.5.b)</u><u>explain the effects of physical activity guidelines on energy expenditure. (6.5.c)</u> <p><u>Additional resources:</u></p> <p><u>Health Smart Virginia</u> <u>American Heart Association</u></p>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> <li data-bbox="247 240 1224 440">• <u>In general, the higher your heart rate during physical activity, the higher the exercise intensity. The American Heart Association generally recommends a target heart rate of moderate exercise intensity: 50% to about 70% of your maximum heart rate; and vigorous exercise intensity: 70% to about 85% of your maximum heart rate.</u> <p data-bbox="201 451 1157 524"><u>Energy expenditure is the energy, in the form of calories, a person uses for everyday tasks (6.5.c)</u></p> <p data-bbox="201 532 1209 605"><u>Physical activity increases the number of calories your body uses for energy or “burns off” (6.5.c)</u></p> <ul style="list-style-type: none"> <li data-bbox="247 618 1230 776">• <u>Physical activity guidelines - 150 minutes of moderate-intensity aerobic activity, 75 minutes of vigorous-intensity aerobic activity, or an equivalent mix of the two each week. Strong scientific evidence shows that physical activity can help maintain a healthy weight over time</u> 	

GRADE SEVEN

Students in grade seven continue to develop competence in modified versions of various games/sports, rhythmic, and recreational activities. They vary movement during dynamic and unpredictable game situations. Recreational pursuits become an additional curriculum option, broadening lifelong physical activity options. The ability to analyze skill performance through observing and understanding critical elements (small, isolated parts of the whole skill or movement) is increasingly apparent, as is the application of basic scientific principles of anatomical structures, movement principles, energy balance, and personal fitness. Students relate the importance of physical activity to health, focusing particularly on weight and stress management. Students understand strategies to achieve and maintain personal fitness standards and create plans by setting reasonable and appropriate goals for improvement or maintenance of health-related fitness. Students continue to develop social skills and cooperative behaviors by demonstrating problem solving, conflict resolution, communication skills, appropriate etiquette, integrity, and respect for others.

Motor Skill Development

7.1 The student will demonstrate competence and apply movement concepts in modified versions of various game/sport, rhythmic, dance, lifetime, and recreational activities.

- a) Demonstrate and apply developmentally appropriate movement forms and skill combinations competently in a variety of cooperative and tactical activities that include dynamic and unpredictable situations.
- b) Demonstrate offensive and defensive strategies and tactics, including creating open space, skilled movement, speed, accuracy, and selection of appropriate skills/tactics to gain an offensive or defensive advantage through modified games/sports.
- c) Demonstrate basic abilities and safety precautions in recreational pursuits (e.g., inline skating, orienteering, hiking, cycling, ropes courses, backpacking, canoeing, rock climbing).
- d) Identify and demonstrate dance steps selected by the teacher or student in folk, social, multicultural, contemporary, and line dances.
- e) Describe and demonstrate how movement is stabilized, including balance (center of gravity and center of support) and planes of motion.
- f) Demonstrate the progression of learning (practice, self or peer assess, correct, practice at a higher level, and reassess) for a specific skill or movement.

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>Motor skill development includes combining and applying movement and manipulative skills to changing physical activity/game situations (7.1.a)</u></p> <p><u>Movement forms and skill combinations include developmentally appropriate performance of all critical elements (7.1.a)</u></p> <p><u>Cooperative activities put an emphasis on team building, communication, and trust (7.1.a)</u></p> <p><u>Tactical activities may include small-sided, modified games and sports that may include offense and defense that include dynamic and unpredictable situations (7.1.a)</u></p> <p><u>Offensive strategies may include creating open space, skilled movement, speed, accuracy, communication, and creativity (7.1.b)</u></p> <ul style="list-style-type: none"> • <u>Creating open space - knowing where the body is in space in relation to objects and other people and moving at an angle or cutting back to provide an opportunity for a pass</u> • <u>Skilled movement – ability to move efficiently</u> • <u>Direction- the path along which something moves</u> • <u>Speed – the rate of motion, ability to move swiftly</u> • <u>Accuracy – the quality of being precise, ability to get an object where it is intended to go</u> • <u>Communication – ability to deliver and receive valuable information</u> • <u>Creativity - the ability to produce novel solutions in game situations</u> <p><u>Offensive tactics include the selection of appropriate skills and strategies to gain an offensive advantage (7.1.b)</u></p> <p><u>Modified games/sports break games into their simplest format and then build on the basics, increasing in complexity as students’ skill levels advance (7.1.b)</u></p>	<p><u>In order to meet these standards, it is expected that students will</u></p> <ul style="list-style-type: none"> • <u>demonstrate and apply developmentally appropriate movement forms and skill combinations competently in a variety of cooperative and tactical activities that include dynamic and unpredictable situations (7.1.a)</u> • <u>demonstrate offensive and defensive strategies and tactics, including creating open space, skilled movement, speed, accuracy, and selection of appropriate skills/tactics to gain an offensive or defensive advantage through modified games/sports. (7.1.b)</u> • <u>demonstrate basic abilities and safety precautions in one or more recreational activities (7.1.c)</u> • <u>identify and demonstrate a variety of rhythm patterns/movements (7.1.d)</u> • <u>describe and demonstrate how movement is stabilized in each plane of motion (7.1.e)</u> • <u>demonstrate the learning progression for a specific skill or movement (7.1.f)</u> <p><u>Additional resources:</u></p>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>Recreational activities provide individual, dual, and group opportunities for competitive and non-competitive physical activities (e.g., in-line skating, orienteering, hiking, cycling, ropes courses, backpacking, rowing, canoeing, and rock climbing) (7.1.c)</u></p> <p><u>Safety precautions, such as a proper warm-up and cool-down procedures, affect performance and prevent injury in recreational pursuits (7.1.c)</u></p> <p><u>Correct techniques in outdoor activities help ensure the safety of self and others (7.1.c)</u></p> <p><u>Dance and/or rhythms can provide opportunities for personal enjoyment, self-expression, challenge, and social interaction (7.1.d)</u></p> <p><u>Movement competency involves patterns (7.1.d)</u></p> <ul style="list-style-type: none"> • <u>Rhythm activities may include folk, social, world, country, square, contemporary, and line dances</u> <p><u>Stability increases in a movement with lower center of the body, the larger the base of support, and the closer the center of the body is to the base of support (7.1.e)</u></p> <p><u>Balance is a static and dynamic process that makes it possible for the body to maintain its center of gravity over its base of support (7.1.e)</u></p> <ul style="list-style-type: none"> • <u>Center of gravity - balance point or that point about which a body would balance without a tendency to rotate</u> • <u>Center of support - area beneath a person that includes every point of contact that the person makes with the supporting surface; these points of contact</u> 	<p><u>SHAPE America National Standards and Grade-Level Outcomes</u></p> <p><u>OPEN Online Physical Education Network</u></p> <p><u>Health Smart Virginia</u></p> <p><u>PE Central</u></p> <p><u>Dynamic PE ASAP</u></p>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>may be body parts (e.g., feet or hands, or they may include things like crutches or the chair a person is sitting in)</u></p> <p><u>Movement is stabilized in three planes of motion (7.1.e)</u></p> <ul style="list-style-type: none"> • <u>frontal plane- front and back halves of the body; side-to-side movements</u> • <u>sagittal plane- right and left halves of the body; forward and backward movements</u> • <u>transverse plane- top and bottom halves of the body; twisting movements</u> <p><u>Incorporating all planes of movement into your activity time will increase your range of motion, prevent injuries, and provide greater stability for your body (7.1.e)</u></p> <p><u>Movement learning progression includes practice, self or peer assess, correct movement/skill components, practice at a higher level, and reassess (7.1.f)</u></p> <p><u>Self/peer assessments allow students to detect, analyze and correct errors in personal movement patterns (7.1.f)</u></p>	

Anatomical Basis of Movement

7.2 The student will understand and apply movement principles and concepts and knowledge of major body structures.

- a) Identify the “core muscles,” including pelvic, lower back, hips, gluteal muscles, and abdomen, and explain their role in stabilizing movement.
- b) Apply biomechanical principles (e.g., center of gravity, base of support) to understand and perform skillful movements.
- c) Describe the anatomical planes of motion in which movement occurs, including sagittal plane, frontal plane, and transverse plane.
- d) Analyze skill patterns and movement performance of self and others, detecting and correcting mechanical errors for selected movements.
- e) Apply knowledge of anatomy and joint types to accurately describe skill- and fitness-based movements, such as throwing/catching, striking, lunges and push-ups.

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>Core muscles act to stabilize the spine providing firm support for all movement (7.2.a)</u></p> <ul style="list-style-type: none"> • <u>Core muscles include pelvis, lower back, hips, gluteal muscles, and abdomen.</u> • <u>Core muscles are important muscles for support and holding the body upright. Strong core muscles support proper posture and alignment</u> <p><u>The structure and function of the muscular system assists in physical performance and stabilization of movement (7.2.a)</u></p> <ul style="list-style-type: none"> • <u>Muscles pull on bones to cause movement</u> • <u>Muscles work in pairs</u> • <u>Muscles work by contracting and relaxing</u> <p><u>Balance works with all movements (7.2.b)</u></p> <ul style="list-style-type: none"> • <u>Center of gravity - balance point or that point about which a body would balance without a tendency to rotate.</u> 	<p><u>In order to meet these standards, it is expected that students will</u></p> <ul style="list-style-type: none"> • <u>identify core muscles and explain their role in stabilizing movement. (7.2.a)</u> • <u>apply biomechanical principles to understand and perform skillful movements. (7.2.b)</u> • <u>describe the three planes of motion in which movement occurs. (7.2.c)</u> • <u>analyze skill patterns and movement performance of self and others, detecting and correcting mechanical errors. (7.2.d)</u> • <u>describe the anatomy and joint types required to accurately perform a skill or fitness-based movement. (7.2.e)</u>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> • <u>Center of support - area beneath a person that includes every point of contact that the person makes with the supporting surface; these points of contact may be body parts (e.g., feet or hands) or they may include things like crutches or the chair a person is sitting in</u> <p><u>Skillful movements use balance, stability, force, and proper form, including athletic position, reaction, and body position while in motion (7.2.b)</u></p> <ul style="list-style-type: none"> • <u>Balance – even distribution of weight allowing one to stay upright and steady</u> • <u>Stability – the ability to be stable or firmly fixed</u> • <u>Force – strength or energy caused by movement</u> • <u>Proper form – moving the body through slow controlled movements to prevent injury</u> • <u>Athletic position – upright position usually involving a slight hip hinge and bent knees that allows an individual to move in any direction as quickly as possible</u> • <u>Reaction – the ability to quickly respond to external stimulus</u> • <u>Body position – alignment of body in relation to movements and external stimuli</u> <p><u>Planes of motion include frontal, sagittal, and transverse planes (7.2.c)</u></p> <ul style="list-style-type: none"> • <u>frontal plane- front and back halves of the body; side-to-side movements</u> • <u>sagittal plane- right and left halves of the body; forward and backward movements</u> • <u>transverse plane- top and bottom halves of the body; twisting movements</u> <p><u>By incorporating all three planes of movement into your mobility time, you will increase your range of motion, prevent injuries, and provide greater stability for your body (7.2.c)</u></p>	<p><u>Additional resources:</u> Health Smart Virginia</p>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>Critical elements and biomechanical principles (balance, planes of movement) can be used to analyze skill patterns and movement performance (7.2.d)</u></p> <p><u>Different anatomy and joint types are required to perform various skill and fitness-based movements (e.g., throwing/catching, striking, lunges, and pushups) (7.2.e)</u></p>	

Fitness Planning

7.3 The student will apply concepts and principles of training and fitness-planning skills to improve physical fitness.

- a) Identify safe practices for improving physical fitness.
- b) Complete a self-assessment of health-related fitness and develop a comprehensive personal fitness plan, including SMART (specific, measurable, attainable, realistic, timely) goals, an action plan that incorporates the FITT (frequency, intensity, time, and type of exercise) principle and to meet the Centers for Disease Control and Prevention’s Physical Activity Guidelines for Americans, timeline, documentation of activities inside and outside school, roadblocks/barriers and solutions, midyear and end-of-year assessments, and reflection on progress for improving at least two self-selected components of health-related fitness.
- c) Identify and apply concepts of fitness improvement using various resources, including available technology, to evaluate, monitor, and record activities for a fitness plan.
- d) Calculate resting, activity, and recovery heart rate and describe its relationship to aerobic fitness.
- e) Describe the differences between aerobic and anaerobic activities and provide three examples of each.
- f) Explain the role of perseverance in achieving fitness goals.

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>The risk of injury can be reduced by performing appropriate amounts of activity and setting appropriate personal goals (7.3.a)</u></p> <p><u>Safe practices for improving physical fitness may include</u></p> <ul style="list-style-type: none"> • <u>warm-up and cool down properly</u> • <u>use/wear appropriate equipment for activity and for safety</u> 	<p><u>In order to meet these standards, it is expected that students will</u></p> <ul style="list-style-type: none"> • <u>identify safe practices for improving physical fitness (7.3.a)</u>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> • <u>vary activities to reduce the risk of overuse injuries</u> • <u>stay hydrated (water is best unless especially hard or long activities)</u> • <u>be aware of weather</u> • <u>proper pacing (not too hard or too fast)</u> • <u>balance types of activities</u> • <u>rest</u> • <u>consult with a coach/teacher or exercise specialist (7.3.a)</u> <p><u>Fitness planning includes self-assessment of the health-related components of fitness and development and implementation of a personal fitness plan (7.3.b)</u></p> <ul style="list-style-type: none"> • <u>Health-related components of fitness</u> <ul style="list-style-type: none"> ○ <u>Muscular strength – the ability to exert a maximal amount of force for a short period of time such as lifting weights</u> ○ <u>Muscular endurance – the ability of a muscle to repeatedly exert force against resistance</u> ○ <u>Flexibility – ability of a joint to move through a full range of motion</u> ○ <u>Cardiovascular endurance – the ability of the heart, lungs, and blood vessels to deliver oxygen to working muscles</u> ○ <u>Body Composition – the components that make up a person’s body weight (percentages of fat, bone, water, and muscle in the human body)</u> <p><u>SMART goal setting provides focused, realistic, and measurable goals and objectives for improving and/or maintaining at least two self-selected components of health-related fitness (7.3.b)</u></p> <ul style="list-style-type: none"> • <u>S – Specific - goals are straightforward and detail what is to be accomplished</u> • <u>M – Measurable - goals must be able to be measured for improvement, how much?, how many?, how will you know the goal is accomplished?</u> 	<ul style="list-style-type: none"> • <u>complete a self-assessment of health-related fitness and develop a comprehensive personal fitness plan (7.3.b)</u> • <u>identify and apply concepts of fitness improvement using various resources, including available technology, to evaluate, monitor, and record activities for a fitness plan (7.3.c)</u> • <u>calculate resting, activity, and recovery heart rate and describe its relationship to aerobic fitness (7.3.d)</u> • <u>describe the difference between aerobic and anaerobic capacity and provide examples of each (7.3.e)</u> • <u>explain the role of perseverance in achieving fitness goals (7.3.f)</u> <p><u>Additional resources:</u> Health Smart Virginia Healthy Children.org</p>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> • <u>A – Attainable - goals require effort beyond what has been achieved before</u> • <u>R – Realistic - goals need to be achievable and reachable</u> • <u>T – Timely - goals should have a time element attached to keep you on track to accomplish in a given time period</u> <p><u>Creating an action plan that incorporates the FITT (frequency, intensity, time, and type) principle sets guidelines to apply when developing fitness plan action steps to become or remain physically fit (7.3.b)</u></p> <ul style="list-style-type: none"> • <u>F – Frequency – how often you exercise</u> • <u>I – Intensity – how hard you exercise</u> • <u>T – Time – how long you exercise</u> • <u>T – Type- what kind of exercise you do</u> <p><u>A timeline for goal achievement and for activities helps hold one accountable (7.3.b)</u></p> <p><u>Recording/documenting, monitoring, and evaluating activities are important to meeting personal goals (7.3.b)</u></p> <p><u>Documentation of activities inside and outside of school, including plans for roadblocks/barriers and solutions assists in reassessing progress mid-year and end-of-year (7.3.b)</u></p> <p><u>Reflection on progress at reassessment milestones allows changes to be made to the fitness plan as needed (7.3.b)</u></p> <p><u>Fitness improvement can be evaluated through a variety of resources including available technology to evaluate, monitor, and record activities for fitness (7.3.c)</u></p>	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> • <u>Technology available to monitor and record – pedometers, heart rate monitors, apps,</u> • <u>Other – exercise journal – how you feel before, during, and after activity, energy level, successes and challenges, rate of perceived exertion</u> <p><u>Heart rate can be used to help determine personal fitness levels (7.3.d)</u></p> <p><u>The more fit a person is, the more quickly the heart will recover after aerobic activity (7.3.d)</u></p> <ul style="list-style-type: none"> • <u>Resting heart rate (RHR) is best taken after 10 minutes of rest.</u> • <u>Activity heart rate can be taken at multiple points during activity and include being taken immediately after stopping activity.</u> • <u>Recovery heart rate is the decrease in heart rate that occurs one minute after maximal exercise. A faster decrease in heart rate is associated with individuals with higher levels of fitness</u> <p><u>The body responds differently based on the demands placed on it by physical activity (7.3.e)</u></p> <ul style="list-style-type: none"> • <u>Anaerobic capacity (without oxygen) is activity in which the body incurs an oxygen debt during short-duration maximal exercise such as lifting a weight, lactic acid is the byproduct</u> • <u>Aerobic capacity (with oxygen) is the body's ability to consume oxygen during exercise such as running and biking, it provides energy at a slower rate for long-term exercise</u> <p><u>Perseverance contributes to the accomplishment of fitness goals (7.3.f)</u></p>	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> • <u>Perseverance is the continued effort to do or achieve something despite difficulties, failure, or opposition; the quality that allows someone to continue trying to do something even though it is difficult</u> 	

Social and Emotional Development

7.4 The student will demonstrate and apply skills to work independently and with others in physical activity settings.

- a) Apply safety procedures, rules, and appropriate etiquette in physical activity settings by self-officiating modified physical activities/games.
- b) Create guidelines and demonstrate how to solve problems and resolve conflicts in activity settings.
- c) Explain the importance of cooperating with classmates, and demonstrate supportive behaviors that promote feelings of inclusion and safety of others.
- d) Describe and demonstrate strategies for dealing with stress, such as deep breathing, guided visualization, and aerobic exercise.
- e) Demonstrate effective communication skills by providing feedback to a peer, using appropriate tone, and other communication skills.
- f) Identify positive mental and emotional aspects of participating in a variety of physical activities.
- g) Describe how participation in physical activities creates enjoyment, reduces stress, and improves mental and emotional wellness.
- h) Identify specific safety concerns associated with at least one activity that includes rules, equipment, and etiquette.
- i) Identify and describe instances that do not support feelings of inclusion (e.g., marginalization).

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>Participation in physical activities can provide an opportunity for developing an understanding and respect for differences among people (7.4.a)</u></p> <p><u>Self-officiating may include following safety procedures, following etiquette, calling own violations and implementing consequences, assisting teammates with following safety procedures, rules and etiquette, settling questions/conflicts/problem solving with other players, and consulting with the teacher as needed for clarification/additional guidance (7.4.a)</u></p> <ul style="list-style-type: none"> • <u>Self-officiate: a physical activity which is officiated by the players, on the honor system, rather than by an outside observer such as a referee.</u> 	<p><u>In order to meet these standards, it is expected that students will</u></p> <ul style="list-style-type: none"> • <u>apply safety procedures, rules, and appropriate etiquette in physical activity settings by self-officiating modified physical activities/games (7.4.a)</u> • <u>create guidelines and demonstrate how to solve problems and resolve conflicts (7.4.b)</u> • <u>explain the importance of cooperating with classmates and demonstrate supportive behaviors that promote inclusion and safety of others (7.4.c)</u> • <u>describe and demonstrate strategies for managing stress (7.4.d)</u> • <u>demonstrate effective communication skills (7.4.e)</u>

- Etiquette: proper acceptable actions, behavior, or conduct within an activity. Elements:
 - Be kind
 - Be courteous
 - Be respectful

To maintain a positive learning environment, students must use communication skills to solve problems and resolve conflicts that arise (7.4.b)

- Problem-solving
 - Identify/define the problem
 - Generate several solutions
 - Evaluate the pros and cons of each solution
 - Choose a solution
 - Implement, document, and reflect on the solution
- Conflict resolution skills
 - Able to reduce own stress quickly – calming oneself before addressing the conflict
 - Be emotionally aware of yourself and the other person – how are you feeling, how is the other person feeling
 - State what the conflict is about
 - Proposing solutions or compromises
 - Agree on a solution or compromise to try
- Communication skills
 - Listening carefully to others
 - Speaking directly to each other
 - Speaking honestly, and kind

- identify positive mental, social, and emotional aspects of participating in physical activities (7.4.f)
- describe how participation in physical activities creates enjoyment, reduces stress, and improves mental/emotional wellness (7.4.g)
- identify safety concerns (rules, equipment, etiquette) associated with at least one activity (7.4.h)
- identify and describe instances that do not support feelings of inclusion (e.g., marginalization) (7.4.i)

Additional resources:
[Health Smart Virginia](#)

A responsible participant views behaving well and including others as important as playing safely (7.4.c)

All classmates should have a safe learning environment and the opportunity for safe participation (7.4.c)

- Supportive behaviors may include listening, helping, encouraging, ensuring everyone is included, taking turns, following rules, and modifying rules as needed for inclusion

Stress is necessary for creativity, learning, and survival. It's only harmful when it becomes overwhelming and interrupts the healthy state of equilibrium that the nervous system needs to maintain (7.4.d)

- Stress: the body's reaction to a change that requires a physical, mental, or emotional adjustment or response

Effectively dealing with stress means to activate the body's natural relaxation response by practicing relaxation techniques (7.4.d)

- Relaxation techniques:
 - Breathing meditation: deep breathing
 - Progressive muscle relaxation: systematically tense and relax different muscle groups in the body
 - Body scan meditation: focus on the sensations in each part of your body
 - Mindfulness: staying calm and focused in the present moment
 - Visualization: imagining a scene in which you feel at peace
 - Yoga: moving and stationary poses, combined with deep breathing

- Tai Chi: a self-paced, non-competitive series of slow, flowing body movements
- Rhythmic/aerobic exercise (such as running, walking, rowing, or cycling): engaging in the present moment, focusing your mind on how your body feels right now

Physical activity can help with managing stress (7.4.d)

When done in the right way and with the right intentions, feedback communication is the avenue to performance greatness (7.4.e)

- Feedback: supports the development of self-regulated learning, critical thinking, and reciprocal learning
 - Two corrections at the most should be identified for feedback
 - Should be specific and meaningful
 - Given with the goal of improvement
 - Timely
 - Honest
 - Respectful
 - Clear
 - Issue-specific
 - Objective
 - Supportive
 - Motivating
 - Action-oriented
 - Solution-oriented

Effective communication gives you the best chance of successfully delivering your message (7.4.e)

- Positive and respectful ways to communicate include talking at an appropriate tone, waiting for a turn to speak, allowing others to provide feedback, and body language (eye contact, gestures).
- Verbal Communication – use of words to send an oral or written message. Verbal communication skills may include be friendly, think before speaking, be clear, focus on body language, and be an active listener.
- Nonverbal Communication includes facial expressions, body language, gestures, and tone and voice volume. Nonverbal communication skills may include eye contact, facial expressions, gestures (nodding), posture, tone of voice, volume of voice

Exercise/physical activity improves mental health by reducing anxiety, depression, and negative mood and by improving self-esteem and cognitive function (7.4.f)

Exercise has been found to alleviate symptoms such as low self-esteem and social withdrawal (doe: <https://dx.doi.org/10.4088%2Fpcc.v08n0208a>) (7.4.f)

Exercise enhances mood and overall well-being, provides opportunities to connect with family and friends, enjoy the outdoors, unwind, meet new people with similar interests, exercising with others can be motivating, sense of belonging, and opportunities to develop social skills (7.4.f)

Participation in physical activities creates enjoyment when engaging in activities that a person likes to do and participate with people they enjoy (7.4.g)

Physical activity causes the release of endorphins in the brain, a chemical that triggers a positive feeling in the body, the body's natural "feel good" chemicals also help to reduce/relieve pain and stress (7.4.g)

Safety concerns should include activity-specific rules, equipment, and etiquette (7.4.h)

- Etiquette is the rules indicating the proper and polite way to behave (e.g., shaking hands/giving high fives/congratulating other teams at the end of a game)

Creating opportunities that allow everyone to participate and succeed contributes to an inclusive environment (7.4.i)

- Inclusion: Feeling a sense of belonging, acceptance, and value.
 - Belonging: feeling needed, importance, and respected within the group
 - Accepted: being welcomed into the class's community
 - Valued: knowing you are worthy and desirable
- Marginalization: treatment of a person or group as insignificant or peripheral

Energy Balance

7.5 The student will describe rate of perceived exertion and nutrients (energy) needed for a variety of-activities and explain the importance of sleep for energy balance.

- a) Explain the connection between an RPE scale and heart rate, and the body’s response to physical activity.
- b) Define and describe the anaerobic and aerobic energy systems.
- c) Identify the nutrients needed for optimal aerobic and anaerobic capacity and for muscle strength and endurance.
- d) Calculate resting heart rate (RHR) and describe its relationship to aerobic fitness and an RPE scale.
- e) Explain the effects of sleep on energy balance.

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>Rate of Perceived Exertion (RPE) is a way of measuring physical activity intensity level. Scales may range from 5 to 20 levels (7.5.a)</u></p> <p><u>Example (variation of Borg scale):</u></p> <ul style="list-style-type: none">• <u>Level 1 – Very light activity (watching TV)</u>• <u>Level 2 – Light activity (can maintain for hours, easy to breathe)</u>• <u>Level 3 – Moderate activity (breathing heavily, somewhat comfortable)</u>• <u>Level 4 – Vigorous activity (borderline uncomfortable, short of breath)</u>• <u>Level 5 – Very hard activity (difficult to maintain exercise intensity, barely breathe)</u>• <u>Level 6 – Max effort activity (almost impossible to keep going, out of breath)</u> <p><u>The RPE scale relies on bodily sensations during exercise, such as muscular fatigue, increased sweating, and increased breathing rate and heart rate (7.5.a, 7.5.d)</u></p> <p><u>Using the RPE scale helps you recognize your body’s signs of exertion and modify your normal workout intensity (7.5.a)</u></p>	<p><u>In order to meet these standards, it is expected that students will</u></p> <ul style="list-style-type: none">• <u>explain the connection between an RPE scale and heart rate, and the body’s response to physical activity (7.5.a)</u>• <u>define and describe the anaerobic and aerobic energy systems (7.5.b)</u>• <u>identify the nutrients needed for optimal aerobic and anaerobic capacity and muscle strength and endurance (7.5.c)</u>• <u>calculate resting heart rate (RHR) and describe its relationship to aerobic fitness and an RPE scale (7.5.d)</u>• <u>explain the impact of sleep on energy balance (7.5.e).</u> <p><u>Additional resources:</u> <u>Health Smart Virginia</u></p>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>Anaerobic and aerobic respiration are ways your body converts food into energy so that your brain, muscles, and other organs can function normally (7.5.b)</u></p> <p><u>In aerobic exercise, oxygen is used to create a metabolic reaction in cells. This reaction produces the cellular energy required for the body to move. (7.5.b)</u></p> <p><u>During anaerobic exercise, the body requires immediate energy. The body relies on stored energy sources, rather than oxygen, to fuel itself. (7.5.b)</u></p> <ul style="list-style-type: none"> • <u>Anaerobic exercise includes breaking down glucose stored in the body which provides energy from 6 up to 90 seconds.</u> <p><u>The body uses different pathways to create energy from macronutrients (carbohydrates, proteins, and fats.) (7.5.c)</u></p> <ul style="list-style-type: none"> • <u>Most energy is derived from the breakdown of carbohydrates and fats, the two main energy nutrients used during exercise.</u> <p><u>For optimal aerobic and anaerobic capacity, the body needs to break down carbohydrates and convert it to glycogen, so it can be used as energy or fuel. (7.5.c)</u></p> <p><u>Aerobic processes in cellular respiration can only occur if oxygen is present. (7.5.c)</u></p> <ul style="list-style-type: none"> • <u>When a cell needs to release energy, it initiates a chemical exchanges that launches the breakdown of glucose. This sugar is carried through the blood and stored in the body as a fast source of energy. The breakdown of glucose releases carbon dioxide, a byproduct that needs to be removed from the body.</u> <ul style="list-style-type: none"> ○ <u>Aerobic exercise conditions enable you to exercise for long periods of time, potentially benefiting from the sustained energy expenditure (i.e., calories burned).</u> 	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> ○ <u>With aerobic training, you become much more efficient at using fat as an energy source for exercise. This allows muscle and liver glycogen to be used at a slower rate.</u> <p><u>Anaerobic energy processes do not use oxygen. (7.5.c)</u></p> <ul style="list-style-type: none"> ○ <u>In anaerobic exercise glycogen, from carbohydrates, is used as fuel. However, there is not enough oxygen in the system to fully break it down.</u> <ul style="list-style-type: none"> ○ <u>Lactic acid, which builds up in muscle cells as aerobic processes fail to keep up with energy demands, is a byproduct of an anaerobic process.</u> ○ <u>Lactic acid leads to fatigue and muscle soreness that can be recovered from by breathing in more oxygen and through the circulation of blood. These process help carry the lactic acid away.</u> <p><u>Resting heart rate (RHR) can be used to help determine personal fitness levels including cardiovascular health. (7.5.d)</u></p> <p><u>In general, a lower heart rate at rest indicates more efficient heart function and better aerobic/cardiorespiratory fitness. (7.5.d)</u></p> <ul style="list-style-type: none"> • <u>Resting heart rate (RHR) is best taken after 10 minutes of rest.</u> <p><u>Monitoring your heart rate, and comparing to an RPE scale, will allow you to track the changes taking place in your cardiovascular system as you move toward aerobic fitness. (7.5.d)</u></p> <p><u>Energy balance is the balance between calories consumed (energy in) and calories expended (energy out) which helps maintain a healthy body weight. (7.5.e)</u></p>	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>Short sleep (less than recommended/sleep deficit) is associated with weight gain due to increased food intake, decreased energy expenditure, and changes in levels of appetite-regulating hormones (https://pubmed.ncbi.nlm.nih.gov/25012962/) (7.5.e)</u></p> <p><u>Transitioning from an insufficient to adequate/recovery sleep schedule can lead to decreased energy intake, especially of fats and carbohydrates, and lead to weight loss (doe: https://doi.org/10.1073/pnas.1216951110) (7.5.e)</u></p>	

GRADE EIGHT

Students in grade eight demonstrate competence in skillful movement in modified, dynamic game/sport situations and in a variety of rhythmic and recreational activities. They transition from modified versions of movement forms to more complex applications across all types of activities. The grade-eight student applies knowledge of major body structures to explain how body systems interact with and respond to physical activity and how structures help the body create movement. Students will explain the relationship between nutrition, activity, and body composition to deepen understanding of energy balance. They will demonstrate socially responsible behavior as they show respect for others, make reasoned and appropriate choices, resist negative peer pressure, and exhibit integrity and fair play to achieve individual and group goals in the physical activity setting. Students are able to set goals, track progress, and participate in physical activities to improve health-related fitness. They have a repertoire of abilities across a variety of game/sport, dance, and recreational pursuits and begin to develop competence in specialized versions of lifelong game/sport activities.

Motor Skill Development

8.1 The student will apply and demonstrate movement concepts and skills in small-sided games/sports, rhythmic, dance, lifetime, and recreational activities.

- a) Demonstrate and apply movement forms to a variety of cooperative and tactical activities that include dynamic and unpredictable situations with a focus on defensive strategies, including reducing space, transitioning from offense to defense quickly, and selecting appropriate tactics to gain a defensive advantage.
- b) Create a rhythmic movement or dance sequence to music as an individual or in a group.
- c) Demonstrate skill-related components of fitness (agility, balance, coordination, power, reaction time, and speed) specific to various activities.
- d) Demonstrate and explain the role of balance (center of support, center of gravity, and planes of motion) in a variety of activities.
- e) Demonstrate physiological principles of warm-up, cool down, overload, specificity, and progression to improve performance.
- f) Demonstrate the use of technology tools to analyze and improve performance.
- g) Analyze movement performance/progressions (i.e., practice, self or peer assess, correct, practice at a higher level, and reassess) of a specific skill and use feedback to learn or improve the movement skills of self and others.

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>Motor skill development includes combining and applying movement and manipulative skills to changing physical activity/game situations (8.1.a)</u></p> <p><u>Cooperative activities put an emphasis on team building, communication, and trust (8.1.a)</u></p> <p><u>Tactical activities may include small-sided, modified games and sports that may include offense and defense that include dynamic and unpredictable situations (8.1.a)</u></p> <ul style="list-style-type: none"> • <u>Defense is the action of preventing an opposing team/opponent from scoring. Defensive strategies include defensive body positioning (lowering center of gravity, arms out), reducing space, use of sidelines, transitioning from offense to defense quickly, communicating with teammates, covering an individual opponent or area of the field of play, and selecting appropriate tactics to gain defensive advantage</u> • <u>Offensive skills include moving to open spaces, give and go, fakes, pivots, changing speed/direction, positioning in front of defender closer to a teammate, communicating with teammates, and continually moving/not standing still</u> <p><u>Dance and/or rhythms can provide opportunities for personal enjoyment, self-expression, challenge, and social interaction (8.1.b)</u></p> <p><u>Movement competency involves patterns (8.1.b)</u></p> <ul style="list-style-type: none"> • <u>Student-created individual or group rhythmic movement sequence may include a beginning, ending, change in direction and pathways, and variety of skills/movements to counts of 4/8</u> 	<p><u>In order to meet these standards, it is expected that students will</u></p> <ul style="list-style-type: none"> • <u>demonstrate and apply movement forms in cooperative and tactical activities with a focus on defensive strategies (8.1.a)</u> • <u>create a rhythmic movement sequence to music (8.1.b)</u> • <u>demonstrate skill-related components of fitness in a variety of activities (8.1.c)</u> • <u>demonstrate the role of balance in a variety of activities and/or planes of movement (8.1.d)</u> • <u>explain the role of balance in a variety of activities/planes of movement (8.1.d)</u> • <u>demonstrate warm-up, cool down, overload, specificity, and progression (8.1.e)</u> • <u>demonstrate the use of technology tools to analyze and improve performance (8.1.f)</u> • <u>analyze movement performance and utilize feedback to learn or improve the movement skills of self-and/or others (8.1.g)</u> <p><u>Additional resources:</u> <u>SHAPE America National Standards and Grade-Level Outcomes</u> <u>OPEN Online Physical Education Network</u></p>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>Skill-related fitness components increases one’s ability to perform in various activities and leads to good overall health (8.1.c)</u></p> <ul style="list-style-type: none"> • <u>Agility – ability to move quickly and easily; quick change of direction</u> • <u>Balance – stability produced by even distribution of weight; muscles tense to keep the body in a balanced position</u> • <u>Coordination – harmonious functioning of parts for effective results; it takes eye-hand coordination to strike an object</u> • <u>Power – physical might, ability to act or produce an effect; kicking a ball for distance</u> • <u>Reaction time – the time required for a subject to initiate a prearranged response to a defined stimulus; the time between hearing a whistle and starting to run or time between seeing a ball being thrown to a place out of reach and moving to catch it</u> • <u>Speed – the rate of motion, ability to move swiftly</u> <p><u>Balance is a static and dynamic process that makes it possible for the body to maintain its center of gravity over its base of support (8.1.d)</u></p> <ul style="list-style-type: none"> • <u>Center of gravity - balance point or that point about which a body would balance without a tendency to rotate</u> • <u>Center of support - area beneath a person that includes every point of contact that the person makes with the supporting surface; these points of contact may be body parts (e.g., feet or hands, or they may include things like crutches or the chair a person is sitting in)</u> <p><u>The lower the center of the body, the larger the base of support, the closer the center of the body is to the base of support, the more stability increase (8.1.d)</u></p>	<p><u>Health Smart Virginia</u> <u>PE Central</u> <u>Dynamic PE ASAP</u></p>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>Movement is stabilized in three planes of motion (8.1.d)</u></p> <ul style="list-style-type: none"> • <u>frontal plane- front and back halves of the body; side-to-side movements</u> • <u>sagittal plane- right and left halves of the body; forward and backward movements</u> • <u>transverse plane- top and bottom halves of the body; twisting movements</u> <p><u>Warming up and cooling down may help reduce risk of injury and improve athletic performance (8.1.e)</u></p> <ul style="list-style-type: none"> • <u>Warm-up - pumps nutrient-rich, oxygenated blood to muscles as it speeds up heart rate and breathing and raising body temperature, preparing the body for activity. A good warm-up should last five to 10 minutes and work all major muscle groups; start activity/exercise slowly, then pick up the pace. Warming up may help reduce muscle soreness and lessen risk of injury</u> • <u>Cool down - after a workout, 5 to 10 minutes cooling down through a sequence of slow movements; helps prevent muscle cramps and dizziness while gradually slowing breathing and heart rate; gradual recovery of pre-exercise heart rate and blood pressure</u> <p><u>Improvements in performance depend upon the training principles of overload, specificity, and progression (8.1.e)</u></p> <ul style="list-style-type: none"> • <u>Specificity – desired adaption occurs in response to specific stress placed upon the body; exercise/activity needs to match desired outcome</u> • <u>Overload – stress must be applied beyond that which the body is accustomed to; increase workload (added weight, time, intensity, and/or repetitions)</u> • <u>Progression – once body has adapted to a level of stress, additional stress is needed; progressively or gradually increase workload</u> 	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>Technology can be used to provide opportunities to analyze movement, monitor progress toward motor skill and fitness goals, and assess learning/improvement (8.1.f)</u></p> <p><u>Technology available to analyze and improve performance may include devices with video capability, apps with frame-by-frame and coaching markings, heart rate monitors, pedometers, and GPS capable devices for speed and distance (8.1.f)</u></p> <p><u>Movement learning progression includes practice, self or peer assess, correct movement/skill components, practice at a higher level, and reassess (8.1.g)</u></p> <p><u>Self/peer assessments allow students to observe specific skills to detect, analyze and correct errors in personal movement patterns (8.1.g)</u></p> <p><u>Feedback motivates, reinforces, and speeds learning (8.1.g)</u> <u>Feedback may be oral, written, or visual and should include specifics about what is being done well (in relation to critical elements) and what can be done to improve, and suggestions for ways to improve through practice</u></p>	

Anatomical Basis of Movement

8.2 The student will apply movement principles and concepts and apply knowledge of major body structures to explain how body systems interact with and respond to physical activity and movement.

- a) Explain how body systems interact with one another during physical activity.
- b) Identify and describe biomechanical principles (e.g., spin, rebound, effects of levers, force, motion, rotation, and energy) to understand skillful movements.
- c) Explain how offensive and defensive tactics and strategies are used to gain an advantage in games and sports.
- d) Analyze performance in a variety of selected skills/activities using movement concepts of agility, power, coordination, reaction time, speed, force, motion, rotation, and energy of self and partner.

- e) Analyze movement progressions (i.e., practice, self or peer assess, correct, practice at a higher level, and reassess) of a specific skill and use feedback to improve the movement skills of self and/or others.
- f) Describe the effects of physical activity and exercise on the body, including cardiorespiratory, muscular, and nervous systems.
- g) Apply knowledge of anatomy to accurately describe movements in relation to type of joint and associated movement/motion, associated bones and muscles, and type of muscle contraction.

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>Body systems interact during physical activity (8.2.a, 8.2.f)</u></p> <ul style="list-style-type: none"> • <u>The heart, which is part of the circulatory system, does not beat unless the brain, which is part of the nervous system, tells it to</u> • <u>The muscular system needs the respiratory and circulatory systems to supply energy in the form of oxygen and nutrients</u> • <u>Vigorous exercise stimulates the endocrine system which causes the release of endorphins, which improve the mood and induce a feeling of calmness</u> <p><u>When the body is moving or producing movement it obeys the same physical laws and biomechanical principles that apply to all types of motion (8.2.b)</u></p> <ul style="list-style-type: none"> • <u>Spin is created when a ball or any object is subjected to an external force creating a force couple. Topspin tends to shorten the flight of the ball, which dips sharply at the end of its flight. Backspin also shortens the flight of the ball, which falls more slowly at the end of the flight. Sidespin makes the ball curve left or right in the direction of the spin.</u> • <u>Rebound – Newton’s Third Law - An object, when struck, will rebound in the opposite direction with the same amount of force with which it was hit.</u> • <u>Effects of levers – bones of the body are levers as well as a stiff, straight object that can be used to lift weight, increase force, or create speed; example bicep curl: pivot point is the elbow, lever is the lower arm/forearm, and weight is the resistance; the force of the contraction of the muscles of the upper arm pulls up on lever (lower arm/forearm), and arm and weight move up</u> 	<p><u>In order to meet these standards, it is expected that students will</u></p> <p><u>In order to meet these standards, it is expected that students will</u></p> <ul style="list-style-type: none"> • <u>explain how body systems interact with one another during physical activity (8.2.a)</u> • <u>identify and describe biomechanical principles to understand skillful movements (8.2.b)</u> • <u>explain how offensive tactics and strategies are used to gain an advantage in games and sports (8.2.c)</u> • <u>analyze performance in a variety of selected skills/activities using movement concepts (8.2.d)</u> • <u>analyze movement progressions (practice, self or peer assess, correct, practice at a higher level, and reassess) of a specific skill and utilize feedback to improve the movement skills of self and/or others (8.2.e)</u>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> • <u>Force – a push or a pull, Newton’s Laws of Motion</u> • <u>Motion – the process of moving or being moved</u> • <u>Rotation – action of rotating around an axis or center</u> • <u>Energy – capacity for doing work, energy in moving objects</u> <p><u>Offense tactics involve the strategies or players that attempt to score in a game (8.2.c)</u></p> <ul style="list-style-type: none"> • <u>Offensive tactics include moving to open spaces, give and go, fakes, pivots, changing speed/direction, positioning in front of defender closer to a teammate, communicating with teammates, and continually moving/not standing still</u> <p><u>Defense tactics involve the strategies or players that prevent the other team from scoring (8.2.c)</u></p> <ul style="list-style-type: none"> • <u>Defensive tactics include defensive body positioning (lowering center of gravity, arms out), reducing space, use of sidelines, transitioning from offense to defense quickly, communicating with teammates, covering an individual opponent or area of the field of play, and reacting to gain defensive advantage</u> <p><u>The ability to analyze components of a skill and movement concepts can result in improvement of self-and/or others (8.2.d)</u></p> <ul style="list-style-type: none"> • <u>Movement performance examples using movement concepts:</u> <ul style="list-style-type: none"> ○ <u>Force: varies returns in net/wall games.</u> ○ <u>Agility: changing directions to hit a tennis ball.</u> ○ <u>Coordination: using the hands and eyes in a basketball dribble is called hand-eye coordination</u> 	<ul style="list-style-type: none"> • <u>describe how physical activity and exercise effects the cardiorespiratory system (8.2.f)</u> • <u>describe the effects of physical activity and exercise on the body, including cardiorespiratory, muscular, and nervous systems (8.2.f)</u> • <u>apply knowledge of anatomy to accurately describe movements in relation to type of joint and associated movement/motion, associated bones and muscles, and type of muscle contraction (8.2.g)</u> <p><u>Additional resources:</u> <u>Health Smart Virginia</u></p>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> ○ <u>Speed: relying on speed to gain advantage, such as a basketball player making a fast break to perform a layup or a football player outrunning the defense to receive a pass.</u> ○ <u>Power: a combination of speed and muscular strength, such as a volleyball player moving quickly to the net and lifting their bodies high into the air.</u> ○ <u>Reaction time: to reach or respond quickly to what is seen, hear or felt. An example is stealing a base in baseball</u> <p><u>Movement learning progression includes practice, self or peer assess, correct movement/skill components, practice at a higher level, and reassess (8.2.e)</u></p> <p><u>Self/peer assessments allow students to observe specific skills to detect, analyze and correct errors in personal movement patterns (8.2.e)</u></p> <p><u>Feedback motivates, reinforces, and speeds learning (8.2.e)</u></p> <p><u>Feedback may be oral, written, or visual and should include specifics about what is being done well (in relation to critical elements) and what can be done to improve, and suggestions for ways to improve through practice (8.2.e)</u></p> <p><u>Physical activity and exercise affect all major body systems (8.2.f)</u></p> <ul style="list-style-type: none"> ● <u>Physical movement – stronger bones and muscles; promotes development of motor skills, joint flexibility, balance, coordination</u> ● <u>Body systems – improves muscle strength, endurance, delivers oxygen and nutrients to tissues from increased heart rate and respiration, helps cardiovascular system be more efficient, boosts energy, better sleep</u> 	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> • <u>Brain development – movement/exercise increases heart rate which pumps more oxygen to the brain, supplying brain cells with oxygen; promotes the production of new brain cells by the release of hormones; and aids in creating new synapses/new connections; improves thinking, cognition, and judgment skills</u> <p><u>Muscles move bones by working in pairs at joints; flexors contracts to bend a limb at the joint and then the flexor relaxes while the extensor contracts to straighten the limb at the same joint (8.2.g)</u></p> <ul style="list-style-type: none"> • <u>Joints and movements</u> <ul style="list-style-type: none"> ○ <u>Ball and socket - rounded surface of one bone moves within a depression on another bone; hip (head of femur and depression of pelvis); shoulder (humerus, scapula, clavicle); movement - flexion/extension</u> ○ <u>Pivot - cervical vertebrae allows head to move side to side; radius and ulna and humerus allow for twist motion (movement of arm for forehand and backhand swing); movement - rotation of one bone around another</u> ○ <u>Hinge - backward and forward swing motion; joints between bones of the fingers (phalanges); ankle (fibula, tibia, and talus of the foot); elbow (ulna and humerus); knee (femur, tibia, and patella); movement - flexion/extension Example - arm bend at elbow: type of joint – hinge; movement/motion – flexion/extension; bones – humerus, radius, ulna; muscles – biceps and triceps; biceps contract while triceps relax to bend arm up, then biceps relax and triceps contract to return arm to straight position</u> 	

Fitness Planning

8.3 The student will apply self-assessment skills and use technology to create and implement a personal fitness plan to improve or maintain personal fitness.

- a) Complete a self-assessment of current fitness levels and develop a comprehensive personal fitness plan, including SMART (specific, measurable, attainable, realistic, timely) goals, an action plan that incorporates the FITT (frequency, intensity, time and type of exercise) principle, a timeline, documentation of activities inside and outside school, roadblocks/barriers and solutions, midyear and end-of-year assessments, and reflection on progress for improving at least three components of health-related fitness.
- b) Describe how an RPE scale can be used to adjust workout intensity during physical activity.
- c) Use a variety of resources, including available technology tools and prior fitness data, to-evaluate, monitor, and record activities for personal fitness improvement.
- d) Create and implement an activity plan (that includes warm-up, cool-down and appropriate intensity levels) applying specificity, overload, and progression, and identify safety precautions to meet the Centers for Disease Control and Prevention’s Physical Activity Guidelines for Americans.
- e) Describe the body’s physiological responses to warm-ups and cool downs.
- f) Identify activities that use the anaerobic and aerobic energy systems.
- g) Demonstrate perseverance in achieving fitness goals.

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>Fitness planning includes self-assessment of the health-related components of fitness and development and implementation of a personal fitness plan (8.3.a)</u></p> <ul style="list-style-type: none">• <u>Health-related components of fitness</u><ul style="list-style-type: none">○ <u>Muscular strength – the ability to exert a maximal amount of force for a short period of time such as lifting weights</u>○ <u>Muscular endurance – the ability of a muscle to repeatedly exert force against resistance</u>○ <u>Flexibility – the ability of a joint to move through a full range of motion</u>	<p><u>In order to meet these standards, it is expected that students will</u></p> <ul style="list-style-type: none">• <u>complete a self-assessment of current fitness levels and develop a comprehensive personal fitness plan (8.3.a)</u>• <u>describe how a rate of perceived exertion (RPE) scale can be used to adjust workout intensity (8.3.b)</u>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> ○ <u>Cardiovascular endurance – the ability of the heart, lungs, and blood vessels to deliver oxygen to working muscles</u> ○ <u>Body Composition – the components that make up a person’s body weight (percentages of fat, bone, water, and muscle in the human body)</u> <p><u>Fitness planning includes:</u></p> <ul style="list-style-type: none"> • <u>SMART (specific, measurable, attainable, realistic, timely) goals for improving and/or maintaining self-selected components of health-related fitness based on self-assessment of health-related components of fitness (utilizing technology as appropriate)</u> • <u>An action plan that incorporates SOP training principles (specificity, overload, and progression)</u> • <u>An action plan that incorporates the FITT (frequency, intensity, time, and type) principle</u> • <u>A warm-up and cool-down</u> • <u>Timeline for goal achievement and for activities</u> • <u>Documentation of activities inside and outside of school using technology tools</u> • <u>Plan addresses/plans for roadblocks/barriers and solutions</u> • <u>Reassess at mid-year and end-of-year</u> • <u>Reflection on progress at reassessment milestones and make changes to plan as needed (8.3.a, 8.3.c, 8.3.d)</u> <p><u>Perceived exertion is how hard a person feels like their body is working. Rate of Perceived Exertion (RPE) is a way of measuring physical activity intensity level. Scales may range from 5 to 20 levels (8.3.b)</u></p> <p><u>Example (variation of Borg scale):</u></p> <ul style="list-style-type: none"> • <u>Level 1- Very light activity (watching TV)</u> 	<ul style="list-style-type: none"> • <u>use a variety of resources to evaluate, monitor, and record activities for fitness improvement (8.3.c)</u> • <u>create and implement an activity plan (that includes a warm-up, cool-down, and appropriate intensity levels) applying specificity, overload, and progression, and identify safety precautions to meet the Centers for Disease Control and Prevention’s Physical Activity Guidelines for Americans (8.3.d)</u> • <u>describe the body’s physiological responses to warm-ups and cool downs (8.3.e)</u> • <u>identify activities that use the anaerobic and aerobic energy systems (8.3.f)</u> • <u>demonstrate perseverance in achieving fitness goals (8.3.g)</u> <p><u>Additional resources:</u> <u>Health Smart Virginia</u></p>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> • <u>Level 2 – Light activity (can maintain for hours, easy to breathe)</u> • <u>Level 3 – Moderate activity (breathing heavily, somewhat comfortable)</u> • <u>Level 4 – Vigorous activity (borderline uncomfortable, short of breath)</u> • <u>Level 5 – Very hard activity (difficult to maintain exercise intensity, barely breathe)</u> • <u>Level 6 – Max effort activity (almost impossible to keep going, out of breath)</u> <p><u>Fitness improvement can be evaluated through a variety of resources including available technology to evaluate, monitor, and record activities for fitness (8.3.c)</u></p> <ul style="list-style-type: none"> • <u>Technology available to monitor and record – pedometers, heart rate monitors, apps,</u> • <u>Other – exercise journal – how you feel before, during, and after activity, energy level, successes and challenges, rate of perceived exertion</u> <p><u>Selection of a measurement method of personal fitness depends on the purpose of the evaluation and what is being measured (8.3.c)</u></p> <p><u>Combining the specificity, overload, and progression principles will ensure that you are not only doing the right exercises but also doing them at a resistance, speed, and frequency that will force your body to adapt (8.3.d)</u></p> <p><u>Activity planning based on Centers for Disease Control and Prevention’s Physical Activity Guidelines for Americans for 60 minutes of physical activity a day should include:</u></p> <ul style="list-style-type: none"> • <u>SMART goal(s) based on self-assessment of current physical activity levels</u> • <u>Action plan strategies that include activities inside and outside of school 7 days a week and that includes warm-up, cool down, and appropriate intensity levels</u> 	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> • <u>Safety precautions for activities</u> • <u>Documentation of activities</u> • <u>Reflection of goal attainment (8.3.d)</u> <p><u>The body has a physiological response to warm-ups and cool downs (8.3.e)</u></p> <ul style="list-style-type: none"> • <u>Effects of Warm-ups:</u> <ul style="list-style-type: none"> ○ <u>Dilates capillaries and raises the pulse rate which enables more blood and oxygen to be available for the muscles</u> ○ <u>Raises body temperature which enhances the rate of ATP conversion</u> ○ <u>Prepares muscles to operate over its full range</u> ○ <u>Reduces the risk of injury</u> ○ <u>Produces hormones like epinephrine, endorphins, growth hormone and testosterone, all of which increase the energy available for your workout</u> • <u>Effects of Cool Downs:</u> <ul style="list-style-type: none"> ○ <u>Reducing to lighter exercises will help with the removal of lactic acid</u> ○ <u>Prevents blood pooling that causes dizziness</u> ○ <u>Stretching improves flexibility</u> ○ <u>Slow down the heart rate</u> ○ <u>Slows down the blood flow</u> ○ <u>Slows down nervous system activity</u> ○ <u>Helps minimize muscle fatigue and soreness</u> <p><u>Anaerobic exercise is typically used in non-endurance sports to build power and by body builders to build muscle mass (8.3.f)</u></p> <ul style="list-style-type: none"> • <u>Examples of anaerobic exercise:</u> <ul style="list-style-type: none"> ○ <u>Weightlifting</u> ○ <u>Sprinting and jumping</u> 	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> ○ <u>Any exercise that consists of short exertion, high-intensity movement</u> <p><u>Aerobic exercise includes any type of exercise but typically those performed at moderate levels of intensity for extended periods of time that maintain an increased heart rate (8.3.f)</u></p> <ul style="list-style-type: none"> ● <u>Examples of aerobic exercise:</u> <ul style="list-style-type: none"> ○ <u>Walking</u> ○ <u>Running</u> ○ <u>Swimming</u> ○ <u>Cycling</u> ○ <u>Rowing</u> <p><u>Having perseverance will help in achieving fitness goals (8.3.g)</u></p> <ul style="list-style-type: none"> ● <u>Perseverance strategies</u> <ul style="list-style-type: none"> ○ <u>Set realistic goals (SMART goals)</u> ○ <u>Be persistent</u> ○ <u>Celebrate your successes</u> ○ <u>Create your non-negotiables (do away with excuses)</u> ○ <u>Monitor your progress</u> 	

Social and Emotional Development

8.4 The student will describe and apply social and safety skills to achieve individual and group goals in physical activity settings.

- a) Describe and demonstrate best practices for participating safely in physical activity, exercise, and dance (e.g., injury prevention, proper alignment, hydration, use of equipment, implementation of rules, sun protection).
- b) Describe and demonstrate appropriate encouragement and feedback to peers without prompting from the teacher.
- c) Identify and demonstrate proper etiquette, respect for others, integrity, effective communication, problem-solving skills, conflict-resolution skills, self-management and teamwork skills while engaging in cooperative and dynamic physical activity and/or social dance.
- d) Identify and demonstrate self-awareness in selecting stress-reducing activities (e.g., yoga, Pilates, tai chi).
- e) Apply relationship skills and strategies (e.g., trust, compassion, empathy) that promote team/group dynamics and inclusion.
- f) Analyze the proper use of equipment and self-management skills in relation to safety in physical activity.
- g) Analyze and compare social and emotional benefits of participation in various activities.
- h) Identify opportunities for social interaction through physical activity in the community.
- i) Develop plans to enhance inclusion and reduce social exclusion/marginalization.

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>While there is a risk of injury with any type of physical activity, the benefits of staying active far outweigh the risks (8.4.a)</u></p> <p><u>Safety practices for physical activity should include proper warm-up and cool down, safety equipment, injury prevention, proper alignment, hydration, use of equipment, implementation of rules, and sun protection (8.4.a)</u></p> <ul style="list-style-type: none"> • <u>Guidelines for safe physical activity:</u> <ul style="list-style-type: none"> ○ <u>Understand the risks but be confident that physical activity is safe for most individuals</u> ○ <u>Choose types of physical activity that are appropriate for your current fitness level and health goals</u> ○ <u>Increase physical activity gradually over time whenever more activity is necessary to meet health goals</u> 	<p><u>In order to meet these standards, it is expected that students will</u></p> <ul style="list-style-type: none"> • <u>describe and demonstrate best practices for participating safely in physical activity, exercise, and dance (8.4.a)</u> • <u>describe appropriate encouragement and feedback to peers (8.4.b)</u> • <u>identify and demonstrate proper etiquette, respect for others, integrity, and teamwork while engaging in physical activity and/or social dance (8.4.c)</u>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> ○ <u>Be protected by using appropriate gear and sports equipment, looking for safe environments, and following rules and procedures.</u> <u>Examples: Policies that promote the use of bicycle helmets reduce the risk of head injury among cyclists. Rules against diving into shallow water at swimming pools prevent head and neck injuries</u> ○ <u>Making good choices about when, where, and how to be active reduces possible injuries and adverse events can be prevented.</u> <u>Example: During very hot and humid weather, lessen the chances of dehydration and heat stress by:</u> ○ <u>Exercising in the cool of early morning as opposed to midday heat</u> ○ <u>Switching to indoor activities (playing basketball in the gym rather than on the playground)</u> ○ <u>Changing the type of activity (swimming rather than playing soccer)</u> ○ <u>Lowering the intensity of activity (walking rather than running)</u> ○ <u>Paying close attention to rest, shade, drinking enough fluids, and other ways to minimize effects of heat</u> ○ <u>If you have chronic conditions or symptoms, consult your healthcare provider about the types and amounts of activity that is appropriate</u> <p><u>Appropriate encouragement and feedback should include positive specific comments about what a peer is doing well, specific comments that may help a peer improve skill/play and include effective verbal and nonverbal communication skills (8.4.b)</u></p> <p><u>Etiquette is the rules indicating the proper and polite way to behave (e.g., shaking hands/giving high fives/congratulating other team at the end of a game) (8.4.c)</u></p> <p><u>Respecting others may include</u></p>	<ul style="list-style-type: none"> ● <u>identify and demonstrate basic movements used in stress-reducing activities (8.4.d)</u> ● <u>apply relationship skills and strategies that promote team/group dynamics and inclusion (8.4.e)</u> ● <u>analyze the proper use of equipment and self-management skills used to be safe in physical activities (8.4.f)</u> ● <u>analyze and compare social and emotional benefits of participation in a variety of activities (8.4.g)</u> ● <u>identify opportunities for social interaction through physical activity in the community (8.4.h)</u> ● <u>develop plans to enhance inclusion and reduce social exclusion/marginalization (8.4.i)</u> <p><u>Additional resources:</u> <u>Health Smart Virginia</u></p>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> • <u>Show interest and appreciation for other people's cultures and backgrounds</u> • <u>Don't insult people, tease them, or make fun of them</u> • <u>Listen to others when they speak</u> • <u>Be considerate of people's likes and dislikes</u> • <u>Don't talk about people behind their backs</u> • <u>Be sensitive to other people's feelings (8.4.c)</u> <p><u>Integrity is the quality of being honest and fair. Integrity in physical activity settings allow for inclusive, fair, and safe participation for all participants integrity (8.4.c)</u></p> <p><u>Teamwork skills may include communication, conflict resolution, decision making, problem solving, and self-management skills (8.4.c)</u></p> <ul style="list-style-type: none"> • <u>Problem-solving</u> <ul style="list-style-type: none"> ○ <u>Identify/define the problem</u> ○ <u>Generate several solutions</u> ○ <u>Evaluate the pros and cons of each solution</u> ○ <u>Choose a solution</u> ○ <u>Implement, document, and reflect on the solution</u> • <u>Conflict resolution skills</u> <ul style="list-style-type: none"> ○ <u>Able to reduce own stress quickly – calming oneself before addressing the conflict</u> ○ <u>Be emotionally aware of yourself and the other person – how are you feeling, how is the other person feeling</u> ○ <u>State what the conflict is about</u> ○ <u>Proposing solutions or compromises</u> ○ <u>Agree on a solution or compromise to try</u> • <u>Communication skills</u> <ul style="list-style-type: none"> ○ <u>Listening carefully to others</u> 	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> ○ <u>Speaking directly to each other</u> ○ <u>Speaking honestly, and kind</u> • <u>Decision-making skills</u> <ul style="list-style-type: none"> ○ <u>Identify the decision to be made</u> ○ <u>List all the possible options</u> ○ <u>Evaluate the pros and cons of each option</u> ○ <u>Make your decision based on the evaluation of each option</u> ○ <u>Reflect on the decision that was made</u> • <u>Self-management skills</u> <ul style="list-style-type: none"> ○ <u>maintaining self-control</u> ○ <u>respecting the rights and feelings of others</u> <p><u>Physical activity is an effective means of reducing stress. Stress-reducing activities may include:</u></p> <ul style="list-style-type: none"> • <u>Yoga – mind-body exercises that include deep breathing, flexibility, strength, balance, coordination, and relaxation</u> • <u>Pilates – low impact flexibility, muscular strength, and endurance movements that emphasizes postural alignment, core strength, and muscle balance</u> • <u>Tai chi – low-impact, slow motion continuous movements, described as meditation in motion (8.4.d)</u> <p><u>A responsible participant views behaving well and including others as important as playing safely. This includes displaying:</u></p> <ul style="list-style-type: none"> • <u>Trust – having confidence in one</u> • <u>Compassion – recognizing others distress and having a desire to alleviate it</u> • <u>Empathy – being aware of and sensitive to others thoughts, feelings, and experiences of others (8.4.e)</u> 	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>Team building activities are simulating problem-solving tasks designed to help group members develop their capacity to work effectively together (8.4.e)</u></p> <p><u>Group dynamics describes the way members of a group interact with one another (8.4.e)</u></p> <p><u>Supportive behaviors may include listening, helping, encouraging, ensuring everyone is included, taking turns, following rules, and modifying rules as needed for inclusion (8.4.e, 8.4.i)</u></p> <p><u>Using self-management skills and equipment properly allows for safe participation in physical activities (8.4.f)</u></p> <ul style="list-style-type: none"> • <u>Self-management skills: problem solving, flexibility, honesty, communication, confidence, integrity</u> <p><u>Exercise/physical activity improves mental health by reducing anxiety, depression, and negative mood and by improving self-esteem and cognitive function. Exercise has also been found to alleviate symptoms such as low self-esteem and social withdrawal (doi: https://dx.doi.org/10.4088%2Fpcc.v08n0208a) (8.4.g)</u></p> <p><u>Physical activity also causes the release of endorphins in the brain, a chemical that triggers a positive feeling in the body, the body’s natural “feel good” chemicals also help to reduce/relieve pain and stress (8.4.g)</u></p> <p><u>Exercise enhances mood and overall well-being, provides opportunities to connect with family and friends, enjoy the outdoors, unwind, meet new people with similar</u></p>	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>interests, exercising with others can be motivating, sense of belonging, and opportunities to develop social skills (8.4.h)</u></p> <p><u>Participation in physical activities creates enjoyment when engaging in activities that a person likes to do and participate with people they enjoy (8.4.h)</u></p> <p><u>Opportunities for social interaction through physical activity in the community may include parks and recreation centers, youth leagues, faith community activities, and youth activities and clubs (8.4.h)</u></p> <p><u>Creating opportunities that allow everyone to participate and succeed contributes to an inclusive environment (8.4.i)</u></p> <ul style="list-style-type: none"> • <u>Inclusion: Feeling a sense of belonging, acceptance, and value.</u> <ul style="list-style-type: none"> ○ <u>Belonging: feeling needed, importance, and respected within the group</u> ○ <u>Accepted: being welcomed into the class’s community</u> ○ <u>Valued: knowing you are worthy and desirable</u> • <u>Marginalization: treatment of a person or group as insignificant or peripheral</u> 	

Energy Balance

8.5 The student will explain the relationship of caloric intake, caloric expenditure, and body composition.

- a) Describe the relationship between inadequate caloric intake and health risk factors.
- b) Explain the role of energy balance in weight management and body composition.
- c) Describe types of body-composition measures.
- d) Explain a Rate of Perceived Exertion (RPE) scale and how it relates to energy expenditure.
- e) Create a one-day energy balance plan, including meals, snacks and physical activity, based on Recommended Dietary Allowance (RDA).

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>Inadequate caloric intake may impact growth and development, and increase the risk of chronic disease, including obesity (8.5.a)</u></p> <p><u>Energy balance is the balance between calories consumed (energy in/caloric intake) and calories expended (energy out/caloric expenditure) (8.5.b)</u></p> <p><u>Body composition is the components that make up a person’s body weight (percentages of fat, bone, water, and muscle in the human body) (8.5.b)</u></p> <p><u>Moderate to vigorous physical activity (MVPA) contributes to balancing the energy from calories consumed to assist in maintaining weight (8.5.b)</u></p> <p><u>Energy balance in children supports natural growth without promoting excess weight gain (8.5.b)</u></p> <p><u>Many factors influence body composition, including gender, age, diet, activity level, and genes (8.5.c)</u></p>	<p><u>In order to meet these standards, it is expected that students will</u></p> <ul style="list-style-type: none">• <u>describe the relationship between inadequate caloric intake and health risk factors (8.5.a)</u>• <u>explain the role of energy balance in weight management and body composition (8.5.b)</u>• <u>describe types of body-composition measures (8.5.c)</u>• <u>explain a Rate of Perceived Exertion (RPE) scale (8.5.d)</u>• <u>explain how Rate of Perceived Exertion relates to energy expenditure (8.5.d)</u>• <u>create a one-day energy balance plan based on Recommended Dietary Allowance (RDA) and physical activity guidelines (8.5.e)</u>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>Body composition analysis is an important part of fitness assessment because it shows how much fat you carry on your body in relation to your muscle mass (8.5.c)</u></p> <ul style="list-style-type: none"> • <u>Body-composition measures</u> <ul style="list-style-type: none"> ○ <u>Body Mass Index (BMI) based on height and weight; a high BMI can be an indicator of high body fatness; can be used to screen for weight categories that may lead to health problems, but it is not diagnostic of the body fatness or health of an individual (CDC)</u> ○ <u>Skinfold calipers – measure thickness of subcutaneous fat at 3 or 7 different sites on the body</u> ○ <u>Body circumference measurements – may include neck, waist, and hips</u> ○ <u>Bioelectrical Impedance Analysis - person places hands on a device for about 20 seconds that runs a small current of electricity through the body to gauge body composition</u> ○ <u>Waist Hip Ratio - calculated by dividing waist measurement by hip measurement; WHR= waist circumference / hip circumference</u> ○ <u>Waist circumference</u> ○ <u>Technologies are available for wearable (wrist) devices that measure body composition</u> <p><u>Rate of Perceived Exertion (RPE) is a way of measuring physical activity intensity level. Intensity levels are part of the FITT principle for meeting personal fitness and exercise goals. Scales may range from 5 to 20 levels (8.5.d)</u></p> <p><u>Example (variation of Borg scale):</u></p> <ul style="list-style-type: none"> • <u>Level 1- Very light activity (watching TV)</u> • <u>Level 2 – Light activity (can maintain for hours, easy to breathe)</u> • <u>Level 3 – Moderate activity (breathing heavily, somewhat comfortable)</u> • <u>Level 4 – Vigorous activity (borderline uncomfortable, short of breath)</u> 	<p><u>Additional resources:</u> Health Smart Virginia</p>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> • <u>Level 5 – Very hard activity (difficult to maintain exercise intensity, barely breathe)</u> • <u>Level 6 – Max effort activity (almost impossible to keep going, out of breath)</u> <p><u>Using the rate of perceived exertion (RPE) scale helps you to recognize your body’s signs of exertion and to modify your workout intensity (8.5.d)</u></p> <ul style="list-style-type: none"> • <u>The more intense an exercise is and/or the longer the duration of exercise, the greater the energy expended per minute which has a greater influence on weight loss</u> <p><u>Personalized meal plans are based on Recommended Dietary Allowance (RDA) for your age, sex, height, weight, and physical activity level (8.5.e)</u></p> <p><u>When creating a one-day energy balance plan, consider all meals and snacks as well as incorporating 60 minutes of physical activity (8.5.e)</u></p> <ul style="list-style-type: none"> • <u>ChooseMyPlate.gov provides tools to personalize your RDA when creating a plan for energy balance</u> 	

GRADE NINE

Students in grade nine complete the transition from modified versions of movement forms to more complex applications across all types of physical activities. This may include fitness activities, dance and rhythmic activities, aquatics, individual performance activities, and games and sports (net/wall, striking/fielding, and goal/target). Students demonstrate the ability to use basic skills, strategies, and tactics in a variety of lifetime physical activities. Students demonstrate more specialized knowledge in identifying and applying key movement concepts and principles. Students will explain the importance of energy balance and the nutritional needs of the body to maintain optimal health and prevent chronic disease. They self-assess their skill performance and develop a personal physical activity program aimed at improving motor skills, movement patterns, and strategies essential to performing a variety of physical activities. They apply their understanding of personal fitness to lifelong participation in physical activity. Students demonstrate independence in making choices, respecting others, avoiding conflict, resolving conflicts appropriately, and using elements of fair play and ethical behavior in physical activity settings. Students demonstrate the knowledge, skills, and abilities required to plan for and improve components of fitness and achieve and maintain a health-enhancing level of personal fitness.

Motor Skill Development

- 9.1 The student will perform all basic movement skills and demonstrate movement and biomechanical principles in a variety of activities that may include outdoor pursuits, fitness activities, dance and rhythmic activities, aquatics, individual performance activities, and games and sports (net/wall, striking/fielding, and goal/target [s]).
- a) Demonstrate proficiency and refinement in locomotor, non-locomotor, and manipulative skills through appropriate activities (e.g., orienteering, rock climbing, cycling, disc golf, lifetime activities, fitness activities, dance and rhythmic activities, aquatics, individual performance activities, games and sports [net/wall, striking/fielding, and goal/target]).
 - b) Design, implement, evaluate, and modify a practice plan for a self-selected skill, including the motor learning process of analysis of performance, application of principles of movement and training, goal setting, and improvement of personal skills through practice, correction, practicing at a higher level, and reassessment.

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<u>Motor skill development includes combining and applying movement and manipulative skills to changing physical activity/game situations. (9.1.a)</u> <ul style="list-style-type: none"> <u>• Proficiency and refinement include performance of all critical elements required by the activity, exercise or dance.</u> 	<u>In order to meet these standards, it is expected that students will</u> <ul style="list-style-type: none"> <u>• demonstrate proficiency (all critical elements) in a variety of activities (9.1.a);</u>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> ○ <u>Activities may include small-sided modified games, modified sports, and other physical activities (e.g., orienteering, rock climbing, cycling, disc golf, lifetime activities, fitness activities, dance and rhythmic activities, aquatics, individual performance activities, games and sports [net/wall, striking/fielding, and goal/target]).</u> ○ <u>Critical elements may include proper grip/use of equipment, proper form/body positioning, balance, coordination, adequate speed/intensity of movement, opposition, footwork, and passing/receiving skills.</u> ○ <u>See K.1, 1.1, 2.1, 3.1, 4.1 and 5.1 for lists of specific critical elements for locomotor, non-locomotor, and manipulative skills.</u> <p><u>Movement/motor learning progression includes analysis of current performance, development of a personalized practice plan for improvement that includes SMART goal setting, application of principles of movement and training, and planning for amount of time and activities needed for practice, correction, practicing at a higher level, and reassessment. (9.1.b)</u></p> <ul style="list-style-type: none"> • <u>Evaluation of performance can come from oneself, peers or a specialist such as a coach or teacher and can include skills checklists, verbal or written feedback and formal analysis of task performance.</u> • <u>Goal-setting should take the form of SMART goal-setting in order to be Specific, Measurable, Achievable, Realistic and Time-Sensitive.</u> 	<ul style="list-style-type: none"> • <u>evaluate performance of a variety of locomotor, non-locomotor, and manipulative skills using a skills checklist (9.1.a, 9.1.b);</u> • <u>analyze current performance for a variety of locomotor, non-locomotor, and manipulative skills (9.1.a, 9.1.b);</u> • <u>design, implement, evaluate, and modify a practice plan for a self-selected skill using SMART goal-setting methods (9.1.b);</u> • <u>apply principles of movement and training to a personal practice plan (9.1.b);</u> • <u>produce written and oral feedback on a variety of tasks/activities (9.1.b);</u> • <u>identify activities needed for practice within a personal fitness plan (9.1.b).</u> <p><u>Additional resources:</u> <u>SHAPE America National Standards and Grade-Level Outcomes</u> <u>OPEN Online Physical Education Network</u> <u>Health Smart Virginia</u> <u>PE Central</u> <u>Dynamic PE ASAP</u></p>

Anatomical Basis of Movement

9.2 The student will explain the structures and functions of the body and how they relate to and are affected by human movement.

- a) Analyze and evaluate proficient and efficient movement in relation to how movement is directed, including the type of muscle action that directs a movement (concentric, eccentric, and isometric), the direction the body part moves relative to its joints (abduction, adduction, flexion, and extension), and planes of motion.
- b) Describe the relationship between the endocrine system and the body’s metabolic response to short- and long-term physical activity.
- c) Explain the body’s response to the principles of specificity, overload, and progression (SOP) in relation to frequency, intensity, time, and type of exercise (FITT).
- d) Explain the anaerobic respiration (ATP-PC and lactic acid system) and aerobic respiration systems used for energy during activity.
- e) Analyze movement performance and use feedback to learn or to improve the movement skills of self and others.
- f) Apply the concepts and principles of levers, force, motion, and rotation to a variety of activities.
- g) Apply biomechanical principles of balance, energy, and types of muscle contractions to a variety of activities.

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>When the body is moving or producing movement it obeys the same physical laws that apply to all types of motion. The type of muscle action and the direction a body part moves in relation to its joints is important for proficient and efficient movement. (9.2.a)</u></p> <ul style="list-style-type: none"> • <u>Muscle actions:</u> <ul style="list-style-type: none"> ○ <u>Concentric contraction (positive contraction): Contraction that shortens the muscle as it acts against a resistive force (biceps curl– bicep muscles shorten as the weight is pulled toward the body).</u> ○ <u>Eccentric contraction (negative contraction): Contraction that lengthens the muscle as it produces force (lowering the weight during biceps curl lengthens the bicep muscles as the weight is lowered back to a resting position – force is produced by the biceps to allow for a controlled return to a resting position as opposed to allowing gravity to pull the weight down)</u> 	<ul style="list-style-type: none"> • <u>In order to meet these standards, it is expected that students will</u> • <u>evaluate different types of muscle contractions (concentric, eccentric, and isometric) (9.2a)</u> • <u>evaluate planes of motion within different physical movements to identify proficient and efficient movement (9.2.a)</u> • <u>demonstrate how the body moves relative to its joints while participating in physical activities (9.2.a);</u>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> ○ <u>How much time is spent in each phase (concentric and eccentric contractions) will affect results. Concentrating on eccentric contractions at higher weights is referred to as negative training.</u> ○ <u>Isometric muscle contraction without appreciable shortening or change in distance between its origin and insertion.</u> • <u>Movement of body part in relation to its joints:</u> <ul style="list-style-type: none"> ○ <u>Abduction: Muscle contraction without appreciable shortening or change in distance between its origin and insertion.</u> ○ <u>Adduction: Movement of a body part toward the median plane (of the body, in the case of limbs; of the hand or foot, in the case of digits).</u> ○ <u>Flexion: Bending movement around a joint in a limb (such as knee or elbow) that decreases the angle between the bones of the limb at the joint.</u> ○ <u>Extension: An unbending movement around a joint in a limb that increases the angle between the bones of the limb at the joint.</u> • <u>Planes of motion</u> <ul style="list-style-type: none"> ○ <u>Sagittal plane: Vertical plane passing from the rear (posterior) to the front (anterior), dividing the body into left and right halves. It is also known as the anteroposterior plane. Most sport and exercise movements that are almost two-dimensional, such as running, long jumping, biking and rowing, take place in this plane.</u> ○ <u>Frontal plane: Vertical and passes from left to right, dividing the body into posterior and anterior halves (front and back). When moving along this plane, we are moving toward or away from the midline. Adduction and abduction are movements along this plane.</u> 	<ul style="list-style-type: none"> • <u>explain how types of muscle contractions and force are used to improve skills and performance (9.2.a);</u> • <u>explain metabolism and the body's metabolic response to exercise (9.2.b);</u> • <u>apply and explain how the body makes energy to move in activity of short duration and activity of long duration (9.2.b);</u> • <u>explain the body's response to the principles of specificity, overload, and progression (SOP) in relation to frequency, intensity, time, and type of exercise (FITT) (9.2.c) ;</u> • <u>explain the anaerobic respiration and aerobic respiration systems used for energy during activity (9.2.d);</u> • <u>provide evidence of the use of feedback to learn or to improve the movement skills (9.2.e);</u> • <u>demonstrate how to provide feedback to assist others in learning or improving movement skills (9.2.e);</u> • <u>analyze the performance of a peer and provide appropriate and meaningful feedback to help them learn or improve a skill (9.2.e);</u>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> ○ <u>Transverse plane: Divides the body into top (superior) and bottom (inferior) halves. Any time we rotate a joint we are moving along the transverse plane.</u> • <u>Efficient movement can be exemplified by, but not limited to</u> <ul style="list-style-type: none"> ○ <u>technique and fitness in running;</u> ○ <u>quickness and effort in tennis;</u> ○ <u>speed and control in a golf swing.</u> • <u>Analyzing movement example (9.2.a)</u> <ul style="list-style-type: none"> ○ <u>Tennis serve</u> <ul style="list-style-type: none"> ● <u>Ball toss with non-dominant hand – concentric contraction of the deltoid as the arm/ball is raised, abduction and flexion at the shoulder ball and socket joint; after ball is released – eccentric contraction of deltoid, adduction and extension of the shoulder joint; motion occurs in the sagittal plane</u> ● <u>Racquet swing – occurs in transverse plane (twisting motion); involves hinge joints – knees and elbow, ball and socket joints – hips and shoulders, condyloid synovial (also called ellipsoidal) joint (modified ball and socket that allows for circular motion, flexion, and extension) – wrist; abduction and adduction and flexion and extension occur during joint movements for a tennis serve.</u> <p><u>Multiple body systems are involved in producing energy during physical activity. The endocrine system consists of glands and organs. It uses hormones to control the body’s metabolism. (9.2.b)</u></p> <ul style="list-style-type: none"> • <u>The endocrine system releases hormones into the bloodstream. This lets the hormones travel to cells in other parts of the body.</u> 	<ul style="list-style-type: none"> • <u>demonstrate efficient body movements along the correct planes of the body (9.2.f);</u> • <u>apply the concept of force, motion, and rotation during a physical activity and explain its effect on performance (9.2.f);</u> • <u>explain how levers, types of muscle contractions, and force are used to improve skills and performance (9.2g);</u> • <u>analyze movement performance and identify anatomical movements around the planes of the body (9.2g);</u> • <u>demonstrate the use of levers, force, motion, and rotation in a variety of activities (9.1.f).</u> <p><u>Additional resources:</u> <u>Health Smart Virginia</u></p>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> • <u>Hormones help control mood, growth and development, the way our organs work, <i>metabolism</i>, and reproduction</u> • <u>The endocrine system includes multiple glands and organs.</u> <ul style="list-style-type: none"> ○ <u>Hypothalamus: located in the lower central part of the brain; links the endocrine system and nervous system; hypothalamus regulates the pituitary gland</u> ○ <u>Pituitary: gland at the base of the brain; often called the “master gland”</u> ○ <u>Thyroid: in the front part of the lower neck; releases hormones that control the rate at which cells burn fuels from food to make energy</u> ○ <u>Parathyroids: 4 tiny glands attached to the thyroid; releases hormone that controls the level of calcium in the blood.</u> ○ <u>Adrenals: on your kidneys</u> ○ <u>Adrenal cortex - releases hormones that help control salt and water balance, the body’s response to stress, metabolism, the immune system, and sexual development and function</u> ○ <u>Adrenal medulla – releases epinephrine (aka adrenaline) which increases blood pressure and heart rate when the body is under stress</u> ○ <u>Pineal body/gland: in the middle of the brain; secretes melatonin (hormone that helps regulate sleep)</u> ○ <u>Reproductive glands (ovaries, testes)</u> ○ <u>Pancreas: makes insulin and glucagon, hormones that control the level of glucose (sugar) in the blood</u> ○ <u>Insulin helps keep the body supplied with stores of energy. The body uses this stored energy for exercise and activity, and helps organs function properly</u> 	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>Metabolism is the breakdown of food (chemical reactions of the body cells) and its transformation into energy. (9.2.b)</u></p> <ul style="list-style-type: none"> • <u>Digestive system uses enzymes to break down proteins into amino acids, turn fats into fatty acids, and turn carbohydrates into simple sugars (glucose). The body uses sugar/glucose, amino acids, and fatty acids as energy sources. These compounds are absorbed into the blood, which carries them to the cells.</u> • <u>Metabolism consists of anabolism (the buildup of substances) and catabolism (the breakdown of substances).</u> <p><u>The body's metabolic response to short- and long-term exercise. The intensity and duration of exercise determines which fuel source is used: (9.2b, 9.2.d)</u></p> <ul style="list-style-type: none"> • <u>Fat metabolism is a slow process and so can only be used as fuel for exercise at less than 60% VO₂ max.</u> • <u>Carbohydrate is a much faster fuel source and so can be used for exercise up to 80% VO₂ max (in trained individuals).</u> • <u>Carbohydrate stores within the muscle and liver can fuel exercise for up to 80 minutes. As carbohydrate stores get lower, the body has to rely more and more on fat stores.</u> • <u>Onset of exercise – breakdown of muscle glycogen stores to produce glucose for anaerobic glycolysis</u> • <u>Then blood flow to muscle is increased, allowing for increased uptake of glucose by muscle</u> • <u>Exercising at about half the maximum aerobic capacity requires a 50/50 mixture of glucose and free fatty acids, with amino acid oxidation still supplying 1-2% of the energy</u> • <u>Exercising at higher levels, about 75 % of maximum aerobic capacity or greater, muscles become progressively more dependent on glucose</u> 	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>oxidation rather than on fatty acid oxidation (National Center for Biotechnology Information)</u></p> <ul style="list-style-type: none"> • <u>Body stores calories (a calorie is a unit that measures how much energy a particular food provides to the body). Too many calories that are not used by the body for functions and through exercise is stored primarily as fat which can lead to overweight and obesity.</u> <p><u>A metabolic response is any reaction by the body to a specific influence or impact. Metabolism is a general term describing the organic process in any cellular structure. (9.2.b)</u></p> <ul style="list-style-type: none"> • <u>A metabolic response can occur with respect to individual cells, a gland, an organ or a process such as the cardiovascular system.</u> • <u>Metabolism is often understood in terms of the metabolic rate, which is the amount of energy expended by the body in a given period.</u> • <u>Metabolism is also a variable in the assessment of human performance.</u> • <u>Metabolic function is subject to such individual factors as age, heredity, gender, level of physical fitness and others. The body may exhibit a metabolic response to any type of external factor or change.</u> <p><u>Changes in the physical intensity or duration of activity, will generate a metabolic response. (9.2.b)</u></p> <ul style="list-style-type: none"> • <u>This response is particularly evident when assessing the nature of muscle composition in an athlete.</u> • <u>When an athlete seeks to improve endurance ability, the training program will correspondingly focus on endurance exercise.</u> • <u>The muscle groups involved in the generation of power in the exercise, each with a set pattern of distribution between fast-twitch and slow-twitch fibers, will respond by making a slight adaptation in which more fast-twitch fibers are utilized for the muscle.</u> 	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>The principles of overload, specificity and progression are highly interconnected and are reciprocally dependent on each other in order to see performance improvement. (9.2.c)</u></p> <ul style="list-style-type: none"> • <u>Specificity – desired adaption occurs in response to specific stress placed upon the body (FITT)</u> • <u>Overload – stress must be applied beyond that which the body is accustomed to; increase workload (added weight, time (FITT), intensity (FITT), and/or repetitions (or how often FITT))</u> • <u>Progression – once body has adapted to a level of stress, additional stress is needed; progressively or gradually increase workload (frequency, intensity, and time can impact progression, FITT).</u> <p><u>To improve fitness or skill performance, the body must be overloaded in a safe and progressive manner. (9.2c)</u></p> <p><u>Two respiration systems are used by the body for energy and the systems are dependent upon the duration of the activity. (9.2d)</u></p> <ul style="list-style-type: none"> • <u>Anaerobic respiration system (ATP-PC and Lactic Acid System; works without oxygen; adenosine triphosphate [ATP – energy carrying molecule] and phosphocreatine [PC])</u> <ul style="list-style-type: none"> ○ <u>To immediately meet the sudden higher energy demand, stored ATP is the first energy source. This lasts for approximately 2 seconds.</u> ○ <u>The ATP-PC system can only last 8-10 seconds before PC stores are depleted.</u> ○ <u>The lactic acid system (Anaerobic glycolysis) must then take over as the predominant source of energy production; high intensity (but sub-</u> 	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>maximal) exercise can last for between 3 and 5 minutes using this system.</u></p> <ul style="list-style-type: none"> ○ <u>If the exercise continues at a high intensity, oxygen is not available at a fast enough rate to allow aerobic metabolism to take over. The production of lactic acid will reach the point where it interferes with muscular function; this is called the lactate threshold.</u> ○ <u>Muscles begin to fatigue when ATP resynthesizes can no longer match demand.</u> <ul style="list-style-type: none"> • <u>Aerobic respiration system</u> <ul style="list-style-type: none"> ○ <u>Also known as Aerobic Glycolysis: Breakdown of carbohydrates to produce ATP; slow, uses either carbohydrates or fat (carbohydrates and fats are only burned in presence of oxygen); needs oxygen to produce ATP; sustained energy; longer-duration, lower-intensity after anaerobic systems have fatigued; long-term steady paced exercise and day-to-day activities; produced large amounts of energy at the lowest intensity.</u> <p><u>Feedback is important to master advanced skills. (9.2.e)</u></p> <ul style="list-style-type: none"> • <u>Feedback is useful when it is focused on the goal of the skill and is specific, objective and provided in terms understood by the recipient of the feedback. Feedback is goal-referenced; tangible and transparent; actionable; user-friendly (specific and personalized); timely; ongoing; and consistent.</u> • <u>When analyzing movements, divide the movement performance into three phases:</u> <ul style="list-style-type: none"> ○ <u>Preparatory: Movements that prepare such as, backswing in golf or tennis.</u> ○ <u>Execution:</u> <ul style="list-style-type: none"> - <u>Force-producing movements such as, the forward motion of the tennis forehand shot.</u> 	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> - <u>Critical instant, the point of contact or the release such as, moment of contact in the tennis serve or the take-off in the long jump.</u> <ul style="list-style-type: none"> o <u>Follow-through: Body movements after the execution where the movement slows down such as, the high leg lift after kicking a goal or the golf club after the ball is struck.</u> • <u>Note: movement skill phases may not all fit neatly into three phases and additional phases may be devised or added.</u> <p><u>When the body is moving or producing movement it obeys the same physical laws that apply to all types of motion. Biomechanics is the field of sports science that applies the laws of mechanics and physics to human performance to gain a greater understanding of forces and the effects of those forces on and within the human body, and therefore improve physical performance of a skill or activity. (9.2.f)</u></p> <ul style="list-style-type: none"> • <u>Levers – Consist of a pivot point (fulcrum), lever arm, and weight/resistance.</u> <ul style="list-style-type: none"> o <u>Example of lever is sport is the use of a tennis racket. The player’s hand is the pivot point/fulcrum, the lever arm is the racket and the resistance is the ball. The longer the racket, the more force you can exert on the ball.</u> • <u>Force is strength or energy exerted; force causes movement</u> • <u>Newton’s laws of motion</u> <ul style="list-style-type: none"> o <u>Inertia – object at rest or in motion will stay in that state until acted upon by a force strong enough to change its state of motion; example:</u> <ul style="list-style-type: none"> ▪ <u>Tennis serve– tennis ball does not leave the hand unless force is applied to toss it upwards; the tossed ball moves upward until either gravity (force) or a racquet strike (force) is applied to change the direction of the tossed ball.</u> 	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> ○ <u>Acceleration/Momentum – acceleration of an object is directly proportionate to the amount of force applied and moves in the direction in which the force is applied; example:</u> <ul style="list-style-type: none"> ▪ <u>The speed of a served tennis ball will vary according to the amount of force applied to the ball with the racquet and according to the weight of the ball (on a humid day, the ball absorbs moisture and will need additional force to achieve the desired speed/acceleration of a tennis ball compared with a tennis ball used on a dry/low humidity day). Professional tennis players achieve service speeds of 120–150 mph.</u> ○ <u>Action and Reaction – for every action there is an equal and opposite reaction; example:</u> <ul style="list-style-type: none"> ▪ <u>Force that the ball exerts on the racket is equal and opposite of the force that the racket exerts on the ball. (9.1.f)</u> • <u>Rotation – the action or process of rotating on or as if on an axis or center; a force must produce a torque to change the rotation of a body, which changes its angular momentum; example: (9.1.f)</u> <ul style="list-style-type: none"> ○ <u>Backspin on a tennis ball (strike below the center of the mass) keeps the ball’s trajectory low, tends to move the ball right to left and stays low when it bounces.</u> ○ <u>Topspin on a tennis ball (strike above the center of the mass -racquet moves from low to high – windshield wiper motion) rotates ball forward in the air, increasing speed of the ball causing it to dip towards the ground, this decreases the distance traveled (hits the ground sooner) and increases its speed as it hits the ground, travels faster and low to the ground.</u> <p><u>Biomechanical principles of balance and strength are crucial to performance of motor skills. (9.1.g)</u></p>	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> • <u>Balance - can be defined as an even distribution of weight that enables someone or something to remain upright while remaining stable and achieving equilibrium. The ability to maintain the body’s center of gravity within the limits of stability as determined by the base of support. (9.2.g)</u> <ul style="list-style-type: none"> ○ <u>Center of gravity is the point at which all of the body’s mass and weight are equally balanced or equally distributed in all directions (in the body it is slightly higher than the waist).</u> ○ <u>An individual’s limits of stability is the distance outside of his/her base of support that he/she can go without losing control of the center of gravity.</u> ○ <u>Base of support – The surface supporting the body and points of contact with that surface (when standing – the position of the feet on the ground).</u> ○ <u>The lower the center of gravity to the base of support, the greater the stability.</u> ○ <u>The nearer the center of gravity to the center of the base of support, the more stable the body.</u> ○ <u>Stability is increased with the number of points of contact (two feet vs. one foot)</u> ○ <u>Dynamic activities can also be described as those that cause the center of gravity to move in response to muscular activity.</u> 	

Fitness Planning

- 9.3 The student will evaluate current fitness behaviors and demonstrate achievement and maintenance of a health-enhancing level of personal fitness by designing, implementing, self-assessing, and modifying a personal fitness program.
- a) Demonstrate program-planning skills by assessing and analyzing personal fitness levels, setting goals, devising strategies, making timelines for a personal physical fitness plan, and evaluating the components and progress of the personal fitness plan.
 - b) Apply the FITT (frequency, intensity, time, type of exercise) principle and other principles of training, such as overload, specificity, and progression, in accordance with personal goals to the personal fitness plan.
 - c) Explain the characteristics, including scientific principles and concepts, of safe and appropriate muscular-stretching, muscular-strengthening, and cardiorespiratory exercise programs to improve the health-related components of fitness.
 - d) Calculate and explain the relationship between resting heart rate, target heart rate, recovery heart rate, blood pressure, training zones, and exercise intensity, including measurement devices (e.g., heart rate monitors, pedometers, accelerometers) to meet exercise and personal fitness goals.
 - e) Demonstrate appropriate techniques and describe the benefits of resistance-training activities, machines, and/or free weights.
 - f) Use the scientific process to analyze and compare resources, including available technology, to evaluate, monitor, and record activities for fitness improvement.
 - g) Identify types of strength exercises (isometric, concentric, eccentric) and stretching exercises (static, proprioceptive neuromuscular facilitation, dynamic) for personal fitness development (e.g., strength, endurance, range of motion).
 - h) Define and describe terms and activities associated with fitness, including *set, repetition, isometric, isotonic, isokinetic, core, and upper-body exercises and lower-body exercises.*
 - i) Apply physiological principles of warm-up, cool down, overload, specificity, and progression.

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>Physical literacy includes the ability to plan, implement, evaluate, and modify a personal, goal-driven fitness plan that enables students to achieve and maintain the level of fitness needed to meet their personal goals for various work-related, sport, and leisure activities. (9.3.a)</u></p> <p><u>Health-related fitness components provide information about a person’s overall physical health. (9.3.a)</u></p>	<p><u>In order to meet these standards, it is expected that students will</u></p> <ul style="list-style-type: none"> • <u>evaluate personal fitness levels and analyze the results to determine areas to improve/maintain (9.3a);</u> • <u>create SMART personal fitness goals based on fitness assessment data results (9.3a);</u>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> • <u>Cardiorespiratory endurance: Is the ability of the cardiovascular system (heart, blood, blood vessels) and respiratory system (lungs, air passages) to deliver oxygen and other nutrients to the working muscles and to remove wastes. Tests that involve running (e.g., 20 m shuttle run test), cycling and swimming can be used to measure this fitness component. Activities vary in intensity level:</u> <ul style="list-style-type: none"> ○ <u>Light activities are physical activities that involve large muscle groups. While engaging in light activities, people begin to notice their breathing, but they can still talk fairly easily.</u> ○ <u>Moderate activities are physical activities that cause breathing and heart rate to increase. People engaging in moderate activities can hear themselves breathe, but they can still talk.</u> ○ <u>Vigorous activities are physical activities that cause breathing and heart rate to increase to a higher level, making it difficult to talk.</u> • <u>Muscular strength is the ability of a muscle or a group of muscles, to exert force for a brief period of time. Strength of different muscles can be measured by having a person perform weightlifting exercises and determining the maximum amount of weight the person can lift. A person’s strength can be expressed as absolute strength (the actual weight lifted) or as relative strength (the weight lifted, divided by the person’s body weight).</u> • <u>Muscular endurance is the ability of a muscle or a group of muscles, to sustain repeated contractions or to continue applying force against a fixed object. Push-ups and curl-ups are often used to test muscular endurance. The person’s endurance is expressed as the number of repetitions completed without stopping for a set period of time (often one minute).</u> • <u>Flexibility is the ability to move joints through their full range of motion. The sit-and-reach test is a good measure of flexibility of the lower back and the backs of the upper legs (hamstrings). A person’s flexibility is usually</u> 	<ul style="list-style-type: none"> • <u>create and implement personal physical fitness plans (9.3.a);</u> • <u>apply FITT and SOP to personal physical fitness plans (9.3.b);</u> • <u>explain the characteristics of safe and appropriate muscular-stretching, muscular-strengthening, and cardiorespiratory exercise programs (9.3.c);</u> • <u>calculate resting heart rate, target heart rate, recovery heart rate, and blood pressure (9.3.d);</u> • <u>explain the relationship between heart rate, training zones, and exercise intensity, to include a variety of measures (9.3.d,f);</u> • <u>explain the effects of heart rate, training zones, and exercise intensity on meeting personal fitness goals (9.3d);</u> • <u>demonstrate appropriate techniques for resistance-training activities, machines, and/or free weights (9.3.e);</u> • <u>understand how to use the scientific process to analyze my fitness improvement (9.3.f);</u> • <u>identify and demonstrate types of strength exercises and stretching exercises (9.3.g);</u> • <u>define and describe terms and activities associated with fitness (9.3.h);</u>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>expressed in how far a joint can be moved or the degrees through which a joint can be moved.</u></p> <ul style="list-style-type: none"> • <u>Body composition refers to the makeup of the body in terms of lean mass (muscle, bone, vital tissue and organs) and fat mass. Good body composition has strong bones, adequate skeletal muscle size, a strong heart and a low amount of fat mass. Regular physical activity and exercise will help decrease body fat and increase or maintain muscle mass, increase bone mass and improve heart function. Although body composition entails muscle, bone and fat, it is often expressed only as percentage of body fat. Many types of tools can be used to assess body composition, including skinfold calipers, bioelectrical impedance analyzers (found in many weigh scales), body mass index (BMI), underwater weighing and dual energy X-ray absorptiometry. Improving in these four health-related fitness areas will increase lean body mass (stronger bones and muscle) and decrease fat mass and therefore significantly affect body composition. Improvements will also reduce risk of disease and improve work capacity.</u> <p><u>Personal fitness planning includes: (9.3.a)</u></p> <ul style="list-style-type: none"> • <u>assessing and analyzing personal fitness levels;</u> • <u>setting SMART goals for improvement and/or maintenance;</u> • <u>creating strategies to achieve goals and monitor progress;</u> • <u>plan for reassessing, evaluating, and reflecting on progress of goals;</u> • <u>revising plan strategies as needed;</u> • <u>applying FITT and SOP to plan.</u> <p><u>The principles of specificity, overload, and progression are highly interconnected and are reciprocally dependent on each other. (9.3.b)</u></p>	<ul style="list-style-type: none"> • <u>describe the physiological principles for warm-up, cool down, overload, specificity, and progression (9.3.i);</u> • <u>perform a proper warm up and cool down in the personal fitness plan (9.3.i);</u> • <u>demonstrate overload, specificity, and progression in the personal fitness plan. (9.3i).</u> <p><u>Additional resources:</u> <u>Health Smart Virginia</u></p>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> • <u>Specificity – desired adaption occurs in response to specific stress placed upon the body; exercise/activity needs to match desired outcome.</u> • <u>Overload – stress must be applied beyond that which the body is accustomed to; increase workload (added weight, time, intensity, and/or repetitions.)</u> • <u>Progression – once body has adapted to a level of stress, additional stress is needed; progressively or gradually increase workload.</u> <p>The FITT principles for improvement of personal fitness are important when developing a personal fitness plan. (9.3.b)</p> <ul style="list-style-type: none"> • <u>FITT principle</u> <ul style="list-style-type: none"> ○ <u>Frequency: How often; commonly measured in days per week. For each component of health-related fitness, a safe frequency is three to five times a week.</u> ○ <u>Intensity: How hard; commonly measured in intensity levels. Intensity can be measured in different ways, depending on the connected health-related component. For example, monitoring heart rate is one way to gauge intensity during aerobic endurance activities.</u> ○ <u>Time: How long; commonly measured in minutes/hours. Time varies depending on the health-related fitness component targeted. For example, flexibility or stretching may take 10-30 seconds for each stretch, while the minimum time for performing aerobic activity is 15 minutes of continuous activity.</u> ○ <u>Type: What kind; measured in specific health-related component of fitness.</u> <u>For example, an individual wishing to increase arm strength must exercise the triceps and biceps, while an individual wishing to increase aerobic endurance needs to jog, run, swim or perform some other aerobically challenging activity.</u> 	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> • <u>Personal fitness planning includes: (9.3.b)</u> <ul style="list-style-type: none"> ○ <u>assessing and analyzing personal fitness levels;</u> ○ <u>setting SMART goals for improvement and/or maintenance;</u> ○ <u>creating strategies to achieve goals and monitor progress;</u> ○ <u>plan for reassessing, evaluating, and reflecting on progress of goals;</u> ○ <u>revising plan strategies as needed;</u> ○ <u>applying the FITT and SOP principles to plan.</u> <p><u>Muscular-stretching raises the body’s internal temperature through light physical activity before engaging in activity. (9.3.c)</u></p> <ul style="list-style-type: none"> • <u>Active stretch– Person stretching applies the force of the stretch</u> • <u>Passive– Resistance by a chair, towel, machine or a partner provides the force of the stretch; carries some risk</u> • <u>Static– Slow and constant with end position held, caution is exercised with proper technique</u> • <u>Ballistic– Bouncing-type movement; not recommended for health-related fitness</u> • <u>Dynamic– Flexibility during sport-specific movements, avoids bouncing, such as a track sprinter performing long walking strides for a warmup focus on hip extension.</u> • <u>Reflex-assisted– such as plyometric: Higher injury risk, not recommended for health-related fitness.</u> • <u>Proprioceptive Neuromuscular Facilitation (PNF) – Technique that combines passive and isometric stretching; a muscle group is passively stretched, then contracts isometrically against resistance while in the stretched position and</u> 	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>then is passively stretched again through the resulting increased range of motion; use of a partner to provide resistance against the isometric contraction and then later to passively take the joint through its increased range of motion. May be done without a partner, such as using a towel; muscles need to be warmed up first.</u></p> <p><u>Muscular strengthening and cardiorespiratory exercises are important when improving overall fitness. (9.3.c)</u></p> <ul style="list-style-type: none"> • <u>Muscular strengthening</u> <ul style="list-style-type: none"> ○ <u>Training or resistance training– Systematic program of exercises designed to increase an individual’s ability to resist or exert force. (9.3e,g)</u> ○ <u>Free weights, weight machines, resistance bands, plyometric exercise, callisthenic exercises, Pilates, yoga, martial arts, circuit training (large muscles before small muscles, alternate push and pull, alternate upper body and lower body), pyramid training and negative training.</u> ○ <u>Safety– Clothing, footwear, equipment, spotters, technique.</u> • <u>Cardiorespiratory exercise</u> <ul style="list-style-type: none"> ○ <u>FITT principle; heart rate– VO2max; RPE</u> ○ <u>Recovery time between workouts should include sufficient rest, rehydration and restoring fuel sources.</u> ○ <u>Long, slow distance training– About 80% of maximum heart rate (70% VO2max), person is able to talk and exercise without respiratory distress.</u> 	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> ○ <u>Pace/tempo training</u>– Steady or threshold training for 20-30 minutes; intermittent pace/tempo training – intensity is same as steady threshold but shorter intervals of time with brief recovery periods. ○ <u>Interval training</u>– Intensity close to VO₂max; workout intervals between 3 and 5 minutes; rest intervals at equal/equivalent time; 1:1; stressful and should be performed sparingly; benefits increased VO₂max and anaerobic metabolism <p><u>Personal fitness goals may be evaluated using a variety of measures. (9.3.d)</u></p> <ul style="list-style-type: none"> • <u>Heart rate is most frequently used for gauging exercise intensity due to the relationship between heart rate and oxygen consumption (VO₂max is a measure of the body’s ability to extract and utilize oxygen during exercise).</u> • <u>Training zones may be characterized by the level of intensity (using a RPE scale) or percentage of maximal heart rate range.</u> ○ <u>Perceived exertion is how hard a person feels like their body is working. Rate of Perceived Exertion (RPE) is a way of measuring physical activity intensity level. Scales may range from 5 to 20 levels. Example (variation of Borg scale):</u> <ul style="list-style-type: none"> ▪ <u>Level 1- Very light activity (seated)</u> ▪ <u>Level 2 – Light activity (can maintain for hours, easy to breathe, walking)</u> ▪ <u>Level 3 – Moderate activity (breathing heavily, somewhat comfortable; skipping, galloping)</u> 	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> ▪ <u>Level 4 – Vigorous activity (borderline uncomfortable, short of breath; jogging/running)</u> ▪ <u>Level 5 – Very hard activity (difficult to maintain exercise intensity, barely breathe, running/sprinting)</u> ▪ <u>Level 6 – Max effort activity (almost impossible to keep going, out of breath, sprinting)</u> <ul style="list-style-type: none"> • <u>Measures</u> <ul style="list-style-type: none"> ○ <u>Heart rate monitors– 2 types: wireless chest/arm straps that use an electrical pulse to read heart rate (tend to be more accurate) and wrist-based/headphones trackers that use optical technology (light). Both can send continuous data to a monitor (watch/phone). Other heart rate monitors and technology may be available.</u> ○ <u>Pedometers– track steps taken by indicating each time the wearer’s hips move, or some models can track foot movement via a GPS tracker or built-in sensors on your phone.</u> ○ <u>Accelerometers– measure acceleration; able to capture intensity of physical activity; able to distinguish between walking and running; can separate human movement from mechanical vibration such as riding in a car (9.3.d).</u> <p><u>Heart rate and blood pressure are indicators of cardiovascular fitness. (9.3.a, 9.3.d)</u></p> <ul style="list-style-type: none"> • <u>Resting heart rate - Best taken after 10 minutes of rest. To check pulse at the wrist, place two fingers between the bone and the tendon over the radial artery — which is located on the thumb side of the wrist. When pulse is felt, count the number of beats in 15 seconds. Multiply this number by four to</u> 	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>calculate beats per minute. Resting heart rate normally ranges from 60-100 beats/min. In general, resting heart rate is an indication of efficient heart function and better cardiovascular fitness. A trained athlete may have a resting heart rate closer to 40.</u></p> <ul style="list-style-type: none"> • <u>Target heart rates - Activity heart rate can be taken at multiple points during activity and include being taken immediately after stopping activity. Help to determine appropriate intensity levels for exercise. By keeping the target heart rate in check, a person is able to avoid under or over training and able to avoid overexertion. Exercise programs may be characterized by the level of intensity or percentage of maximal heart rate range (maximum heart rate is 220 minus a person’s age). Target Heart Rate Zone information. Some drugs and medications or medical conditions may affect heart rate, resulting in having a lower maximum heart rate and target zone. Health care provider should be consulted.</u> • <u>Recovery heart rate - Recovery heart rate is the decrease in heart rate that occurs one minute after maximal exercise. Faster decreases in heart rate are associated with higher levels of fitness.</u> • <u>Blood pressure - Measure of the force of blood pushing against blood vessel walls; high blood pressure indicates that the heart is working harder to get blood out to the body; normal is less than 120 over 80 (120/80); measured with a blood pressure cuff (sphygmomanometer) – rubber cuff and a gauge - works by inflating a cuff around the upper arm to temporarily stop the flow of blood in an artery, as air is slowly released from the cuff, the device records the pressure at which blood begins to flow again. Blood pressure is recorded as two measurements:</u> 	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> ○ <u>The first number is the systolic pressure. Systolic pressure represents the peak blood pressure that occurs when the heart contracts.</u> ○ <u>The second number is the diastolic pressure. Diastolic pressure represents the lowest blood pressure that occurs when the heart relaxes between beats.</u> ○ <u>Note: Teachers may want to connect with their school nurses, public health nurses or nurse training programs in their school or in their area to support instruction of blood pressure.</u> <p><u>Appropriate techniques for resistance-training activities, machines, and/or free weights will be determined by activities selected. Focus should be on proper ergonomics/body positioning, equipment-related safety, and skill/capacity of individual students. Note; teachers may need to set appropriate weight limits (9.3.e).</u></p> <p><u>It is important to use the scientific process to evaluate resources and technology in the fitness industry. (9.3.f)</u></p> <p><u>A variety of strength and stretching exercises can improve/maintain fitness levels. (9.3.g)</u></p> <ul style="list-style-type: none"> • <u>Appropriate techniques for resistance-training activities are crucial to avoid injury and improve fitness levels.</u> • <u>Activities, whether using resistance bands, free weights, apps or media (videos) should match student interest, fitness level, activity level, experience and should provide student choice; caution should be exercised when implementing any new techniques.</u> 	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>There is a wide range of terms and activities associated with fitness. (9.3.h)</u> <u>Examples include but are not limited to:</u></p> <ul style="list-style-type: none"> • <u>Set: A group of consecutive reps for any exercise.</u> • <u>Repetition (rep): One completion of an activity or exercise</u> • <u>Isometric and isotonic</u> • <u>Isokinetic - Muscular contraction in the absence of significant resistance, with marked shortening of muscle fibers and without great increase in muscle tone.</u> • <u>Core - Refers to muscles that are the central part of the body; muscles of the upper and lower torso, around the spine and pelvic muscles (back, side, pelvic and buttock muscles); include rectus abdominis, transversus abdominis, obliques, trapezius, latissimus dorsi, spinal erector, gluteus maximus, pectoralis major and deltoid; provides stability, able to flex, side bend and rotate the trunk; protect abdominal organs.</u> • <u>Upper body exercises would train the following muscle groups to some degree – chest, back, shoulders, biceps, triceps</u> • <u>Lower body exercises would train the following muscle groups to some degree – quadriceps, hamstrings, calves, lower back, abdominals</u> <p><u>Warming up and cooling down may help reduce risk of injury and improve athletic performance. (9.3.i)</u></p> <ul style="list-style-type: none"> • <u>Warm-up - pumps nutrient-rich, oxygenated blood to muscles as it speeds up heart rate and breathing and raising body temperature, preparing the body for activity. A good warm-up should last five to 10 minutes and work all major muscle groups; start activity/exercise slowly, then pick up the</u> 	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>pace. Warming up may help reduce muscle soreness and lessen risk of injury</u></p> <ul style="list-style-type: none"> • <u>Cool down - after a workout, 5 to 10 minutes cooling down through a sequence of slow movements; helps prevent muscle cramps and dizziness while gradually slowing breathing and heart rate; gradual recovery of pre-exercise heart rate and blood pressure</u> <p><u>Improvements in performance depend upon the training principles of overload, specificity, and progression. (9.3.i)</u></p> <ul style="list-style-type: none"> • <u>Specificity – desired adaption occurs in response to specific stress placed upon the body; exercise/activity needs to match desired outcome</u> • <u>Overload – stress must be applied beyond that which the body is accustomed to; increase workload (added weight, time, intensity, and/or repetitions)</u> • <u>Progression – once body has adapted to a level of stress, additional stress is needed; progressively or gradually increase workload</u> 	

Social and Emotional Development

9.4 The student will explain and demonstrate the skills needed to be safe, responsible, and respectful in all physical activity settings.

- a) Identify and demonstrate proper etiquette, respect for the differences of others, integrity, safety and teamwork while engaging in a variety of activities.
- b) Explain the effects of sports and activities in developing respect for the unique characteristics, differences and abilities of peers.
- c) Apply conflict-resolution skills in physical activity settings.
- d) Identify an opportunity for social support in a self-selected physical activity.
- e) Apply communication skills and strategies that promote positive team/group dynamics.
- f) Apply problem-solving and critical-thinking skills in physical activity settings, both as an individual and in groups.
- g) Apply best practices for participating safely in physical activity, exercise, and dance (e.g., injury prevention, proper alignment, hydration, use of equipment, implementation of rules, sun protection).
- h) Analyze and compare psychological benefits derived from various physical activities (e.g., decreased stress and anxiety, increased self-esteem, increased mental alertness, improved mood).
- i) Develop and analyze activities to determine areas of exclusion and inclusion.

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>Social and emotional development and teamwork skills include respecting the rights and feeling of others, while being sensitive and responsive to the well-being of everyone involved. (9.4a)</u></p> <ul style="list-style-type: none"> • <u>Leadership skills that contribute to teamwork include integrity, open and honest communication, active listening, empathy, trustworthiness, flexibility, relationship building, and respect for the differences and safety of others.</u> • <u>Etiquette is the proper and acceptable action, behavior or conduct within an activity or setting.</u> • <u>Integrity is often linked to sportsmanship within physical education activities and involves doing the “right thing” even when no one else is watching.</u> 	<p><u>In order to meet these standards, it is expected that students will</u></p> <ul style="list-style-type: none"> • <u>describe and demonstrate leadership skills that contribute to teamwork while participating in a variety of physical activities, exercise and dance (9.4.a)</u> • <u>create a list explaining proper etiquette for the PE setting (9.4.a)</u> • <u>explain how participation in sports, dance and physical activities can build an individual’s character (9.4.b)</u>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> • <u>Teamwork and leadership qualities are important outside of the physical education classroom and often lead to opportunities to further demonstrate maturity and responsibility.</u> <p><u>Accepting others' ideas, cultural diversity and body types is important to building a diverse community, team or group. (9.4b)</u></p> <ul style="list-style-type: none"> • <u>Sharing ideas and respecting others leads to a more inclusive environment with positive group dynamics.</u> • <u>Modifying activities, rules or equipment may be necessary to improve success rate and build skill for all individuals within a group or team. (9.4.b)</u> <p><u>Conflict is normal and inevitable, occurring in various settings throughout life experiences, and requires intentional positive resolution strategies. (9.4.c)</u></p> <ul style="list-style-type: none"> • <u>Conflict Resolution Skills include:</u> <ul style="list-style-type: none"> ○ <u>Discuss problem without blame.</u> ○ <u>Active listening.</u> ○ <u>Identify and clarify issues and needs.</u> ○ <u>Brainstorm solutions and compromises.</u> ○ <u>Choose and apply solution.</u> ○ <u>Evaluate solution (9.4.c, 9.4.f).</u> • <u>Nonproductive/nonconstructive methods of handling conflict include criticism of others, blaming others, hurtful words and/or hurtful actions. (9.4.c)</u> <p><u>Physical activities, exercise and dance can provide social supports by meeting new people, engaging in similar interests with others, building collaboration and cooperation, and improving community wellness. (9.4.d)</u></p>	<ul style="list-style-type: none"> • <u>apply appropriate conflict-resolution skills in a variety of physical activity, exercise and dance settings (9.4.c)</u> • <u>demonstrate social support of classmates within the PE setting by regularly encouraging and motivating peers (9.4.d)</u> • <u>demonstrate leadership and communication skills/strategies during a variety of physical activity, exercise and dance (9.4.e)</u> • <u>apply problem-solving and critical-thinking skills to complete cooperative/team-building activities (9.4.f)</u> • <u>analyze an activity, exercise or dance and create rules to promote safety for all participants (9.4.g)</u> • <u>analyze and compare social, emotional, and mental benefits derived from physical activities, exercise and dance (9.4.h)</u> • <u>modify the rules, equipment or strategies/procedures of a selected activity, exercise or dance in order to</u>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>Supporting others and being encouraged by others serves as a positive influence on self-efficacy and social/emotional wellness for both parties. (9.4.d)</u></p> <p><u>Communication skills/strategies are key to all social interactions, including physical activities, exercise and dance. (9.4.e)</u></p> <ul style="list-style-type: none"> • <u>Methods of communication include:</u> <ul style="list-style-type: none"> ○ <u>Verbal communication– sharing of information / relay a message between two or more people that uses sounds, signs and/or language; either oral or written; spoken word; either face-to-face or electronically.</u> ○ <u>Nonverbal communication– sending and receiving wordless messages; body movements/body language such as facial expressions, body posture, gestures, eye contact, way, tone of voice, touch.</u> ○ <u>Visual communication– visual aids such as signs, graphics, drawings, design, color, graphs, charts.</u> ○ <u>Active Listening– pay attention to the speaker, avoid being distracted; show you are listening, smile, nod; provide feedback – restate what you heard, ask questions; defer judgment– don’t interrupt; respond with respect.</u> <p><u>Effective participation in physical activity, exercise and dance requires critical thinking, both as an individual and within a group. (9.4.f)</u></p> <ul style="list-style-type: none"> • <u>Critical-thinking skills allow someone to make logical and informed decisions to the best of their ability and is the intentional application of higher order thinking.</u> 	<p><u>promote inclusion and positive group dynamics (9.4.i).</u></p> <p><u>Additional resources:</u> <u>Health Smart Virginia</u></p>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> • <u>Skills include observation, analysis, interpretation, inference, self-regulation, open-mindedness, reflection, evaluation, explanation, decision making, and problem-solving</u> <p><u>Knowledge and understanding of the environment, participant skill level/ability and level of conditioning is key to planning a safe activity, exercise or dance session.</u> (9.4.g)</p> <ul style="list-style-type: none"> • <u>Maintaining safe environments, adequate physical conditioning, proper body alignment/form, and following rules and procedures helps reduce injury during activity, exercise and dance.</u> • <u>During very hot and humid weather, lessen the chances of dehydration and heat stress by –</u> <ul style="list-style-type: none"> ○ <u>Exercising at a cooler time of the day</u> ○ <u>Switching to indoor activities.</u> ○ <u>Changing the type or intensity of activity.</u> ○ <u>Providing adequate fluids, rest breaks and shade as needed.</u> • <u>Utilize proper protection for sun exposure such as sunscreen, hat, clothing that protects from UV rays, and sunglasses.</u> • <u>Appropriate and properly fitted equipment for an activity may range from general items of clothing or footwear to special protective suits or apparatus, such as a mouth guard or shin guards.</u> • <u>Seek training and coaching for activities that involve advanced skills.</u> <p><u>Physical activity and exercise can positively impact mental health, decrease stress, improve mood and make individuals feel more connected to their community.</u> (9.4.d, 9.4.h)</p> <p><u>Selection and participation in physical activities, exercise and dance that one enjoys helps promote social, emotional and mental wellness. (9.4.h)</u></p>	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> • <u>Social and emotional benefits/supports of participation in physical activities may include:</u> <ul style="list-style-type: none"> ○ <u>Improves mental health and mood.</u> ○ <u>Reduces the risk of depression and anxiety.</u> ○ <u>Develops higher self-esteem and body image.</u> ○ <u>Helps develop basic motor skills needed for day-to-day life.</u> ○ <u>Effective in promoting mutual understanding and empathy.</u> ○ <u>Builds character– social skills like teamwork, cooperation and leadership.</u> ○ <u>Ability to handle winning and losing while being a good sport.</u> ○ <u>Develop resiliency</u> <p><u>A supportive, inclusive environment includes access to learning and the curriculum with the best approach to ensure learning physically, socially, and emotionally – this could include: speed of play, differentiated instruction, autonomy supported instruction, demonstrations, use of tools/modified equipment, peer -partner opportunities, etc. (9.4.i)</u></p> <ul style="list-style-type: none"> • <u>Modifying activities, rules or equipment may be necessary to improve success rate and build skill for all individuals within a group or team.</u> 	

Energy Balance

9.5 The student will explain the importance of energy balance and evaluate current caloric intake and caloric expenditure to maintain optimal health and prevent chronic disease.

- a) Explain the body’s physiological response to sugar, sodium, and fat.
- b) Assess and analyze current energy balance, including intake and expenditure, activity levels, food choices, and amount of sleep.
- c) Explain body composition, using body mass index (BMI) and other measures, the variety of body types, and healthy body weight.
- d) Design and implement a plan to maintain an appropriate energy balance for a healthy, active lifestyle, including a balanced intake, expenditure (levels of intensity), and sleep.

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>The body needs sugar, sodium and fat in appropriate quantities to function properly. (9.5.a).</u></p> <ul style="list-style-type: none">• <u>Sugar is a carbohydrate; the body processes table sugar (empty calories) and sugar in fruit (nutrients, fiber, lower calories) the same way. Sugar digestion begins in the mouth but most occurs in the small intestine where enzymes break sugar down to monosaccharides that are carried to the liver where it is converted to glucose; glucose is either used for energy or stored for later use; glucose is important and necessary fuel for the body; liver and kidneys produce it naturally. The hormone, insulin, is released from cells located in the pancreas and regulates how much sugar circulates in the blood stream; insulin speeds up the transfer of sugar from blood and delivers it to muscle, liver and fat tissues to be used as fuel or stored for the body to use later. If a person does not have enough insulin, sugar accumulates in the blood stream and a person has diabetes. A diet very high in sugar content, especially refined sugar – if not burned, excess sugar turns to fat, difficult to burn off fat because it takes a lot of energy.</u>• <u>Sodium, found in salt, is an electrolyte. Kidneys maintain the balance of electrolytes and water by regulating the fluids that are taken in and passed</u>	<p><u>In order to meet these standards, it is expected that students will</u></p> <ul style="list-style-type: none">• <u>explain the body’s physiological response to sugar, sodium, and fat (9.5.a)</u>• <u>maintain a food log, exercise log and sleep log in order to assess and analyze current energy balance, to include sleep requirements (9.5.b)</u>• <u>explain body composition, measurement of body composition, body types, and healthy body weight (9.5.c)</u>• <u>differentiate between body composition and body weight, and explain the correlation between the two measurements (9.5.c)</u>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>out of the body. If this balance is disturbed, muscles, nerves and organs won't function correctly because the cells can't generate muscle contractions and nerve impulses. Too little salt results in hyponatremia; can happen when a person sweats excessively. Too much sodium results in hypernatremia; blood volume can increase, making the heart pump harder and is linked to high blood pressure. Dietary guidelines recommend less than 2300 mg of sodium per day (less than half a teaspoon).</u></p> <ul style="list-style-type: none"> • <u>Fat– transfers vitamins A, D, E and K in the blood that are needed for growth and healthy skin; takes longer to digest than carbohydrates or proteins which helps to satisfy hunger longer than other nutrients; foods high in fat are usually high in calories; consuming excess amounts of fats increases risk of unhealthful weight gain and obesity; fats take more energy to burn.</u> <p><u>The key to achieving and maintaining a healthy weight isn't about short-term dietary changes. It's about a lifestyle that includes healthy eating, regular physical activity, and balancing the calories you consume with the calories your body uses. (CDC) (9.5.b)</u></p> <ul style="list-style-type: none"> • <u>Energy balance - includes food calories taken into the body through food and drink (energy in) and calories used for daily energy requirements (energy out). Daily energy requirements include the amount of energy required for body maintenance at rest, physical activity and movement, and for food digestion, absorption and transport.</u> • <u>Physical activity guidelines – 60 minutes per day; weekly: 150 minutes of moderate-intensity aerobic activity, 75 minutes of vigorous-intensity aerobic activity, or an equivalent mix of the two each week.</u> • <u>Sleep: teens 13-18 should get 8-10 hours of sleep each night (CDC) (9.5.b).</u> 	<ul style="list-style-type: none"> • <u>design and implement a personalized nutrition, exercise and sleep plan to maintain an appropriate energy balance and promote wellness (9.5.d)</u> <p><u>Additional resources:</u> <u>Health Smart Virginia</u></p>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>Body composition is the ratio of body fat to lean body tissue, including muscle, bone, water and connective tissue (9.5.c).</u></p> <ul style="list-style-type: none"> • <u>There is not an ideal weight for everyone; weight ranges should take into account age, gender, height, body type, growth rate, metabolic rate, and activity level. (9.5.c)</u> • <u>Body type is determined by heredity. (9.5.c)</u> <ul style="list-style-type: none"> ○ <u>Mesomorph– characterized by low-to-medium percentage of body fat, medium-to-large bone size and a large amount of muscle mass and size; muscular and broader shoulders</u> ○ <u>Endomorph– characterized by high percentage of body fat, large bone size and a small amount of muscle mass and size; rounder and broader hips</u> ○ <u>Ectomorph– characterized by low percentage of body fat, small bones size and a small amount of muscle mass and size; slender and tall</u> • <u>Body-composition measures vary widely in methodology and accuracy. (9.5.c)</u> <ul style="list-style-type: none"> ○ <u>Body Mass Index (BMI) based on height and weight; a high BMI can be an indicator of high body fatness; can be used to screen for weight categories that may lead to health problems but it is not diagnostic of the body fatness or health of an individual (CDC)</u> ○ <u>Skinfold calipers – measure thickness of subcutaneous fat at 3 or 7 different sites on the body. Accuracy is determined by hydration levels and competence/experience of measurer.</u> ○ <u>Body circumference measurements – may include neck, waist, and hips. Does not account for body type differences.</u> ○ <u>Bioelectrical Impedance Analysis - person places hands on a device for about 20 seconds that runs a small current of electricity through the body</u> 	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>to gauge body composition. Accuracy depends upon hydration levels and sensitivity of the device.</u></p> <ul style="list-style-type: none"> ○ <u>Underwater Weighing: Most accurate method for measuring body composition. Underwater weighing involves submerging a person in a tank of water and having him/her expel the air out of his/her lungs. This method is not easy to administer and can be very expensive. Error of underwater weighing is 2 to 2.5%.</u> <p><u>Creation and implementation of an energy balance plan requires understanding of one's nutritional/energy needs, exercise/activity needs and sleep requirements to ensure optimal health and wellness. (9.5.b, 9.5.d).</u></p>	

GRADE TEN

Students in grade ten are proficient in fundamental movement skills and skill combinations and are competent in self-selected physical activities that they are likely to pursue throughout life including outdoor pursuits, fitness activities, dance and rhythmic activities, aquatics, selected individual performance activities, and net/wall and target games. They understand and apply concepts and principles of mechanics and anatomy in relation to human movement and apply the concepts and principles of the body’s metabolic response to short-term and long-term physical activity. Students are good leaders and good followers; they respect others and anticipate and avoid unsafe physical activity situations. They develop the ability to understand and they anticipate how physical activity interests and abilities change across a lifetime. Students demonstrate competency in lifelong physical activities and plan, implement, self-assess, and modify a personal fitness plan. Students are prepared to lead a physically active lifestyle.

Motor Skill Development

10.1 The student will demonstrate proficiency and apply the concepts and principles of exercise physiology, biomechanics, and anatomy in a variety of lifetime activities that may include outdoor pursuits, fitness activities, dance and rhythmic activities, aquatics, selected individual performance activities, and net/wall and target games in at least two self-selected, lifelong, skill-related physical activities.

- a) Demonstrate skill attainment in one or more lifetime activities.
- b) Apply and demonstrate knowledge of how movement is created, directed, and stabilized in one or more lifetime activities.
- c) Identify and demonstrate movement activities in each plane of motion (frontal, sagittal, and transverse) and activities that occur in multiple planes.
- d) Demonstrate appropriate and proper use of equipment in one or more lifetime activities.

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>Skill attainment includes demonstration of all critical skill components and proficiency in application of skills and strategies specific to selected activities.</u></p> <p><u>Lifetime activities dependent upon activities offered to or selected by students.</u></p> <p><u>(10.1.a)</u></p> <p><u>Note: Lifetime activities are dependent upon activities offered to or selected by students.</u></p>	<p><u>In order to meet these standards, it is expected that students will</u></p> <ul style="list-style-type: none"> • <u>demonstrate skill attainment in at least two lifetime activities (10.1.a)</u>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> • <u>Lifetime activities can be broken down in three categories: individual activities, dual activities, and team activities</u> <ul style="list-style-type: none"> ○ <u>Individual activities may include but are not limited to golf, yoga, cycling, hiking/backpacking, orienteering, rock climbing, rowing, canoeing or other paddle sports, swimming, jogging, walking, Pilates, dance, archery, weightlifting, tai chi, skating. (10.1.a)</u> ○ <u>Dual activities may include but are not limited to tennis, table tennis, badminton, pickle ball, racquetball, squash, bocce ball, skating, tai chi, tennis, bowling. (10.1.a)</u> ○ <u>Team activities may include but are not limited to volleyball, basketball, softball, handball, ultimate Frisbee, hockey, flag football. (10.1.a)</u> <p><u>Lifetime recreational pursuits can increase self-esteem, reduce substance abuse, build family bonds and promote volunteerism. (10.1.a)</u></p> <ul style="list-style-type: none"> • <u>Benefits derived from outdoor pursuits:</u> <ul style="list-style-type: none"> ○ <u>Self-confidence: Students with limited physical skills can experience swift success in outdoor pursuits that leads them to believe in their ability to succeed. (10.1.a)</u> <ul style="list-style-type: none"> ▪ <u>Example: Planning a travel route that is efficient and enjoyable for everyone. By understanding a map’s contours, students can not only avoid potential hazards (e.g., moving water, exposure to lightning) but also conserve energy by avoiding unnecessary elevation gain or loss. By matching the difficulty of the route to the abilities of the group, the student supports the group while also experiencing a sense of</u> 	<ul style="list-style-type: none"> • <u>apply and demonstrate knowledge of how movement is created, directed, and stabilized (10.1.b)</u> • <u>describe dynamic and unpredictable movement experiences (10.1.b)</u> • <u>define concentric, eccentric, and isometric movements and provide examples of each (10.1.b)</u> • <u>discuss how technological advances (such as “coaches’ eye”, or motion capture) can be utilized by students to apply and demonstrate/document how movement is created, directed, and stabilized in an activity (10.1.b)</u> • <u>identify and demonstrate movement activities in each plane of movement and activities that occur in multiple planes (10.1.c)</u> • <u>define planes of motion and provide examples of movement activities in each plane (10.1.c)</u> • <u>identify and demonstrate movements within specific sport that occur in singular and multiple planes (10.1.c)</u>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>accomplishment. Acquiring a new technical skill empowers and encourages continued involvement in an activity. Students are better poised to take on new challenges when they feel genuinely capable as a result of gaining new proficiencies. (10.1.a)</u></p> <ul style="list-style-type: none"> ○ <u>Mutual support: The emphasis on working together and respecting others necessitates a combination of interpersonal skills and appropriate communication. (10.1.a)</u> <ul style="list-style-type: none"> ▪ <u>Example: Rock climbing involves cohesiveness and trust between climber and belayer. Good belayers provide climbers with the reassurance to push their physical limits by giving them the knowledge that they can do so without worry. Outdoor pursuits develop enthusiastic and contributing group members who view their roles as an important component of an effective team.</u> ○ <u>Fitness: There are different types of fitness in outdoor pursuits. (10.1.a)</u> <ul style="list-style-type: none"> ▪ <u>Cycling up a steep incline provides the steady, sustained exercise recommended for cardiorespiratory endurance and weight control.</u> ▪ <u>Bouldering demands power, agility, and flexibility and involves certain skills that can compensate for insufficient power (e.g., relying more on the legs than the arms or using techniques for shifting weight and resting).</u> ▪ <u>Cycling can be adapted to individual fitness levels.</u> ○ <u>Excitement and fun: Whether perceived or real, an element of risk adds to the excitement of outdoor experiences. When students learn</u> 	<ul style="list-style-type: none"> • <u>demonstrate movement patterns of athletes in all three planes of motion during their sport (10.1.c)</u> • <u>plan for and practice multiple training exercises that occur in all three planes of motion to decrease potential injury (10.1.c)</u> • <u>demonstrate appropriate and proper use of equipment (10.1.d)</u> • <u>identify safety equipment in activities and provide examples (10.1d)</u> <p><u>Additional resources:</u> <u>SHAPE America National Standards and Grade-Level Outcomes</u> <u>OPEN Online Physical Education Network</u> <u>Health Smart Virginia</u> <u>PE Central</u> <u>Dynamic PE ASAP</u></p>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>to cope successfully with risks, many of them become more autonomous and self-sufficient. (10.1.a)</u></p> <ul style="list-style-type: none"> ▪ <u>For example: caving often includes squeezing through cramped, shadowy passages that may be steep or slippery. This task can help students learn how to cope with fears and anxieties. Furthermore, if an activity isn't enjoyable, students will not willingly experience more of it. (10.1.a)</u> ○ <u>Wonder of nature: Although climbing high peaks presents important challenges, an equally valuable experience may be sitting still in a quiet place away from the usual distractions and listening to the breeze or observing a vast landscape or delicate flower. (10.1.a)</u> <p><u>Movement is created by agility, power, coordination, reaction time, speed, force, motion, rotation and energy. (10.1.b)</u></p> <ul style="list-style-type: none"> • <u>Movement is directed by type of muscle action that directs a movement (concentric, eccentric and isometric), the direction the body part moves relative to its joints (abduction, adduction, flexion and extension), levers, force, rotation, motion and energy. (10.1.b)</u> • <u>Movement is stabilized by balance (center of gravity and center of support, muscle actions) and planes of motion (sagittal plane – flexion and extension; frontal plane – adduction and abduction; transverse plane – internal and external rotation; multi-plane movements). (10.1.b)</u> <p><u>All movement occurs within planes of motion (frontal, sagittal, and transverse. Some activities occur in multiple planes such as running. (10.1.c)</u></p> <ul style="list-style-type: none"> • <u>The sagittal plane is a vertical plane passing from the rear (posterior) to the front (anterior) dividing the body into left and right halves. It is also known as the anteroposterior plane. Movements that involve forward and backward motion are sagittal plane movements.</u> 	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> ○ <u>Flexion and extension take place in the sagittal plane.</u> ○ <u>Rolling a bowling ball, sit-ups, and bicep curls are examples of exercises that occur in this plane.</u> • <u>The frontal plane is also vertical and passes from left to right, dividing the body into posterior and anterior halves. It is also known as the coronal or the mediolateral plane.</u> <ul style="list-style-type: none"> ○ <u>Abduction and adduction is often in the frontal plane.</u> ○ <u>Jumping jacks, spinal lateral flexion, and moving laterally through space are examples of exercises that occur in this plane.</u> • <u>The transverse/horizontal plane divides the body into top (superior) and bottom (inferior) halves. Any time there is rotation in a joint, such as twisting movements occur in this plane.</u> <ul style="list-style-type: none"> ○ <u>Rotation (internal, external, and twisting), pronation, and supination occur in the transverse plane.</u> ○ <u>Twisting lunges, side plank with rotation, and clamshells are examples of exercises that occur in this plane.</u> • <u>Running is an example of an activity that occurs in three planes.</u> <ul style="list-style-type: none"> ○ <u>Sagittal: Flexion occurs in the legs at the beginning of the swing phase of running, when the limb is moving forward. Extension occurs in the stance limb, reaching its full extension.</u> ○ <u>Frontal: Abduction and adduction are the movements. Observing the waistline, abduction is movement away from the middle line of the body, and adduction is movement towards the middle line. Frontal plane movement is also seen in the rear foot when the shoe strikes the ground; this is termed ankle inversion and eversion.</u> ○ <u>Transverse: Rotation occurs in this plane between the pelvis, rib cage and shoulders.</u> 	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>Appropriate and proper use of equipment is dependent upon activities. (10.1.d)</u></p> <ul style="list-style-type: none"> • <u>Equipment for an activity may range from general items of clothing to special protective suits or apparatus and items for safety.</u> • <u>It is essential to use the correct equipment and to make sure it is in good condition.</u> • <u>Identifying proper equipment for lifetime activities is necessary for safe participation.</u> • <u>Wearing a proper fitting helmet for different activities such as cycling, rock climbing, and canoeing is imperative.</u> 	

Anatomical Basis of Movement

10.2 The student will apply knowledge of biomechanics and anatomy and analyze and evaluate the ability to move proficiently and efficiently in a variety of lifetime activities.

- a) Explain how the body responds to energy needs for anaerobic and aerobic activities, including fast and slow-twitch muscle fibers, and anaerobic respiration (ATP-PC and lactic acid system) and aerobic respiration.
- b) Analyze movement activities for component skills and movement patterns for one or more lifetime activities.
- c) Identify and explain the relationship of opposing muscle groups (agonist/antagonist).
- d) Explore common musculoskeletal injuries and the role of ergonomically correct movement for injury prevention.
- e) Explain and demonstrate ergonomically correct form in strength and conditioning activities.

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>The body responds to energy needs for anaerobic and aerobic activities, including fast and slow-twitch muscle fibers, and anaerobic respiration (ATP-PC and lactic acid system) and aerobic respiration. (10.2.a).</u></p> <p><u>Responses to Anaerobic Exercise:</u></p> <ul style="list-style-type: none">• <u>To immediately meet the sudden higher energy demand, stored ATP is the first energy source. This lasts for approximately 2 seconds. (10.2.a)</u>• <u>The ATP-PC system can only last 8-10 seconds before PC stores are depleted. (10.2.a)</u>• <u>The lactic acid system (Anaerobic glycolysis) must then take over as the predominant source of energy production; high intensity (but sub-maximal) exercise can last for between 3 and 5 minutes using this system. (10.2.a)</u>• <u>Anaerobic respiration transfers a relatively small amount of energy from glucose to cells. (10.2.a)</u>• <u>If the exercise continues at a high intensity, oxygen is not available at a fast enough rate to allow aerobic metabolism to take over. The production of</u>	<p><u>In order to meet these standards, it is expected that students will</u></p> <ul style="list-style-type: none">• <u>explain how the body responds to energy needs for anaerobic and aerobic activities, including fast and slow-twitch muscle fibers, and anaerobic respiration (ATP-PC and lactic acid system) and aerobic respiration (10.2.a)</u>• <u>explain the difference between fast and slow-twitch muscle fibers and provide examples (10.2.a)</u>• <u>discuss anaerobic and aerobic activities with examples (10.2.a)</u>• <u>explain the bodies response to anaerobic and aerobic exercise (10.2.a)</u>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>lactic acid will reach the point where it interferes with muscular function; this is called the lactate threshold. (10.2.a)</u></p> <ul style="list-style-type: none"> • <u>The process by which organisms break down glucose into a form that the cell can utilize as energy is cellular respiration (10.2.a)</u> • <u>Muscles begin to fatigue when ATP resynthesizes can no longer match demand. (10.2.a)</u> <p><u>Responses to Aerobic Exercise:</u></p> <ul style="list-style-type: none"> • <u>Due to the necessity of oxygen being present for aerobic metabolism, the first few minutes of low to moderate intensity exercise are powered by anaerobic metabolism. (10.2.a)</u> • <u>Continued low to moderate intensity exercise is then fueled by carbohydrate and fat stores using aerobic metabolism. (10.2.a)</u> • <u>Aerobic respiration uses oxygen to convert glucose into carbon dioxide and water producing large amounts of ATP. (10.2.a)</u> • <u>The intensity and duration of exercise determines which fuel source is used:</u> <ul style="list-style-type: none"> ○ <u>Fat metabolism is a slow process and so can only be used as fuel for exercise at less than 60% VO₂ max. (10.2.a)</u> ○ <u>Carbohydrate is a much faster fuel source and so can be used for exercise up to 80% (in trained individuals). (10.2.a)</u> ○ <u>Carbohydrate stores within the muscle and liver can fuel exercise for up to 80 minutes. As carbohydrate stores get lower, the body has to rely more and more on fat stores. (10.2.a)</u> 	<ul style="list-style-type: none"> • <u>define and explain aerobic respiration and anaerobic respiration (10.2.a)</u> • <u>define cellular respiration (10.2.a)</u> • <u>explain the bodies choice in fuel sources (10.2.a)</u> • <u>explain the bodies choice in fuel sources during moderate activities, intense activities, shorter duration activities, longer duration activities (10.2.a)</u> • <u>analyze movement activities for component skills and movement patterns (10.2.b)</u> • <u>define the phases of movement (preparatory, execution, follow through) (10.2.b)</u> • <u>demonstrate the phases of movement (preparatory, execution, follow through) (10.2.b)</u> • <u>identify phases of movement in activity (10.2.b)</u> • <u>identify and explain the relationship of opposing muscle groups (10.2.c)</u> • <u>explain how agonist muscles bring about movement (10.2.c)</u>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> • <u>The intensity of exercise, which can be maintained, drops as fat cannot supply the amount of energy. (10.2.a)</u> • <u>Fast-twitch muscle fibers contract relatively rapidly, utilized especially in actions requiring maximum effort of short duration, such as sprinting. (10.2.a)</u> • <u>Slow-twitch muscle fibers contract relatively slowly and is resistant to fatigue (10.2.a).</u> <p><u>Movement can be analyzed by division phases of movement (10.2.b).</u></p> <ul style="list-style-type: none"> • <u>Preparatory: Movements that prepare such as: backswing in golf or tennis. (10.2.b).</u> • <u>Execution:</u> <ul style="list-style-type: none"> ○ <u>Force-producing movements such as, the forward motion of the tennis forehand shot. (10.2.b).</u> ○ <u>Critical instant, the point of contact or the release such as: the moment of contact in the tennis serve. (10.2.b).</u> • <u>Follow-through: Body movements after the execution where the movement slows down such as: movement of the golf club after the ball is struck. (10.2.b).</u> • <u>Movement skill phases may not all fit neatly into three phases and additional phases may be devised or added. Example: The long jump may also be divided into: preliminary movements; run-up; take-off and landing (10.2.b).</u> <p><u>Ergonomically correct movement helps prevent common musculoskeletal injuries. (10.2.d)</u></p>	<ul style="list-style-type: none"> • <u>identify Agonist muscles (10.2.c)</u> • <u>explain how antagonist muscles slow down or stop movement (10.2.c)</u> • <u>identify Antagonist Muscles (10.2.c)</u> • <u>explain contraction and relaxation of muscles and identify antagonistic pairs (bicep vs triceps) (10.2.c)</u> • <u>explain how synergist muscles help create a range of movements (10.2.c)</u> • <u>explain the benefit of a resistance program that includes activities for opposing muscle groups (10.2.c)</u> • <u>explore the types of musculoskeletal disorders that occur in the workplace and the role of ergonomics (10.2.d)</u> • <u>identify musculoskeletal injuries and understand early identification of repetitive motion problems (10.2.d)</u> • <u>identify types of ergonomically correct movements for injury prevention (10.2.d)</u> • <u>explain the ergonomics of strength and conditioning activities (10.2.e)</u> <p><u>Additional resources:</u> Health Smart Virginia</p>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> • <u>The Bureau of Labor Statistics of the Department of Labor defines musculoskeletal disorders (MSDs) as musculoskeletal system and connective tissue diseases and disorders when the event or exposure leading to the case is bodily reaction (e.g., bending, climbing, crawling, reaching, twisting), overexertion, or repetitive motion. MSDs do not include disorders caused by slips, trips, falls, or similar incidents. Examples of MSDs include sprains, strains, and tears, back pain, carpal tunnel syndrome, and hernia (CDC) (10.2.d).</u> • <u>Ergonomics is the science of fitting workplace conditions and job demands to the capability of the working population. The goal of ergonomics is to reduce stress and eliminate injuries and disorders associated with the overuse of muscles, bad posture, and repeated tasks. A workplace ergonomics program can aim to prevent or control injuries and illnesses by eliminating or reducing worker exposure to risk factors. Risk factors include awkward postures, repetition, material handling, force, mechanical compression, vibration, temperature extremes, glare, inadequate lighting, and duration of exposure. For example, employees who spend many hours at a workstation may develop ergonomic-related problems resulting in musculoskeletal disorders (MSDs). (CDC) (10.2.d).</u> <p><u>Ergonomically correct form can be applied to strength and conditioning activities to ensure correct body posture, ensuring that too much force or repetition/overuse is not occurring, and fitting the activity to the person (10.2.e).</u></p>	

Fitness Planning

10.3 The student will demonstrate the ability to apply basic principles of training and scientific concepts and principles to evaluate current fitness behaviors and identify strategies needed for health-enhancing fitness for the present and into adulthood.

- a) Construct a fitness and activity plan for the present and the future (postsecondary education, college/career) to address the health-related components of fitness.
- b) Identify the key factors an informed fitness consumer must evaluate to make critical and effective decisions when purchasing fitness products and/or services.
- c) Identify fitness needs to prevent health concerns in the present and into the future.
- d) Identify the effects of life choices, economics, motivation, accessibility, exercise adherence, and participation in physical activity in college or career settings.
- e) Describe components of health-related fitness in relation to one career goal.
- f) Explain the effects of physical activity on emotional and social well-being for the present and into the future.
- g) Apply rate of perceived exertion (RPE) and pacing to a conditioning plan that meets the needs of one or more lifetime activities.
- h) Design and implement a program for strength and conditioning.

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>Physical activity refers to the guideline of 60 minutes a day of moderate to vigorous physical activity. Health-related fitness is linked to fitness components that may lower risks such as high blood pressure, diabetes, or low back pain (10.3.a).</u></p> <ul style="list-style-type: none">• <u>Aerobic fitness - Ability of the heart and lungs to deliver blood to muscles. (10.3.a).</u>• <u>Muscular strength and endurance - Enough to do normal activities easily and protect the low back. (10.3.a).</u>• <u>Flexibility - Ability to move joints through their proper range of motion. (10.3.a).</u>• <u>Body composition – ratio of body fat to lean body tissue, including muscle, bone, water and connective tissue (10.3.a).</u>	<p><u>In order to meet these standards, it is expected that students will</u></p> <ul style="list-style-type: none">• <u>create a fitness and activity plan for the present and the future to address the health-related components of fitness (10.3.a).</u>• <u>identify the components of fitness (10.3.a).</u>• <u>describe how the components of fitness relate to postsecondary job environment (10.3.a).</u>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>Addressing fitness components and planning for activity needs beyond high school should include how/where to access fitness and physical activities, needs of the individual for the postsecondary environment - college, career, and work-related needs such as a job that requires standing or sitting most of the day or work requiring physical demands such as contracting work (10.3.a & 10.3 e).</u></p> <ul style="list-style-type: none"> • <u>Aerobic fitness – Ability of the heart and lungs to deliver blood to muscles. (10.3.a & 10.3 e)</u> • <u>Muscular Strength and Endurance – Critical to both health and ability to carry out daily activities, such as performing household tasks (yard work, carrying groceries) or job-related tasks (lifting or moving heavy objects). (10.3.a & 10.3 e)</u> • <u>Flexibility – For good joint function as well as being able to walk, lift and step normally. The ability to move a joint through its normal range of motion is affected by the condition of the joint itself (for example: arthritis). A short (tight) muscle limits the joints ability to move normally. If the hamstrings are too short, they limit the ability of the pelvis to tilt, which directly affects the lower (lumbar) spine and can lead to low back pain. (10.3.a & 10.3 e)</u> • <u>Body Composition – BMI measure is related to the risk of disease and death. The score is valid for both men and women, but it does have some limitations. It may overestimate body fat in athletes and others who have a muscular build. It may underestimate body fat in older persons and others who have lost muscle mass. (10.3.a & 10.3 e)</u> <p><u>A consumer is someone who purchases and utilizes economic goods. When a person purchases and utilizes products for physical fitness or physical activity, the person becomes a fitness consumer. (10.3.b)</u></p>	<ul style="list-style-type: none"> • <u>identify the key factors an informed fitness consumer must evaluate to make critical and effective decisions when purchasing fitness products and/or services.</u> • <u>use a variety of resources to analyze current fitness and activity level (10.3.b)</u> • <u>identify fitness needs to prevent health concerns in the present and into the future (10.3.c)</u> • <u>identify the impact of life choices, economics, motivation, accessibility, exercise adherence, and participation in physical activity in college or career settings (10.3.d)</u> • <u>describe components of health-related fitness in relation to one career goal (10.3.e)</u> • <u>explain the impact of physical activity on emotional and social well-being for the present and into the future (10.3.f)</u> • <u>apply rate of perceived exertion (RPE) and pacing to a conditioning plan that</u>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>A Fitness Consumer should research to understand the functions of the goods being purchased to improve or maintain their physical fitness levels. (10.3.b).</u></p> <p><u>A fitness consumer should consider the following before making a purchase of goods: (10.3.b)</u></p> <ul style="list-style-type: none"> • <u>How will the goods being purchased effect the consumer’s fitness goals and needs? (10.3.b)</u> • <u>How will the consumer utilize the equipment and how often? (10.3.b)</u> • <u>Does the goods/equipment being purchased meet the consumer’s physical needs (for example, does the machine fit a consumer that is over 6 feet tall)? (10.3.b)</u> • <u>Does the consumer have enough space for the goods being purchased to exercise safely? (10.3.b)</u> • <u>Is the consumer getting the best price on the features they need? (10.3.b)</u> <p><u>There is a variety of low-tech goods and technology-based devices and applications that can be used to analyze, monitor, and improve fitness and activity levels without overpaying (10.3.b).</u></p> <ul style="list-style-type: none"> • <u>Pedometers– track steps taken by indicating each time the wearer’s hips move or some models can track foot movement via a GPS tracker or built-in sensors on a phone (10.3.b)</u> • <u>Heart rate monitors– 2 types: wireless chest/arm straps that use an electrical pulse to read heart rate (tend to be more accurate) and wrist-based/headphones trackers that use optical technology (light). Both can send continuous data to a monitor (watch/phone). Other heart rate monitors and technology may be available (10.3.b)</u> • <u>Accelerometers– measure acceleration; able to capture intensity of physical activity; able to distinguish between walking and running; can separate human movement from mechanical vibration such as riding in a car (10.3.b)</u> 	<p><u>meets the needs of one or more lifetime activities. (10.3.g)</u></p> <ul style="list-style-type: none"> • <u>design and implement a program for strength and conditioning. (10.3.h)</u> <p><u>Additional resources:</u> Health Smart Virginia</p>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> • <u>Variety of apps for watches and phones (10.3.b)</u> • <u>Calculator sites such as:</u> <ul style="list-style-type: none"> ○ <u>BMI (10.3.b)</u> ○ <u>Calories burned (10.3.b)</u> ○ <u>One repetition maximum or 1RM in weight training (10.3.b)</u> <p><u>Regular exercise helps control blood pressure, body weight, and cholesterol levels; decreases the risk for hardening of the arteries, heart attack, stroke, arthritis, and diabetes; improves digestion, helps to manage stress, aids in better sleep and is good for managing low-back pain. Anyone can be at risk for chronic disease; however, some people are more at risk due to heredity (receive from a parent or ancestor by genetic transmission) or because a condition is familial (tending to occur in more members of a family than expected by chance alone) (10.3.c).</u></p> <ul style="list-style-type: none"> • <u>Risks with aging include falling that can be reduced with balance and strength training. Balance training can include backward walking, sideways walking, heel walking, toe walking, practicing standing from a sitting position, and activities such as Tai Chi and yoga. Strong leg and hip muscles help to reduce the risk of falls, a cause of considerable disability among older adults. Resistance training at least two days per week, making sure to exercise all major muscle groups through a full range of motion and ending each workout with stretching exercises to help maintain mobility and range of motion can decrease risk for injury. (10.3.c).</u> • <u>Adults older than 50 years who do not perform resistance training lose nearly 1/4 pound of muscle mass per year. Since muscle mass is directly related to</u> 	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>how many calories your body burns each day, resistance training is important for weight management. (10.3.c).</u></p> <p><u>According to CDC, physical activity is one of the best things people can do to improve their health. It is vital for healthy aging and can reduce the burden of chronic diseases and prevent early death. Active people generally live longer and are at less risk for serious health problems like heart disease, type 2 diabetes, obesity, and some cancers. For people with chronic diseases, physical activity can help manage these conditions and complications. Physical activity matters because (10.3.d):</u></p> <ul style="list-style-type: none"> • <u>1 in 2 adults live with a chronic disease</u> • <u>Only half of adults get the physical activity they need to help reduce and prevent chronic diseases.</u> • <u>Getting enough physical activity could prevent 1 in 10 premature deaths.</u> • <u>\$117 billion annually in health care costs are associated with inadequate physical activity.</u> • <u>Physical activity has positive physical, emotional, social, and mental impact for children, adults, and healthy aging.</u> • <u>Work force impacts - Absenteeism and lost productivity from employee illness, injury, obesity or chronic conditions. One study reports that obesity alone has been estimated to cost employers almost \$2,500 per employee per year, including direct medical expenditures and absenteeism (Steps to Wellness—Physical Activity in the Workplace; CDC). (10.3.d)</u> • <u>Building active, safe, and walkable communities help increase retail activity and employment, increase property values, reduce health care costs, improve safety, and positively impact workforce (fewer sick days). (10.3.d)</u> 	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>Physical activity that includes all health-related components of fitness are important throughout life. Career choices may increase a need/focus on a particular area such as a position that requires lifting heavy objects. In addition to aerobic fitness, muscular strength and endurance and flexibility have increase importance to ensure strength to lift objects, maintain mobility and flexibility throughout repeated motions, ensure proper ergonomics (body positioning), protect low back; and body composition/healthy weight to perform work activities (10.3.e).</u></p> <p><u>Social and emotional benefits/supports of participation in physical activities may include (10.3.f):</u></p> <ul style="list-style-type: none"> • <u>Improves mental health and mood.</u> • <u>Reduces the risk of depression and anxiety.</u> • <u>Develops higher self-esteem and body image.</u> • <u>Helps develop basic motor skills needed for day-to-day life.</u> • <u>Effective in promoting mutual understanding and empathy.</u> • <u>Builds character– social skills like teamwork, cooperation, and leadership.</u> • <u>Ability to handle winning and losing while being a good sport.</u> • <u>Develop resiliency</u> <p><u>Pacing is needed to avoid fatigue before the end of an activity (e.g., jogging three miles); strategy by which effort is managed during exercise based on a goal and demands of the task; time per distance. Pacing strategies may include time, heart rate, and level of intensity/using a RPE scale (10.2.g).</u></p>	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> • <u>Perceived exertion is how hard a person feels like their body is working. Rate of Perceived Exertion (RPE) is a way of measuring physical activity intensity level. Scales may range from 5 to 20 levels. Example (variation of Borg scale):</u> <ul style="list-style-type: none"> ○ <u>Level 1- Very light activity (seated) (10.2.g).</u> ○ <u>Level 2 – Light activity (can maintain for hours, easy to breathe; walking) (10.2.g).</u> ○ <u>Level 3 – Moderate activity (breathing heavily, somewhat comfortable; skipping, galloping) (10.2.g).</u> ○ <u>Level 4 – Vigorous activity (borderline uncomfortable, short of breath; jogging/running) (10.2.g).</u> ○ <u>Level 5 – Very hard activity (difficult to maintain exercise intensity, barely breathe; running/sprinting) (10.2.g).</u> ○ <u>Level 6 – Max effort activity (almost impossible to keep going, out of breath; sprinting) (10.2.g).</u> <p><u>Design and implement a program for strength and conditioning (10.2.h)</u></p> <ul style="list-style-type: none"> • <u>Strength training is exercise that uses resistance (weights, bodyweight) to boost muscle mass, reduce fat percentage, strengthen bones and muscle (10.2.h)</u> • <u>Conditioning activities usually target the whole body to strengthen, shape, and tone; may include flexibility, strength and resistance training; conditioning activities may involve higher repetitions with primary goal of improving cardiovascular system (10.2.h)</u> 	

Social and Emotional Development

10.4 The student will demonstrate appropriate behaviors in all physical activity settings and the social skills needed to be a contributing member of society.

- a) Explain the importance of and demonstrate effective communication skills in physical activity settings.
- b) Explain the importance of and apply relationship and conflict resolution skills and social awareness for current and future health and fitness.
- c) Identify and avoid prejudices and biases in physical activity settings.
- d) Explain the importance of understanding cultural diversity for personal health and fitness.
- e) Evaluate opportunities for social interaction and social support in a self-selected physical activity or dance.
- f) Apply stress-management strategies (e.g., mental imagery, relaxation techniques, deep breathing, aerobic exercise, meditation) to reduce stress.
- g) Explain the mental and emotional benefits of mind-body exercise/activities (e.g., yoga, Pilates, tai chi).
- h) Identify ways to promote equity and inclusion and embrace diversity in a physical activity setting.

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>Leadership and communication skills ensure inclusive and safe participation in physical activities (10.4.a).</u></p> <ul style="list-style-type: none"> • <u>Leadership skills include integrity, open and honest communication, active listening, empathy, trustworthiness, commitment, critical and creative thinking, flexibility, relationship building, dependability, time management, and ability to inspire and convince others. (10.4.a)</u> • <u>Communication skills/strategies may include:</u> <ul style="list-style-type: none"> ○ <u>Verbal communication– sharing of information/relay a message between two or more people that uses sounds, signs and/or language; either oral or written; spoken word; either face-to-face or electronically. (10.4.a)</u> 	<p><u>In order to meet these standards, it is expected that students will</u></p> <ul style="list-style-type: none"> • <u>explain the importance of and demonstrate effective communication skills in physical activity settings. (10.4.a)</u> • <u>explain the importance of and apply relationship and conflict resolution skills and social awareness for current and future health and fitness. (10.4.b)</u>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> ○ <u>Nonverbal communication– sending and receiving wordless messages; body movements/body language such as facial expressions, body posture, gestures, eye contact, way, tone of voice, touch. (10.4.a)</u> ○ <u>Visual communication– visual aids such as signs, graphics, drawings, design, color, graphs, charts. (10.4.a)</u> ○ <u>Active Listening– pay attention to the speaker, avoid being distracted; show you are listening, smile, nod; provide feedback – restate what you heard, ask questions; defer judgment– don’t interrupt; respond with respect (10.4.a)</u> <p><u>Critical thinking and problem solving are essential for health and fitness from setting goals and developing plans and strategies to accessing accurate and reliable information and evaluating resources for providers of health services and products (10.4.b).</u></p> <p><u>Worksite audits may be beneficial to identify specific improvements that would improve the health and overall quality of the workspace. (10.4.b).</u></p> <p><u>Physical activity settings need to be evaluated for safety that includes impacts to appropriate safety equipment, proper skills needed for the activity and environment, weather-related concerns, proper activity equipment, access to guides for outdoor pursuits, specialized trainers, physical safety – use of sidewalks, traffic, bike lanes, free of debris and obstacles, lighting, and access to assistance if needed (10.4.b).</u></p> <p><u>Prejudice is defined by Webster dictionary as injury or damage resulting from some judgement or action of another in disregard of one’s rights Prejudice Definition & Meaning - Merriam-Webster (10.4.c).</u></p> <p><u>Bias is defined as a personal and sometimes unreasoned judgement Biases Definition & Meaning - Merriam-Webster (10.4.c).</u></p>	<ul style="list-style-type: none"> • <u>describe the role of critical thinking for current and future health and fitness. (10.4.b)</u> • <u>identify and avoid prejudices and biases in physical activity settings. (10.4.c)</u> • <u>explain the importance of understanding cultural diversity for personal health and fitness. (10.4.d)</u> • <u>evaluate opportunities for social interaction and social support in a self-selected physical activity or dance. (10.4.e)</u> • <u>explain how participation in physical activities develop social connections (10.4.e)</u> • <u>apply stress-management strategies (e.g., mental imagery, relaxation techniques, deep breathing, aerobic exercise, meditation) to reduce stress. (10.4.f)</u> • <u>explain the mental and emotional benefits of mind-body exercise/activities (e.g., yoga, Pilates, tai chi). (10.4.g)</u>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>Prejudice and bias can occur in physical activity settings as people may have preconceived and false notions of what individuals or groups of people can and cannot do. Incidents of prejudice and bias in sport and physical activity can isolate members or groups within community. Students should work to include all members of the community (regardless of race, sex, sexual orientation, weight, height, and/or disability, to name a few). (10.4.c).</u></p> <p><u>Students belong to a variety of cultures such as family, gender, teams, faith community, school, grade level, school classes, ethnicity, and interest groups/clubs. Understanding cultural diversity is important for all aspects of health, fitness, and life (10.4.d).</u></p> <ul style="list-style-type: none"> • <u>Culture: The beliefs, customs, arts of a particular society, group, place, or time. (10.4.d).</u> • <u>Cultural diversity: Ethnic, gender, racial and socioeconomic variety in a situation, institution, or group; the coexistence of different ethnic, gender, racial and socioeconomic groups within one social unit (dictionary.com). (10.4.d).</u> • <u>All of the significant differences between people, including perceptions of differences that need to be considered in particular situations and circumstances. Often the most significant differences are the least obvious, such as thinking styles or beliefs and values. (10.4.d).</u> <p><u>Physical activities such as group exercise classes, recreation leagues, and jogging/biking offer an opportunity to socialize and develop friendships (10.4.e).</u></p> <ul style="list-style-type: none"> • <u>Community resources for accessing physical activity or dance opportunities (parks and recreation facilities, faith community, recreation leagues, associations and organizations). (10.4.e).</u> 	<p><u>Identify ways to promote equity and inclusion and embrace diversity in a physical activity setting. (10.4.h)</u></p> <p><u>Additional resources:</u> <u>Health Smart Virginia</u></p>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> • <u>Identify current and future activities and how those activities may help students develop positive social relationships, now and into the future. (10.4.e).</u> <p><u>Stress-management strategies may include (10.4.f):</u></p> <ul style="list-style-type: none"> • <u>Relaxation techniques</u> • <u>Breathing meditation: Deep breathing</u> • <u>Progressive muscle relaxation: Systematically tense and relax different muscle groups in the body</u> • <u>Body scan meditation: Focus on the sensations in each part of the body</u> • <u>Mindfulness: Staying calm and focused in the present moment</u> • <u>Visualization: Imagining a scene in which you feel at peace</u> • <u>Rhythmic exercise (such as running, walking, rowing, or cycling): Engaging in the present moment, focusing your mind on how the body feels right now.</u> • <u>Social support and self-care (CDC)</u> <ul style="list-style-type: none"> ○ <u>Eat a healthy, well-balanced diet</u> ○ <u>Exercise regularly</u> ○ <u>Get plenty of sleep</u> ○ <u>Give yourself a break if you feel stressed out (listen to music, take a walk)</u> ○ <u>Maintain a normal routine</u> 	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> ○ <u>Stay active. You can take your mind off your problems by helping a neighbor, volunteering in the community, even taking the dog on a long walk.</u> <p><u>Mind-body exercise/activities may include (10.4.g)</u></p> <ul style="list-style-type: none"> • <u>Yoga: A system of exercises; series of moving and stationary poses and postures, combined with deep breathing, which help improve strength, flexibility and balance</u> • <u>Pilates: Series of fluid movements performed in a precise manner, accompanied by specialized breathing techniques and intense mental concentration.</u> • <u>Tai Chi: A Chinese form of exercise that uses very slow and controlled movements; it involves the practice of various postures; movements are continuous and serve to relax and align the body</u> <p><u>Creating an inclusive culture for physical education/school and physical activity in the community helps every student learn to lead a healthy and active lifestyle and have a sense of belonging, acceptance and value (CDC). (10.4.h)</u></p> <ul style="list-style-type: none"> • <u>Strategies for inclusion may include:</u> <ul style="list-style-type: none"> ○ <u>modifying/adapting equipment, rules, environment, activity (10.4.h)</u> ○ <u>creating a welcoming/inclusive environment, one that supports, uplifts, and promotes feelings of belonging, acceptance, and value (10.4.h)</u> ○ <u>Understanding that diversity includes the impact of unequal power relations on the development of group identities and cultures (10.4.h)</u> 	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> ○ <u>Respectfully express curiosity about the history and lived experiences of others and exchange ideas and beliefs in an open-minded way (10.4.h)</u> ○ <u>Interact comfortably and respectfully with all people, whether they are similar to or different from oneself. (10.4.h)</u> <p><u>A supportive, inclusive environment includes access to learning and the curriculum with the best approach to ensure learning physically, socially, and emotionally – this could include: speed of play, differentiated instruction, autonomy supported instruction, demonstrations, use of tools/modified equipment, peer -partner opportunities, etc.</u></p>	

Energy Balance

10.5 The student will explain the importance of energy balance and evaluate current caloric intake and caloric expenditure to maintain optimal health and prevent chronic disease for the present and into adulthood.

- a) Analyze the relationships among physical activity, nutrition, body composition, and sleep that are optimal for personal health and/or for participation in lifetime activities.
- b) Evaluate current activity and intensity levels.
- c) Evaluate current caloric expenditure and intake needs.
- d) Evaluate current sleep needs.
- e) Evaluate the caloric intake needs for before, during, and after a variety of lifetime activities.
- f) Explain energy balance (caloric expenditure vs. caloric intake) in relation to changing needs from adolescence through adulthood.
- g) Explain the potential consequences of energy imbalance (e.g., over-exercising, under-eating, overeating, sedentary lifestyle).
- h) Explain the role of perseverance and tenacity in achieving lifelong energy balance.

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>Each person may have different needs for calories and exercise. A healthy lifestyle requires balancing foods you eat, beverages you drink, adequate sleep, stress management, and the amount of activity in your daily routine (CDC) (10.5.a).</u></p> <ul style="list-style-type: none">• <u>Regular exercise helps control blood pressure, body weight, and cholesterol levels; decreases the risk for hardening of the arteries, heart attack, stroke, arthritis, and diabetes; improves digestion, helps to manage stress, aids in better sleep and is good for managing low-back pain. (10.5.a).</u>• <u>A healthy eating plan emphasizes fruits, vegetables, whole grains, and fat-free or low-fat milk and milk products; includes lean meats, poultry, fish, beans, eggs, and nuts; is low in saturated fats, trans fats, cholesterol, salt (sodium), and added sugars; and stays within daily calorie needs. (10.5.a).</u>	<p><u>In order to meet these standards, it is expected that students will</u></p> <ul style="list-style-type: none">• <u>analyze the relationships among physical activity, nutrition, body composition, and sleep that are optimal for personal health and/or for participation in lifetime activities. (10.5.a)</u>• <u>evaluate current activity and intensity levels. (10.5.b)</u>• <u>evaluate current caloric expenditure and intake needs. (10.5.c)</u>• <u>evaluate current sleep needs. (10.5.d)</u>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> • <u>Body composition - A high amount of body fat can lead to weight-related diseases and other health issues. Being underweight is also a health risk. (10.5.a).</u> • <u>Sleep is a powerful regulator of appetite, energy use and weight control. Sleep deprivation can inhibit one’s ability to lose weight even while exercising and eating well. (10.5.a).</u> <p><u>Physical activity guidelines – 60 minutes per day; weekly: 150 minutes of moderate-intensity aerobic activity, 75 minutes of vigorous-intensity aerobic activity, or an equivalent mix of the two each week. (10.5.b).</u></p> <ul style="list-style-type: none"> • <u>Use the RPE scale and determine workout intensity (10.5.b).</u> • <u>Perceived exertion is how hard a person feels like their body is working. Rate of Perceived Exertion (RPE) is a way of measuring physical activity intensity level. Scales may range from 5 to 20 levels. (10.5.b).</u> <ul style="list-style-type: none"> ○ <u>Example (variation of Borg scale):</u> <ul style="list-style-type: none"> ▪ <u>Level 1– Very light activity (seated)</u> ▪ <u>Level 2 – Light activity (can maintain for hours, easy to breathe, walking)</u> ▪ <u>Level 3 – Moderate activity (breathing heavily, somewhat comfortable; skipping, galloping)</u> ▪ <u>Level 4 – Vigorous activity (borderline uncomfortable, short of breath; jogging/running)</u> ▪ <u>Level 5 – Very hard activity (difficult to maintain exercise intensity, barely breathe, running/sprinting)</u> ▪ <u>Level 6 – Max effort activity (almost impossible to keep going, out of breath, sprinting)</u> 	<ul style="list-style-type: none"> • <u>evaluate the caloric intake needs for before, during, and after a variety of lifetime activities. (10.5.e)</u> • <u>explain energy balance (caloric expenditure vs. caloric intake) in relation to changing needs from adolescence through adulthood. (10.5.f)</u> • <u>explain the potential consequences of energy imbalance (e.g., over-exercising, undereating, overeating, sedentary lifestyle). (10.5.g)</u> • <u>explain the role of perseverance and tenacity in achieving lifelong energy balance. (10.5.h)</u> <p><u>Additional resources:</u> <u>Health Smart Virginia</u></p>

Expenditure and intake needs vary with age and physical activity levels. (10.5.c).
Refer to [Dietary Guidelines for Americans](#) for adolescent and adult guidelines for caloric expenditure and intake. Also see DRI Calculator for Healthcare Professionals tool that calculates daily nutrient recommendations based on the Dietary Reference Intakes (DRIs) established by the Health and Medicine Division of the National Academies of Sciences, Engineering and Medicine. The data represents the most current scientific knowledge on nutrient needs however individual requirements may be higher or lower than [DRI recommendations](#) (10.5.c).

Guidelines for sleep: teens 13-18 should get 8-10 hours per 24 hours of sleep; adults 18-60 should get 7 or more hours per night (CDC) (10.5.d).

- Stimulants like coffee and energy drinks, alarm clocks and external lights (including those from electronic devices) interfere with our “circadian rhythm” or natural sleep/wake cycle. (10.5.d).
- A good night's sleep improves learning. Sleep is involved in healing and repair of heart and blood vessels. The right amount of sleep reduces heart rate and blood pressure. Getting enough sleep helps a person function productivity/safety throughout the day. People who are sleep deficient are less productive at work/school. They take longer to finish tasks, have a slower reaction time and make more mistakes. Consult a primary care physician or a sleep professional to determine the underlying cause, if experiencing symptoms such as: sleepiness during the day or when you expect to be awake and alert, snoring, leg cramps or tingling, gasping or difficulty breathing during sleep, prolonged insomnia or another symptom that is preventing you from sleeping well. (10.5.d).

Evaluate the caloric intake needs for before, during, and after a variety of lifetime activities. (10.5.e)

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> • <u>Pre lifetime physical activity:</u> <ul style="list-style-type: none"> ○ <u>Good supply of protein for tissue repair 1-2 hours before activity. A lifetime activity that has a lot of cardio requires more carbohydrates than protein. Carbohydrates are metabolized into glucose (energy) very quickly so they should be consumed 30-60 minutes before an activity. (10.5.e)</u> • <u>During physical lifetime activity:</u> <ul style="list-style-type: none"> ○ <u>Add protein and fiber to deliver a steadier supply of energy throughout the activity. (10.5.e)</u> • <u>After a lifetime physical activity:</u> <ul style="list-style-type: none"> ○ <u>Go for carbohydrates to replace the energy in depleted muscles. Protein, though, is almost equally important in sealing in your physical activity benefits and promoting recovery. (10.5.e)</u> <p><u>Explain energy balance (caloric expenditure vs. caloric intake) in relation to changing needs from adolescence through adulthood (10.5.f).</u></p> <p><u>Refer to Dietary Guidelines for Americans (10.5.f) for adolescent and adult guidelines for caloric expenditure and intake. Also see DRI Calculator for Healthcare Professionals tool that calculates daily nutrient recommendations based on the Dietary Reference Intakes (DRIs) established by the Health and Medicine Division of the National Academies of Sciences, Engineering and Medicine. The data represents the most current scientific knowledge on nutrient needs however individual requirements may be higher or lower than DRI recommendations (10.5.f).</u></p> <p><u>Energy imbalance may include (10.5.g)</u></p>	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> • <u>Taking in more calories than expending results in caloric surplus; this can result in muscle gain, fat gain, or both (10.5.g)</u> • <u>Calories taken in equals calories expended results in maintenance; everything stays the same (10.5.g)</u> • <u>Expending more calories than calories taken in results in caloric deficit (negative energy balance); this can result in fat loss, muscle loss, or both (10.5.g)</u> <ul style="list-style-type: none"> ○ <u>Effects of a negative energy balance (more out than in) include: Decline in metabolism, decreases in bone mass, reductions in thyroid hormones, reductions in testosterone levels, inability to concentrate and a reduction in physical performance. (10.5.g)</u> ○ <u>Excessive amounts of physical activity can lead to injuries, menstrual abnormalities and bone weakening. (10.5.g)</u> ○ <u>Signs of over-exercise may include delayed recovery time, depression, insomnia, disinterest in exercise, mood changes, fatigue. (10.5.g)</u> <p><u>Explain the role of perseverance and tenacity in achieving lifelong energy balance (10.5.h).</u></p> <p><u>People’s needs, interests, and circumstances change over a lifetime. Achieving a lifestyle that includes healthy eating, regular physical activity, and balancing calories consumed with calories the body uses takes an ongoing commitment, perseverance and tenacity (10.5.h).</u></p> <ul style="list-style-type: none"> • <u>Perseverance is continued effort to do or achieve something despite difficulties, failure, or opposition (10.5.h).</u> 	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p>Tenacity is the state or quality of being tenacious - persistent in maintaining, adhering to, or seeking something valued or desired (10.5.h).</p>	

GRADE ELEVEN/TWELVE (ELECTIVE)

Elective physical education courses provide students with the opportunity to participate in physical activities for specific purposes. Students in elective physical education demonstrate the knowledge and understanding necessary to analyze movement performance in an activity of choice using scientific principles, and implement effective practice procedures for skillful performance in specialized movement forms. Students apply advanced movement-specific information so that they develop the ability to learn, self-assess, and improve movement skills independently. Options for offering specialized-movement courses can be configured by quarter, by semester, or on a full-year basis. Students should be offered the opportunity to self-select an activity throughout the course. Students will select areas of concentration to study. Examples of activity choices, include:

- aerobics
- aquatics (swimming, kayaking, canoeing)
- cycling
- dance
- individual sports
- lifelong activities
- outdoor pursuits
- Pilates
- self-defense
- skating
- team sports
- weight management
- weight training/conditioning

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Motor Skill Development

11/12.1 The student will study in-depth and demonstrate mastery of movement skills and patterns in at least one lifetime physical activity per nine-week period.

- a) Demonstrate mastery in all basic skills and movement patterns required for the selected activity and the ability to use the skills with consistency in the appropriate setting.
- b) Identify and apply appropriate skill practice and strategies of the selected activity at an advanced level.
- c) Demonstrate advanced movement patterns in at least one self-selected movement or activity.
- d) Demonstrate the ability to use combined movement skills and strategies in self-selected movement activities.
- e) Analyze movement activities to identify component skills and movement patterns.
- f) Conduct observations and skill analyses of others to improve skill performance.
- g) Create practice and game plans for optimal performance of movement patterns in self-selected sport/activity from the perspective of a coach, personal trainer, athlete, or other sport-related role.
- h) Select and apply appropriate practice procedures to learn skills and movement patterns in activities of personal interest.
- i) Apply appropriate strategies during performance, including offensive and defensive strategies, game-specific situational strategies, and strategies for working more effectively with team members/partners.

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>Skill mastery includes demonstration of all critical skill components and proficiency in application of skills and strategies specific to selected activities.</u> <u>Lifetime activities dependent upon activities offered to or selected by students.</u> <u>(11/12.1.a)</u></p> <p><u>Movement/motor learning progression includes analysis of current performance, development of a personalized practice plan for improvement that includes SMART goal setting, application of principles of movement and training, and planning for amount of time and activities needed for practice, correction, practicing at a higher level, and reassessment. (11/12.1.b)</u></p>	<p><u>In order to meet these standards, it is expected that students will</u></p> <ul style="list-style-type: none"> • <u>demonstrate mastery in all basic skills and movement patterns (11/12.1.a);</u> • <u>identify and apply appropriate skill practice and strategies (11/12.1.b);</u> • <u>demonstrate advanced movement patterns (11/12.1.c);</u> • <u>demonstrate the ability to use combined movement skills and strategies (11/12.1.d);</u>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>Advanced movement patterns include consistency of skill demonstration and ability to adapt/react to changing/unpredictable game situations. (11/12.1.c)</u></p> <p><u>Combination movements can involve all three of the non-locomotor, locomotor, and object control movements together. Pairing combined movement skills with specific strategies creates a desired outcome in self-selected movement activities. (11/12.1.d)</u></p> <p><u>When analyzing movements, divide the movement performance into three phases:</u></p> <ul style="list-style-type: none"> • <u>Preparatory: Movements that prepare such as, backswing in golf or tennis.</u> • <u>Execution:</u> <ul style="list-style-type: none"> ○ <u>Force-producing movements such as, the forward motion of the tennis forehand shot.</u> ○ <u>Critical instant, the point of contact or the release such as, moment of contact in the tennis serve or the take-off in the long jump.</u> • <u>Follow through: Body movements after the execution where the movement slows down such as, the high leg lift after kicking a ball or the golf club after the ball is struck.</u> • <u>Movement skill phases may not all fit neatly into three phases and additional phases may be devised or added. (11/12.1.e, 11/12.1.f)</u> <p><u>Feedback is important to master advanced skills. Feedback is useful when it is focused on the goal of the skill and is specific, objective and provided in terms understood by the recipient of the feedback. (11/12.1.f). Also refer to 11/12.1.e</u></p> <p><u>Practice and game planning can vary based on the perspectives of the person making the plans.</u></p> <ul style="list-style-type: none"> • <u>Coach – impacts to planning may include preseason versus season, skills of all players and skills players need to develop, player injuries, conditions</u> 	<ul style="list-style-type: none"> • <u>analyze movement activities to identify component skills and movement patterns (11/12.1.e.);</u> • <u>conduct observations and skill analyses of others to improve skill performance (11/12.1.f);</u> • <u>create practice and game plans for optimal performance of movement patterns from the perspective of a coach, personal trainer, athlete, or other sport-related role (11/12.1.g);</u> • <u>select and apply appropriate practice procedures to learn skills and movement patterns (11/12.1.h);</u> • <u>apply appropriate strategies during performance (11/12.1.i).</u> <p><u>Additional resources:</u> <u>SHAPE America National Standards and Grade-Level Outcomes</u> <u>OPEN Online Physical Education Network</u> <u>Health Smart Virginia</u> <u>PE Central</u> <u>Dynamic PE ASAP</u></p>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>(facility and environmental/weather-related), individual and group/team skills and strategies, team building, teamwork and communication, and game-specific skills and strategies</u></p> <ul style="list-style-type: none"> • <u>Personal trainer – focused on the personal health, fitness goals, and safety of individuals or small groups</u> • <u>Athlete – focused on maintenance and improvement of personal skills; personal fitness goals (11/12.1.g)</u> <p><u>Learning skills and movement patterns begins with accessing resources for the proper ways to perform the skills such as a coach, teacher, or other professional (in person or through media). Engage in deliberate practice that focuses on the specific skills and application of the skills. Use video or professionals to analyze ongoing skill development. (11/12.1.h) Also refer to 11/12.1.b.</u></p> <p><u>Game/activity-specific strategies and communication are dependent upon activity selected. (11/12.1.i)</u></p>	

Anatomical Basis of Movement

11/12.2 The student will apply knowledge of body systems and movement principles, and concepts that aid in the improvement of movement skills and performance to specialized movement forms.

- a) Explain and apply biomechanical and physiological principles that aid in the improvement of skills and performance in specialized movement forms, including laws of motion, leverage, balance, weight transfer, speed, timing, accuracy, force, cardiac output, maximal oxygen consumption (VO2 max), energy systems (aerobic and anaerobic), heart rate (resting, target, and recovery), caloric cost of activity, muscle contraction, static versus dynamic flexibility, and muscular strength versus muscular endurance.
- b) Analyze performance to identify physiological and biomechanical deficiencies including self-evaluation, peer evaluation, and teacher evaluation.
- c) Explain the rules, safety protocols, relevant markings/lines for the field of play, offensive and defensive tactics, and common penalties and violations for selected activities.
- d) Design, justify, and evaluate warm-up and cool-down sequences for selected activities.
- e) Apply the FITT (frequency, intensity, time, and type of exercise) principle to improve skill performance.
- f) Apply the specificity, overload, and progression (SOP) principle to the design and performance of a physical activity program to achieve physical benefits.
- g) Analyze feedback about personal performance to improve skills including self-evaluation, peer evaluation, and teacher evaluation.

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>Biomechanical and physiological principles that aid in the improvement of skills and performance include:</u></p> <ul style="list-style-type: none"> • <u>Newton’s laws of motion</u> <ul style="list-style-type: none"> ○ <u>Inertia – object at rest or in motion will stay in that state until acted upon by a force strong enough to change its state of motion</u> ○ <u>Acceleration/momentum – acceleration of an object is directly proportionate to the amount of force applied and moves in the direction in which the force is applied</u> 	<p><u>In order to meet these standards, it is expected that students will</u></p> <ul style="list-style-type: none"> • <u>explain and apply biomechanical and physiological principles that aid in the improvement of skills and performance in specialized movement forms, to include laws of motion, leverage, balance, weight transfer, speed, timing, accuracy, force, cardiac output, maximal oxygen</u>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> ○ <u>Action and reaction – for every action there is an equal and opposite reaction</u> • <u>Leverage - Bones of the body are levers as well as a stiff, straight object that can be used to lift weight, increase force, or create speed.</u> • <u>Balance - even distribution of weight that enables someone or something to remain upright while remaining stable and achieving equilibrium. The ability to maintain the body’s center of gravity within the limits of stability as determined by the base of support.</u> <ul style="list-style-type: none"> ○ <u>Center of gravity is the point at which all of the body’s mass and weight are equally balanced or equally distributed in all directions (in the body it is slightly higher than the waist).</u> ○ <u>An individual’s limits of stability are the points outside of his/her base of support that he/she can go without losing control of the center of gravity.</u> ○ <u>Base of support – The surface supporting the body and points of contact with that surface (when standing – the position of the feet on the ground).</u> ○ <u>The lower the center of gravity to the base of support, the greater the stability.</u> ○ <u>The nearer the center of gravity to the center of the base of support, the more stable the body.</u> ○ <u>Stability is increased with the number of points of contact (two feet vs. one foot).</u> ○ <u>Dynamic activities can also be described as those that cause the center of gravity to move in response to muscular activity.</u> • <u>Weight transfer – weight is moved from one supporting foot or other body part partially or fully to another foot or other body part such as from the</u> 	<ul style="list-style-type: none"> ○ <u>consumption (VO2 max), energy systems (aerobic and anaerobic), heart rate (resting, target, and recovery), caloric cost of activity, muscle contraction, static versus dynamic flexibility, and muscular strength versus muscular endurance (11/12.2.a)</u> • <u>analyze performance to identify physiological and biomechanical deficiencies to include self-evaluation, peer evaluation, and teacher evaluation (11/12.2.b)</u> • <u>explain the rules, safety protocols, relevant markings/lines for the field of play, offensive and defensive tactics, and common penalties and violations for selected activities (11/12.2.c)</u> • <u>design, justify, and evaluate warm-up and cool-down sequences for selected activities (11/12.2.d)</u> • <u>apply the FITT (frequency, intensity, time, and type) principle to improve skill performance (11/12.2.e)</u>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>rear leg/foot in a golf backswing to the front left/foot in the downswing/follow through.</u></p> <ul style="list-style-type: none"> • <u>Speed - rate of motion, ability to move swiftly</u> • <u>Timing - ability to coincide movements in relation to external factors; combination of decision-making, coordination and reaction time which gets the player in the right place at the right time (TopEnd Sports and Science)</u> • <u>Accuracy - requires precision of movement with the critical elements of skills such as follow through and aim in the desired direction when throwing to a target; impacted by the ability to use force as needed for an intended target or outcome</u> • <u>Force - strength or energy exerted; force causes movement</u> • <u>Cardiac output - amount of blood the heart pumps in one minute, and it is dependent on the heart rate, contractility, preload, and afterload (doi: 10.1186/cc6975)</u> • <u>Maximal oxygen consumption/uptake (VO₂ max) – measurement of the maximum amount of oxygen a person can utilize during exercise; used to establish aerobic endurance/cardiovascular fitness; the greater the VO₂ max, the more oxygen a person’s body can consume, and the more effectively the body can use that oxygen to generate the maximum amount of ATP energy</u> • <u>Two respiration systems are used by the body for energy and the systems are dependent upon the duration of the activity.</u> <ul style="list-style-type: none"> ○ <u>Anaerobic respiration system (ATP-PC and Lactic Acid System; works without oxygen; adenosine triphosphate [ATP – energy carrying molecule] and phosphocreatine [PC])</u> 	<ul style="list-style-type: none"> • <u>apply the specificity, overload, and progression (SOP) principle to the design and performance of a physical activity program to achieve physical benefits (11/12.2.f)</u> • <u>analyze feedback about personal performance to improve skills including self-evaluation, peer evaluation, and teacher evaluation (11/12.2.g)</u> <p><u>Additional resources:</u> Health Smart Virginia</p>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> ▪ <u>To immediately meet the sudden higher energy demand, stored ATP is the first energy source. This lasts for approximately two seconds.</u> ▪ <u>The ATP-PC system can only last eight to 10 seconds before PC stores are depleted.</u> ▪ <u>The lactic acid system (anaerobic glycolysis) must then take over as the predominant source of energy production; high intensity (but sub-maximal) exercise can last for between three and five minutes using this system.</u> ▪ <u>If the exercise continues at a high intensity, oxygen is not available at a fast enough rate to allow aerobic metabolism to take over. The production of lactic acid will reach the point where it interferes with muscular function; this is called the lactate threshold.</u> ▪ <u>Muscles begin to fatigue when ATP resynthesis can no longer match demand.</u> ○ <u>Aerobic respiration system, aka aerobic glycolysis - Breakdown of carbohydrates to produce ATP; slow, uses either carbohydrates or fat (carbohydrates and fats are only burned in presence of oxygen); needs oxygen to produce ATP; sustained energy; longer-duration, lower-intensity after anaerobic systems have fatigued; long-term steady paced exercise and day-to-day activities; produces large amounts of energy at the lowest intensity</u> • <u>Heart rate (resting, target, and recovery)</u> <ul style="list-style-type: none"> ○ <u>Resting heart rate - In general, resting heart rate is an indication of efficient heart function and better cardiovascular fitness. A trained athlete may have a resting heart rate closer to 40. It is best taken after 10 minutes of rest.</u> 	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> ○ <u>Target heart rates - Activity heart rate can be taken at multiple points during activity and include being taken immediately after stopping activity. It helps to determine appropriate intensity levels for exercise. By keeping the target heart rate in check, a person can avoid under- or over-training and is able to avoid overexertion. Exercise programs may be characterized by the level of intensity or percentage of maximal heart rate range (maximum heart rate is 220 minus a person's age). (Target Heart Rate Zone information) Some drugs and medications or medical conditions may affect heart rate, resulting in having a lower maximum heart rate and target zone. A health care provider should be consulted.</u> ○ <u>Recovery heart rate - Recovery heart rate is the decrease in heart rate that occurs one minute after maximal exercise. Faster decreases in heart rate are associated with individuals with higher levels of fitness.</u> • <u>Caloric cost of activity – net energy consumed by an activity (various charts available online such as Harvard Health chart for calories burned in 30 minutes of different activities for three different body weights)</u> • <u>Types of muscle contractions</u> <ul style="list-style-type: none"> ○ <u>Isometric – muscular contraction in which the length of the muscle does not change</u> ○ <u>Isotonic – muscular contraction in which the length of the muscle does change</u> ○ <u>Eccentric – an isotonic contraction where the muscle lengthens</u> ○ <u>Concentric – an isotonic contraction where the muscle shortens</u> • <u>Muscular-stretching: Be sure to raise the body's internal temperature through light physical activity before engaging in stretching activities.</u> <ul style="list-style-type: none"> ○ <u>Static– Slow and constant with end position held, caution is exercised with proper technique</u> 	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> ○ <u>Dynamic– Flexibility during sport-specific movements, such as a track sprinter performing long walking strides for a warmup focus on hip extension</u> • <u>Muscular strength - maximum force that muscles can exert in a single effort including getting up out of a chair and lifting /moving heavy objects</u> • <u>Muscular endurance - the ability to sustain or repeat muscular activity over time including running, biking, and walking (11/12.2.a)</u> <p><u>Analyzing performance of self and others can indicate physiological and biomechanical deficiencies. Applying movement principles can aid in the improvement and performance of the chosen activity. (11/12.2.b) - Refer to (11/12.1.e-f) and (11/12.2.a-b)</u></p> <p><u>Rules, safety protocols, relevant markings/lines for the field of play, offensive and defensive tactics, and common penalties and violations are dependent upon the selected activities. (11/12.2.c)</u></p> <p><u>Proper and comprehensive warm-up and cool-down protocols are essential to short-term exercise performance, as well as long-term injury prevention and general physical health. Warm-ups and cool-downs should include components that are aligned with the physical demands of the selected activity.</u></p> <ul style="list-style-type: none"> • <u>Warm-ups - pumps nutrient-rich, oxygenated blood to muscles as heart rate, breathing, and body temperature increases, preparing the body for activity</u> • <u>Cool-downs - gradually slows breathing and heart rate, gradual recovery of pre-exercise heart rate and blood pressure. (11/12.2.d)</u> 	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>FITT principle - frequency, intensity, time, and type – is a “formula” for planning what kind of physical activity/activities, how often to do the activities, how hard, and for how long to meet goals. (11/12.2.e)</u></p> <p><u>The principles of specificity, overload, and progression are highly interconnected and are reciprocally dependent on each other.</u></p> <ul style="list-style-type: none"> • <u>Specificity – desired adaption occurs in response to specific stress placed upon the body; exercise/activity needs to match desired outcome</u> • <u>Overload – stress must be applied beyond that which the body is accustomed to; increase workload (added weight, time, intensity, and/or repetitions)</u> • <u>Progression – once body has adapted to a level of stress, additional stress is needed; progressively or gradually increase workload (11/12.2.f)</u> <p><u>To improve skills, feedback about personal performance is an essential factor affecting motor skill development. Feedback has been defined as an action taken by an agent (e.g., teacher and student) to deliver information about one or more aspects of student performance [9,10] Use this feedback to guide and improve future performance by looking at the components of that performance and adjusting/modifying as needed. (11/12.2.g)</u></p>	

Fitness Planning

11/12.3 The student will design, implement, and evaluate a personal fitness program for self, a college student, or an employee in a selected field of work.

- a) Assess individual level of health-related fitness using a variety of appropriate measures (e.g., criterion-referenced wellness tests, FitnessGram) and technology (heart-rate monitors, pedometers, accelerometers, and bioelectrical impedance).
- b) Evaluate and adjust activity levels to meet the Centers for Disease Control and Prevention’s Physical Activity Guidelines for Americans.
- c) Design and critique a personal fitness program, using available technology (e.g., electronic portfolios, tracking applications) and resources, to improve or maintain personal fitness levels in relation to the five components of fitness.
- d) Explain the physical and mental (emotional, social) benefits of physical fitness for lifelong health and wellness.
- e) Create personal fitness plans for a variety of situations (e.g., injury, aging) based on goals.
- f) Identify and evaluate community resources for selected physical and/or lifetime activities including recreation centers, local fitness centers, adult leagues, and other fitness clubs/groups.
- g) Identify barriers to physical activity, including those related to time, motivation, or energy, skill confidence, fear of injury, resources, and social influences/peer pressure, and identify strategies to overcome these barriers.
- h) Evaluate and apply scientific evidence to make critical decisions when purchasing fitness products and/or services.

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>Criterion-referenced wellness tests emphasize a health criterion - health outcomes or health risks; scores/standards set by determining the point or level on which a fitness parameter is associated with an increased risk of a disease outcome or risk factors of disease. (Norm-referenced tests compare students’ performance to peers and emphasize peak performance; dependent on population)</u></p> <p><u>Health-related fitness measures using technology may include</u></p> <ul style="list-style-type: none"> • <u>Heart rate monitors– Two types: wireless chest/arm straps that use an electrical pulse to read heart rate (tend to be more accurate) and wrist-based/headphones trackers that use optical technology (light). Both can</u> 	<p><u>In order to meet these standards, it is expected that students will</u></p> <ul style="list-style-type: none"> • <u>use criterion-referenced wellness tests and technology to assess individual level of health-related fitness (11/12.3.a)</u> • <u>evaluate and adjust activity levels (11/12.3.b)</u> • <u>use assessment results to design and critique a personal fitness program (11/12.3.c)</u>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>send continuous data to a monitor (watch/phone). Other heart rate monitors and technology may be available.</u></p> <ul style="list-style-type: none"> • <u>Pedometers– track steps taken by indicating each time the wearer’s hips move. Some models can track foot movement via a GPS tracker or built-in sensors on a phone.</u> • <u>Accelerometers– measure acceleration; able to capture intensity of physical activity; able to distinguish between walking and running; can separate human movement from mechanical vibration such as riding in a car.</u> • <u>Bioelectrical Impedance Analysis - person places hands on the electrodes of a device for about 20 seconds. It runs an imperceptible level of electrical current through the body. The flow of the current is affected by the amount of water in the body. The device measures how this signal is impeded through different types of tissue. Tissues that contain large amounts of fluid and electrolytes, such as blood, have high conductivity, but fat and bone slow the signal down. As BIA determines the resistance to flow of the current as it passes through the body, it provides estimates of body water from which body fat is calculated using selected equations. (11/12.3.a)</u> <p><u>Physical activity guidelines – 60 minutes per day; weekly: 150 minutes of moderate-intensity aerobic activity, 75 minutes of vigorous-intensity aerobic activity, or an equivalent mix of the two each week. (CDC) (11/12.3.b)</u></p> <p><u>Health-related fitness components provide information about a person’s overall physical health.</u></p> <ul style="list-style-type: none"> • <u>Health-related fitness components include cardiorespiratory endurance, flexibility, muscular strength and endurance, and body composition.</u> 	<ul style="list-style-type: none"> • <u>explain the physical and mental (emotional, social) benefits of physical fitness (11/12.3.d)</u> • <u>create fitness plans for a variety of individuals or situations (11/12.3.e)</u> • <u>identify and evaluate community resources for physical activities (11/12.3.f)</u> • <u>identify barriers and strategies to overcome barriers to physical activity (11/12.3.g)</u> • <u>evaluate and apply scientific evidence to make critical decisions when purchasing fitness products and/or services. (11/12.3.h)</u> <p><u>Additional resources:</u> <u>Health Smart Virginia</u></p>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> • <u>Personal fitness planning includes</u> <ul style="list-style-type: none"> ○ <u>assessing and analyzing personal fitness levels</u> ○ <u>setting SMART goals for improvement and/or maintenance</u> ○ <u>creating strategies to achieve goals and monitor progress</u> <ul style="list-style-type: none"> ▪ <u>applying FITT and SOP principles</u> ○ <u>making timelines to achieve goals</u> ○ <u>plan for reassessing, evaluating, and reflecting on progress of goals</u> ○ <u>revising plan strategies as needed (11/12.3.c)</u> <p><u>Regular exercise helps control blood pressure, body weight, and cholesterol levels; decreases the risk for hardening of the arteries, heart attack, stroke, arthritis, and diabetes; improves digestion, helps to manage stress, aids in better sleep and is good for managing low-back pain. Anyone can be at risk for chronic disease; however, some people are more at risk due to heredity (receive from a parent or ancestor by genetic transmission) or because a condition is familial (tending to occur in more members of a family than expected by chance alone). Social and emotional benefits/supports of participation in physical activities may include:</u></p> <ul style="list-style-type: none"> • <u>Improves mental health and mood.</u> • <u>Reduces the risk of depression and anxiety.</u> • <u>Develops higher self-esteem and body image.</u> • <u>Helps develop basic motor skills needed for day-to-day life.</u> • <u>Effectively promotes mutual understanding and empathy.</u> • <u>Builds character– social skills like teamwork, cooperation, and leadership.</u> • <u>Supports ability to win and lose while being a good sport.</u> • <u>Develops resiliency (11/12.3.d)</u> 	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>Fitness plans should be based on individual goals and desired outcomes with planning for appropriate activities and strategies to address potential barriers to success. Plans should include pre- and post-assessment opportunities. (11/12.3.e)</u></p> <p><u>Community resources for physical activities may include recreation centers, park and recreation agencies, fitness centers, adult leagues, online communities, and other fitness clubs/groups. These resources can be evaluated on the quantity and quality of services provided as well as equitable access and mechanisms to ensure safety for community members. (11/12.3.f)</u></p> <p><u>Successful planning for lifelong physical activity includes identifying barriers and developing strategies to overcome barriers such as time (using time management skills, sticking to a routine), motivation (having goals, having an exercise partner), energy (making appropriate nutrition choices), skill confidence (time for practice, access to trainer/coach), fear of injury (using appropriate equipment, addressing safety, staying fit), resources (planning in advance, being innovative), and social influences/peer pressure (being goal oriented, perseverance, planning time). (11/12.3.g)</u></p> <p><u>Becoming an informed consumer of fitness products and services is essential for health and safety in a market where there are many fitness claims available to consumers. Fitness products can include equipment, technology, performance clothing, consumables, supplements, or creams. Fitness services can include personal trainers, diet plans, classes, gym memberships etc. Informed fitness consumers should consider the following:</u></p> <ul style="list-style-type: none"> • <u>Personal goals – level of commitment</u> • <u>Lifestyle habits – time and space</u> • <u>Advertising claims and discrepancies</u> 	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> • <u>Alignment between fitness product and personal goals</u> <u>Financial impacts (11/12.3.h)</u>	

Social and Emotional Development

11/12.4 The student will evaluate and implement a safe environment for skill practice and play and demonstrate social competency skills for lifetime activity participation.

- a) Evaluate, create, and implement a growth mindset plan for increasing self-efficacy.
- b) Demonstrate appropriate etiquette as a participant and spectator in physical activity/sport.
- c) Demonstrate proper care of athletic/activity equipment.
- d) Demonstrate safe behavior when participating in or watching physical activity/sport.
- e) Explain and demonstrate leadership skills of critical thinking, creative thinking, communication, collaboration, and citizenship skills.
- f) Demonstrate the ability to work cooperatively to accomplish a group goal.
- g) Advocate for a rule change or modification in a sport or activity to facilitate safety or the inclusion of individuals from the point of view of an athlete, coach, parent, or referee.
- h) Demonstrate respect for differences among people in physical activity settings.
- i) Develop and demonstrate strategies for inclusion of persons of diverse backgrounds and identify personal, cultural, and linguistic assets in setting collective goals.
- j) Identify ways that physical activities can provide positive social interaction, such as the benefits of team involvement and an individual’s role as a positive member of a group.
- k) Create and implement a strategy to promote peer involvement in physical activity, such as a social-networking campaign or a video.
- l) Describe and demonstrate behaviors that support an inclusive environment, where a sense of belonging, acceptance, and value is available to all students.

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>Growth mindset is the underlying belief you have about learning and intelligence. If you believe you can get smarter, more effort is put into achievement. To improve, use prompts such as, “I can learn to do anything I want...,” “Challenges help me to grow,” and “My effort and my attitude determine my abilities.”</u></p>	<p><u>In order to meet these standards, it is expected that students will</u></p> <ul style="list-style-type: none"> • <u>evaluate, create, and implement a growth mindset plan for increasing self-efficacy (11/12.4.a);</u>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>(11/12.4.a)</u></p> <p><u>Etiquette refers to guidelines indicating the proper and polite way to behave (e.g., shaking hands/giving high fives/congratulating other team at the end of a game, speaking respectfully as a spectator). Etiquette varies dependent on the activity. (11/12.4.b)</u></p> <p><u>Proper care of athletic/activity equipment should include appropriate use and cleaning per manufacturers’ instructions. (11/12.4.c)</u></p> <p><u>Safe behavior when participating in or watching physical activity/sport helps to ensure the safety of everyone. (11/12.4.d)</u></p> <p><u>Leadership skills include:</u></p> <ul style="list-style-type: none"> • <u>Problem solving skills</u> <ul style="list-style-type: none"> ○ <u>Identify the problem</u> ○ <u>Analyze the problem</u> ○ <u>Generate potential solutions</u> ○ <u>Select and plan the solution</u> ○ <u>Implement the solution</u> • <u>Communication skills/strategies</u> <ul style="list-style-type: none"> ○ <u>Verbal communication– sharing of information/relay a message between two or more people that uses sounds, signs and/or language; either oral or written; spoken word; either face-to-face or electronically.</u> ○ <u>Nonverbal communication– sending and receiving wordless messages; body movements/body language such as facial</u> 	<ul style="list-style-type: none"> • <u>demonstrate appropriate etiquette (11/12.4.b);</u> • <u>demonstrate proper care of athletic/activity equipment (11/12.4.c);</u> • <u>demonstrate safe behavior when participating in or watching physical activity/sport (11/12.4.d);</u> • <u>explain and demonstrate leadership skills (11/12.4.e);</u> • <u>demonstrate the ability to work cooperatively to accomplish a group goal (11/12.4.f);</u> • <u>advocate for rule change or modification in a sport or activity (11/12.4.g);</u> • <u>demonstrate respect for differences among people (11/12.4.h);</u> • <u>develop and demonstrate strategies for inclusion of persons of diverse backgrounds and abilities and identify individual assets in setting collective goals (11/12.4.i);</u> • <u>identify ways that physical activities can provide positive social interaction (11/12.4.j);</u>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>expressions, body posture, gestures, eye contact, way, tone of voice, touch.</u></p> <ul style="list-style-type: none"> ○ <u>Visual communication– visual aids such as signs, graphics, drawings, design, color, graphs, charts.</u> ○ <u>Active listening– pay attention to the speaker, avoid being distracted; show you are listening, smile, nod; provide feedback – restate what you heard, ask questions; defer judgment– don’t interrupt; respond with respect</u> • <u>Conflict resolution skills</u> <ul style="list-style-type: none"> ○ <u>Discuss problem without blame.</u> ○ <u>Active listening.</u> ○ <u>Identify and clarify issues and needs.</u> ○ <u>Brainstorm solutions.</u> ○ <u>Choose and apply solution.</u> ○ <u>Evaluate solution (11/12.4.e)</u> • <u>Cooperation skills</u> <ul style="list-style-type: none"> ○ <u>Following rules</u> ○ <u>Encouraging others</u> ○ <u>Complimenting others</u> ○ <u>Controlling temper</u> ○ <u>Wanting everyone to play well and succeed</u> ○ <u>Working together toward a common goal</u> ○ <u>Helping classmates/teammates</u> ○ <u>Playing under control</u> ○ <u>Sharing</u> ○ <u>Showing concern for teammates/classmates’ feelings (11/12.4.f)</u> 	<ul style="list-style-type: none"> • <u>create and implement a strategy to promote peer involvement in physical activity (11/12.4.k);</u> • <u>describe and demonstrate behaviors that support an inclusive environment (11/12.4.l).</u> <p><u>Additional resources:</u> <u>Health Smart Virginia</u></p>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>Inclusion: the action or state of including or of being included within a group or structure. Advocating for modifications or rule adjustments can be incorporated into physical activity opportunities. (11/12.4.g)</u></p> <p><u>Ways to respect people who are different from us:</u></p> <ul style="list-style-type: none"> • <u>Try to learn something from the other person.</u> • <u>Show interest and appreciation for other people's cultures and backgrounds.</u> • <u>Don't insult people, tease them, or make fun of them.</u> • <u>Listen to others when they speak.</u> • <u>Be considerate of people's likes and dislikes.</u> • <u>Don't talk about people behind their backs.</u> • <u>Be sensitive to other people's feelings.</u> <p><u>(11/12.4.h)</u></p> <p><u>Creating an inclusive culture for physical education and physical activity helps every student learn to lead a healthy and active lifestyle (CDC). Strategies for inclusion may include modifying/adapting equipment, rules, environment, activity; creating a welcoming/inclusive environment, one that supports and uplifts everyone; and providing meaningful learning and participation experiences. (11/12.4.i)</u></p> <p><u>Physical activities can provide positive social interaction by meeting new people, engaging in similar interests with others, experiencing teamwork and cooperation. Team involvement helps to develop self-esteem, self-confidence, competence, caring, character, connections, and skills to include communication and relationship building. (11/12.4.j)</u></p>	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>Strategies to promote peer involvement in physical activity may include low/no cost activities, where to access activities, providing a variety of activities to include competitive and noncompetitive, and differentiating activities for a variety of abilities. (11/12.4.k)</u></p> <p><u>A supportive, inclusive environment includes access to learning and the curriculum with the best approach to ensure learning physically, socially, and emotionally – this could include: speed of play, differentiated instruction, autonomy supported instruction, demonstrations, use of tools / modified equipment, peer-partner opportunities, etc. (11/12.4.l)</u></p>	

Energy Balance

11/12.5 The student will explain the importance of energy balance and demonstrate understanding of the nutritional needs of the body to maintain optimal health and prevent chronic disease for a lifetime.

- a) Analyze the relationships among physical activity, nutrition, body composition, and sleep that are optimal for personal health and/or for participation in a self-selected physical activity.
- b) Analyze current and future nutritional and physical activity needs in relation to changes in growth/aging.
- c) Explain the benefits of nutrient-dense, low-sodium foods versus high-calorie, empty calorie, and high-sodium foods.
- d) Analyze current and future sleep needs for positively influencing academic, career success, and mental health.
- e) Apply rate of perceived exertion and pacing to a conditioning plan that meets the needs of a self-selected physical activity.
- f) Explain energy balance in terms of caloric intake and expenditure in relation to changing lifestyle needs from adolescence to adulthood.
- g) Compare caloric expenditure while sitting and standing.

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>Each person may have different needs for calories and exercise. A healthy lifestyle requires balancing foods you eat, beverages you drink, adequate sleep, stress management, and the amount of activity in your daily routine. (CDC)</u></p> <ul style="list-style-type: none"> • <u>Regular exercise helps control blood pressure, body weight, and cholesterol levels; decreases the risk for hardening of the arteries, heart attack, stroke, arthritis, and diabetes; improves digestion, helps to manage stress, aids in better sleep and is good for managing low-back pain.</u> • <u>A healthy eating plan emphasizes fruits, vegetables, whole grains, and fat-free or low-fat milk and milk products; includes lean meats, poultry, fish, beans, eggs, and nuts; is low in saturated fats, trans-fats, cholesterol, salt (sodium), and added sugars; and stays within daily calorie needs.</u> • <u>Body composition - A high amount of body fat can lead to weight-related diseases and other health issues. Being underweight is also a health risk.</u> 	<p><u>In order to meet these standards, it is expected that students will</u></p> <ul style="list-style-type: none"> • <u>analyze the relationships among physical activity, nutrition, body composition, and sleep (11/12.5.a)</u> • <u>analyze current and future nutritional and physical activity needs in relation to changes in growth/aging (11/12.5.b)</u> • <u>explain the benefits of nutrient-dense, low-sodium foods versus high-calorie, empty calorie, and high-sodium foods (11/12.5.c)</u>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> • <u>Sleep is a powerful regulator of appetite, energy use and weight control. Sleep deprivation can inhibit one’s ability to lose weight even while exercising and eating well. (11/12.5.a)</u> <p><u>Physical activity guidelines</u></p> <ul style="list-style-type: none"> • <u>Ages 6-17: moderate- and vigorous-intensity physical activity for periods of time that add up to 60 minutes (1 hour) or more each day. This activity should include aerobic activity as well as age-appropriate muscle- and bone- strengthening activities.</u> • <u>Adults: 150 to 300 minutes of moderate-intensity aerobic physical activity each week; muscle-strengthening activities also provide health benefits and are an important part of an adult’s overall physical activity plan</u> <p><u>Expenditure and intake needs vary with age and physical activity levels. Refer to Dietary Guidelines for Americans for adolescent and adult guidelines for caloric expenditure and intake. Also see DRI Calculator for Healthcare Professionals tool that calculates daily nutrient recommendations based on the Dietary Reference Intakes (DRIs) established by the Health and Medicine Division of the National Academies of Sciences, Engineering and Medicine. The data represents the most current scientific knowledge on nutrient needs however individual requirements may be higher or lower than DRI recommendations. (11/12.5.b)</u></p> <p><u>Nutrient-dense foods are high in nutrients but relatively low in calories. Nutrient-dense foods contain vitamins, minerals, complex carbohydrates, lean protein, and healthy fats. Examples of nutrient-dense foods include fruits and vegetables, whole grains, low-fat or fat-free milk products, seafood, lean meats, eggs, peas, beans, and nuts. Vegetables, fruits, and grains offer important vitamins and minerals to keep the body healthy. Most of these foods have little fat. They also</u></p>	<ul style="list-style-type: none"> • <u>analyze current and future sleep needs (11/12.5.d)</u> • <u>apply rate of perceived exertion and pacing to a conditioning plan (11/12.5.e)</u> • <u>explain energy balance in relation to changing lifestyle needs from adolescence to adulthood (11/12.5.f)</u> • <u>compare caloric expenditure while sitting and standing (11/12.5.g)</u> <p><u>Additional resources:</u> <u>Health Smart Virginia</u></p>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>have no cholesterol. Fruits, vegetables, and grains are also a source of fiber, and eating more fiber may lower cholesterol and blood sugar. (11/12.5.c)</u></p> <p><u>Guidelines for sleep: teens 13-18 should get eight to 10 hours per 24 hours of sleep; adults 18-60 should get seven or more hours per night. (CDC)</u></p> <ul style="list-style-type: none"> • <u>Stimulants like coffee and energy drinks, alarm clocks and external lights (including those from electronic devices) interfere with our “circadian rhythm” or natural sleep/wake cycle.</u> • <u>A good night's sleep improves learning. Sleep is involved in healing and repair of heart and blood vessels. Adequate sleep reduces heart rate and blood pressure and helps a person function productivity/safety throughout the day. People who are sleep deficient are less productive at work/school. They take longer to finish tasks, have a slower reaction time and make more mistakes. Consult a primary care physician or a sleep professional to determine the underlying cause if experiencing symptoms such as: sleepiness during the day or when you expect to be awake and alert, snoring, leg cramps or tingling, gasping or difficulty breathing during sleep, prolonged insomnia or another symptom that is preventing you from sleeping well. (11/12.5.d)</u> <p><u>Pacing is needed to avoid fatigue before the end of an activity (e.g. jogging three miles); strategy by which effort is managed during exercise based on a goal and demands of the task; time per distance. Pacing strategies may include time, heart rate, and level of intensity/using a RPE scale.</u></p> <ul style="list-style-type: none"> • <u>Perceived exertion is how hard a person feels like their body is working. Rate of Perceived Exertion (RPE) is a way of measuring physical activity intensity level. Scales may range from 5 to 20 levels. Example (variation of Borg scale):</u> 	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> ○ <u>Level 1- Very light activity (seated)</u> ○ <u>Level 2 – Light activity (can maintain for hours, easy to breathe, walking)</u> ○ <u>Level 3 – Moderate activity (breathing heavily, somewhat comfortable; skipping, galloping)</u> ○ <u>Level 4 – Vigorous activity (borderline uncomfortable, short of breath; jogging/running)</u> ○ <u>Level 5 – Very hard activity (difficult to maintain exercise intensity, barely breathe, running/sprinting)</u> ○ <u>Level 6 – Max effort activity (almost impossible to keep going, out of breath, sprinting) (11/12.5.e)</u> <p><u>Energy expenditure is the sum of the basal metabolic rate (BMR, the amount of energy expended while at complete rest), the thermic effect of food (TEF, the energy required to digest and absorb food), and the energy expended in physical activity. Energy is needed to keep the heart beating and organs functioning, maintenance of body temperature, muscle contraction, and growth. An average adult will use around 1.1 calories (kcal) each minute just maintaining these functions. BMR differs from one person to the next, both within a population and between population groups. Infants and young children tend to have a proportionately high BMR for their size due to their rapid growth and development. Men usually have a higher BMR than women since they tend to have more muscle. Older adults usually have a lower BMR than younger people since their muscle mass tends to decrease with age. The BMR accounts on average for about three quarters of an individual's energy needs. See 11/12.5.c. (11/12.5.f-g)</u></p>	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p>While staying active is the best way to burn calories, you may be able to improve your health by simply spending more time standing than sitting each day. Standing burns more calories than sitting — and it also has less possible health risks when you stand more compared to sitting all day each day. While this may not help you lose a significant amount of weight, it can certainly help you maintain your current weight and reduce certain health risks – see the charts to learn more. (11/12.5.g)</p>	

PERSONAL FITNESS I/II (ELECTIVE)

Personal Fitness is an elective physical education course that focuses on fitness, strength training, physical conditioning, and lifetime health concepts, activities and knowledge to promote health and wellness. This course is structured to develop individualized knowledge of weight training and physical conditioning for the beginning student and the advanced student. The course requires mastery of training principles and a thorough understanding of fitness center safety rules prior to participation in weight room laboratory experiences. The course content is presented so that teachers may select strategies and instructional techniques designed to improve muscular strength and endurance, flexibility, and cardiorespiratory endurance. Students will gain the necessary information and skills to plan and implement a personal fitness and conditioning program that includes skill- and health-related fitness components to achieve and maintain a health-enhancing level of physical fitness for a lifetime. Various training models will be presented that allow for flexibility of instruction among diverse student needs. Students will continue to implement and modify personal fitness and conditioning programs.

Motor Skill Development

PF.1 The student will demonstrate mastery of movement skills and patterns used to perform a variety of strength training, physical conditioning, and fitness-based activities.

- a) Demonstrate proficiency in personal fitness-related skills (strength training, physical conditioning, and fitness activities) through the execution of appropriate basic and advanced skills, use of knowledge related to an activity to enhance performance, development of motor skills for a high level of participation, consistent and correct performance of skills, understanding motor cues, appropriate spotting techniques, how to correct performance problems, displaying effort to learn and apply new skills, participating confidently with peers, applying skills to the development of a personal fitness program, possessing necessary physical fitness for moderate to vigorous participation, and correct selection of appropriate exercises based on personal goals and ability.
- b) Explain the importance of and demonstrate proficiency in a variety of activities that contribute to improvement of each component of health-related and skill-related fitness.
- c) Explain the relationship between health-related fitness activities and health problems, such as cardiovascular disease, obesity, and joint pain.
- d) Demonstrate a variety of activities that contribute to the improvement of each component of skill-related fitness.

- e) Demonstrate correct techniques, form, and exercise procedures when performing strength training, physical conditioning, and fitness activities and exercises.
- f) Describe and demonstrate assessment activities that contribute to the development and improvement of health- and skill-related fitness components and personal fitness goals.
- g) Apply movement principles and concepts to skill performance of strength training, physical conditioning, and fitness activities.

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>Proficiency includes consistent, correct performance of all critical elements and safety practices for skills and activities (PF.1.a).</u></p> <ul style="list-style-type: none"> • <u>Strength training activity skills may include:</u> <ul style="list-style-type: none"> ○ <u>Free weight activities</u> ○ <u>Olympic lifts</u> ○ <u>Dumbbell / kettlebell activities</u> ○ <u>Manual resistance activities</u> ○ <u>Resistance band activities</u> ○ <u>Resistance machines</u> • <u>Physical conditioning and fitness activities may include:</u> <ul style="list-style-type: none"> ○ <u>Speed and agility activities</u> ○ <u>Endurance activities</u> ○ <u>Flexibility activities</u> ○ <u>Plyometric activities</u> • <u>Activities to apply knowledge of strength training, physical conditioning and fitness activities may be self-selected (i.e., individual, dual, team activities)</u> <p><u>Health-related and skill-related fitness components provide information about and contribute to a person’s overall physical health (PF.1.b).</u></p>	<p><u>In order to meet these standards, it is expected that students will</u></p> <ul style="list-style-type: none"> • <u>demonstrate proficiency in strength training, physical conditioning, and fitness activities (PF.1.a)</u> <ul style="list-style-type: none"> ○ <u>analysis and performance of basic and advanced skills in strength training, personal conditioning, and fitness activities including component skills and movement patterns applicable to skill performance</u> ○ <u>performance of spotting techniques</u> ○ <u>for a selected activity, evaluate skill performance, correct performance problems, select appropriate exercises to improve performance</u> ○ <u>demonstrate confident participation with peers</u> • <u>explain the importance of and demonstrate proficiency in a variety of</u>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> • <u>Health-related fitness components may include cardiorespiratory endurance, flexibility, muscular strength and endurance, and body composition.</u> • <u>Skill-related fitness components include</u> <ul style="list-style-type: none"> ○ <u>Agility – ability to move with quick easy grace; quick change of direction</u> ○ <u>Balance – stability produced by even distribution of weight; muscles tense to keep the body in a balanced position</u> ○ <u>Coordination – harmonious functioning of parts for effective results; it takes eye-hand coordination to strike an object</u> ○ <u>Power – physical might, ability to act or produce an effect; kicking a ball for distance</u> ○ <u>Reaction time – the time required for a subject to initiate a prearranged response to a defined stimulus; time between hearing a whistle and starting to run or time between seeing a ball being thrown to a place out of reach and moving to catch it</u> ○ <u>Speed – rate of motion, ability to move swiftly</u> <p><u>According to the Centers for Disease Control and Prevention (CDC), physical activity is one of the best things people can do to improve their health. It is vital for healthy aging and can reduce the burden of chronic diseases and prevent early death. Active people generally live longer and are at less risk for serious health problems like heart disease, type 2 diabetes, obesity, and some cancers. For people with chronic diseases, physical activity can help manage these conditions and complications. (PF.1.c).</u></p> <p><u>Improving each component of skill-related fitness may include (PF.1.d).</u></p> <ul style="list-style-type: none"> • <u>Speed and agility activities</u> 	<p><u>activities for each component of health-related and skill-related fitness (PF.1.b)</u></p> <ul style="list-style-type: none"> • <u>explain the relationship between health-related fitness activities and health problems (PF.1.c)</u> • <u>demonstrate a variety of activities that contribute to improvement of each component of skill-related fitness (PF.1.d)</u> • <u>demonstrate correct techniques, form, and exercise procedures when performing strength training, physical conditioning, and fitness activities and exercises (PF.1.e)</u> • <u>describe and demonstrate a variety of assessment activities that contribute to the development and improvement of health- and skill-related fitness components and personal fitness goals (PF.1.f)</u> • <u>apply movement principles and concepts to skill performance of strength training, physical conditioning, and fitness activities (PF.1.g)</u>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> • <u>Endurance activities</u> • <u>Flexibility activities</u> • <u>Plyometric activities</u> • <u>Reaction time activities</u> <p><u>Proficiency includes consistent, correct performance of all critical elements and safety practices (including spotting techniques) for skills and activities (PF.1.e).</u></p> <ul style="list-style-type: none"> • <u>Strength training activity skills may include:</u> <ul style="list-style-type: none"> ○ <u>Free weight activities</u> ○ <u>Olympic lifts</u> ○ <u>Dumbbell/kettlebell activities</u> ○ <u>Manual resistance activities</u> ○ <u>Resistance band activities</u> ○ <u>Resistance machines</u> • <u>Physical conditioning and fitness activities may include:</u> <ul style="list-style-type: none"> ○ <u>Speed and agility activities</u> ○ <u>Endurance activities</u> ○ <u>Flexibility activities</u> ○ <u>Plyometric activities</u> • <u>Component skills and movement patterns may include:</u> <ul style="list-style-type: none"> ○ <u>Squat</u> ○ <u>Lunge</u> ○ <u>Push</u> ○ <u>Pull</u> ○ <u>Bend</u> ○ <u>Twist</u> 	<p><u>Additional resources:</u></p> <p><u>SHAPE America National Standards and Grade-Level Outcomes</u></p> <p><u>OPEN Online Physical Education Network</u></p> <p><u>Health Smart Virginia</u></p> <p><u>PE Central</u></p> <p><u>Dynamic PE ASAP</u></p> <p><u>CDC</u></p>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>Assessments for personal fitness and health- and skill-related fitness components should be criterion-referenced, medically-supported assessments. (PF.1.f).</u></p> <ul style="list-style-type: none"> • <u>Assessments may include</u> <ul style="list-style-type: none"> ○ <u>Cooper Institute (FitnessGram)</u> ○ <u>ACE Group Fitness Instructor Fitness Assessment Protocols</u> ○ <u>Mayo Clinic</u> <p><u>Movement principles may include hinge, plank, push, pull, squat, lunge and rotation. These movements either alone or in combination are the basis of all movement. Movement principles may also include balance, stability, force, and form. (PF.1.g)</u></p> <p><u>Movement concepts may include body awareness, spatial awareness, effort awareness, and relationship to/with objects, people and space or locomotor, non-manipulative, and manipulative skills. (PF.1.g)</u></p>	

Anatomical Basis of Movement

PF.2 The student will describe major body systems and explain the effects of physical activity on the systems.

- a) Describe the muscular system, including identification of the major muscles/muscle groups of the body and their function.
- b) Describe exercises/activities that increase the strength and flexibility of the muscular system.
- c) Describe the cardiovascular system, including identification of organs and their functions.
- d) Explain the effects of physical activity and training on the muscular and cardiovascular systems.

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p>The muscular system is made up of cardiac (heart beat), smooth (circulation, digestion, breathing), and skeletal (mobility, stability, posture) muscle. Smooth and cardiac muscles are involuntary and skeletal muscles are voluntary (can consciously control) (Healthline). 600 muscles in the body. Skeletal muscle major groups include (PF.2.a):</p> <ul style="list-style-type: none"> • <u>back – erector spinae, latissimus dorsi</u> • <u>chest – pectoralis major, teres major, diaphragm</u> • <u>arms and shoulders – biceps brachii, triceps brachii, trapezius, rhomboideus major and minor, pectoralis minor, pectoralis major, deltoid, rotator cuff muscles (subscapularis, supraspinatus, infraspinatus and teres minor)</u> • <u>abdominals – rectus abdominis, external oblique, internal oblique, transversus abdominus</u> • <u>legs – quadriceps (rectus femoris, vastus lateralis, vastus medialis, vastus intermedius), hamstrings (long head of the biceps femoris, short head of the biceps femoris, semitendinosus, and semimembranosus), gastrocnemius, tibialis anterior, soleus</u> • <u>buttocks – gluteus maximus, medius and minimus</u> 	<p>In order to meet these standards, it is expected that students will</p> <ul style="list-style-type: none"> • <u>identify the major muscles/muscle groups of the body and their function (PF.2.a)</u> • <u>describe exercises/activities that increase the strength and flexibility of the muscular system (PF.2.b)</u> • <u>identify the organs of the cardiovascular system and their functions (PF.2.c)</u> • <u>explain the effects of physical activity and training on the muscular and cardiovascular systems (PF.2.d)</u> <p>Additional resources: Health Smart Virginia</p>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p data-bbox="201 238 1220 354"><u>Exercises/activities that increase the strength and flexibility of the muscular system may include cycling, running, dance, push-ups, curl ups, planks, squats, lunges, lifting weights, kettlebells, resistance bands, yoga, and Pilates (PF.2.b).</u></p> <p data-bbox="201 407 1251 773"><u>The cardiovascular system is sometimes called the blood-vascular, or the circulatory system. It consists of the heart, which is a muscular pumping device, and a closed system of vessels called arteries, veins, and capillaries. Blood contained in the circulatory system is pumped by the heart around a closed circle or circuit of vessels as it passes again and again through the various "circulations" of the body. Blood carries the oxygen and nutrients the organs need to work properly; and blood also carries carbon dioxide to the lungs so that it can be released out of the body through exhaling. (NIH National Heart, Lung, and Blood Institute) (PF.2.c)</u></p> <ul data-bbox="247 786 1247 1406" style="list-style-type: none"> <li data-bbox="247 786 1247 899">• <u>Heart is located in the center of the chest, near the lungs. It has four hollow heart chambers surrounded by muscle and other heart tissue. Four chambers include</u> <ul data-bbox="296 912 1247 987" style="list-style-type: none"> <li data-bbox="296 912 741 943">o <u>Right and left atrium at the top</u> <li data-bbox="296 954 1247 987">o <u>Right and left ventricle on the bottom that pump blood out of the heart</u> <li data-bbox="247 998 1247 1112">• <u>Chambers are separated by heart valves, which make sure that the blood keeps flowing in the right direction. Valves allow blood to flow out of a chamber and close to allow the chamber to refill with blood. Valves include</u> <ul data-bbox="296 1166 1247 1406" style="list-style-type: none"> <li data-bbox="296 1166 1247 1279">o <u>Tricuspid valve separates right atrium and right ventricle - acts like a door between your atrium and ventricle to prevent blood from flowing backward into the atrium</u> <li data-bbox="296 1291 1247 1406">o <u>Pulmonary valve separates right ventricle and pulmonary artery - carries blood to the lungs to drop off carbon dioxide and pick up oxygen</u> 	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> o <u>Aortic valve separates left ventricle and aorta - carries blood to the lungs to drop off carbon dioxide and pick up oxygen</u> o <u>Mitral valve separates left atrium and left ventricle - acts like a door between atrium and ventricle to prevent blood from flowing backward into the atrium</u> • <u>Adding oxygen to blood</u> <ul style="list-style-type: none"> o <u>Oxygen-poor blood from the body enters the heart through two large veins called the superior and inferior vena cava. The blood enters the heart's right atrium and is pumped to the right ventricle which pumps the blood to the lungs.</u> o <u>The pulmonary artery then carries the oxygen-poor blood from the heart to the lungs. Lungs add oxygen to blood. The oxygen-rich blood returns to the heart through the pulmonary veins.</u> o <u>Oxygen-rich blood from the lungs then enters the left atrium and is pumped to the left ventricle. The left ventricle generates the high pressure needed to pump the blood to the whole body through blood vessels.</u> o <u>When blood leaves the heart to go to the rest of the body, it travels through a large artery called the aorta.</u> • <u>The heart is a muscle that needs blood to get oxygen and nutrients. Coronary arteries branch off from the aorta so that oxygen-rich blood is delivered to the heart as well as the rest of the body.</u> • <u>Interruptions, blockage, or diseases that affect how the heart or blood vessels pump blood can cause complications such as heart disease or stroke.</u> <p><u>Physical activity and training affect the muscular system. (PF.2.d)</u></p>	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> • <u>Aerobic exercise mainly uses slow-twitch muscles, and the availability of oxygen prevents the buildup of lactic acid. This typically does not result in substantial muscle fatigue in the short-term.</u> • <u>Anaerobic exercise mainly uses fast-twitch muscle fibers and in the short-term muscle can become fatigued and sore because of impaired blood flow, ion imbalance within the muscle, nervous fatigue, loss of desire to continue exercising, and most importantly, the accumulation of lactic acid in the muscle. Muscle soreness, once thought to be due to lactic acid accumulation, has more recently been attributed to small tearing of the muscles fibers caused by eccentric contraction.</u> • <u>Long term effects of physical activity on the muscular system includes building and strengthening muscles, which can protect the bones from injury, and supporting and protecting joints affected by arthritis. Strong muscles also give stability and improve balance and coordination. Exercise improves blood supply to the muscles and increases their capacity to use oxygen.</u> <p><u>Effects of physical activity on the cardiovascular system (Johns Hopkins) (PF.2.d).</u></p> <ul style="list-style-type: none"> • <u>Improves muscles’ ability to pull oxygen out of the blood, reducing the need for the heart to pump more blood to the muscles</u> • <u>Reduces stress hormones that can put an extra burden on the heart</u> • <u>Works like a beta blocker to slow the heart rate and lower blood pressure</u> • <u>Increases high-density lipoprotein (HDL) or “good” cholesterol and helps control triglycerides</u> • <u>Lowers blood pressure</u> • <u>Lessens risk of developing diabetes</u> • <u>Maintains healthy body weight</u> 	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<u>Reduces inflammation throughout the body</u>	

Fitness Planning

PF.3 The student will create a personal fitness and conditioning program for skill- and health-related components of fitness.

- a) Design, monitor, assess and modify a personal fitness and physical conditioning program that includes skill- and health-related fitness components to achieve and maintain a health-enhancing level of physical fitness for a lifetime.
- b) Apply principles of training (specificity, individualization, progressive overload and variation) for planning and modifying levels of physical activity in personal fitness and physical conditioning plans.
- c) Evaluate a variety of strength-training programs and design a personal strength-training program.
- d) Analyze different activities and sports for their contributions to the development of specific health- and skill-related fitness components.
- e) Use technology to assess, improve, and maintain personal health- and skill-related fitness levels.
- f) Evaluate fitness and physical conditioning programs, products, and services to become an informed consumer.
- g) Compare and evaluate competing arguments related to fitness products and services.

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>For skill- and health-related fitness components see PF.1.b (PF.3.a).</u></p> <p><u>Personal fitness/physical conditioning planning should include (PF.3.a)</u></p> <ul style="list-style-type: none"> • <u>assessing and analyzing personal fitness levels</u> • <u>setting SMART goals for improvement and/or maintenance</u> • <u>creating strategies to achieve goals and monitor progress</u> <ul style="list-style-type: none"> ○ <u>applying FITT and SOP to plan</u> • <u>making timelines to achieve goals</u> • <u>plan for reassessing, evaluating, and reflecting on progress of goals</u> • <u>revising plan strategies as needed</u> <p><u>The principles of overload, specificity and progression are highly interconnected and are reciprocally dependent on one another (PF.3.b).</u></p> <ul style="list-style-type: none"> • <u>Specificity – desired adaption occurs in response to specific stress placed upon the body; exercise/activity needs to match desired outcome</u> 	<p><u>In order to meet these standards, it is expected that students will</u></p> <ul style="list-style-type: none"> • <u>plan (assess, set goals, action steps), implement, and monitor (modify as needed) a personal fitness and physical conditioning program that includes health- and skill-related components (PF.3.a)</u> • <u>apply principles of training for personal fitness and physical conditioning plans (PF.3.b)</u> • <u>evaluate a variety of strength-training programs (PF.3.c)</u>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> • <u>Individualization – training should be adjusted according to each individual’s characteristics and needs, such as age, gender, body composition, training age, injury history, what a person is training for, what goals does the person have</u> • <u>Progressive overload – stress must be applied beyond that which the body is accustomed to; gradually increase the weight, frequency, or number of repetitions in your strength training routine</u> • <u>Progression – once the body has adapted to a level of stress, additional stress is needed; progressively or gradually increase workload</u> • <u>Variation – the manipulation of various training variables - i.e. adding variety - or a different training stimulus; change an exercise (or use a derivative of an existing exercise), manipulate load, volume (reps, sets), ROM and speed of movement</u> <p><u>Evaluate a variety of strength-training programs and design a personal strength training program</u></p> <ul style="list-style-type: none"> • <u>Strength training programs may include (PF.3.c):</u> <ul style="list-style-type: none"> ○ <u>Free weight activities</u> ○ <u>Olympic lifts</u> ○ <u>Dumbbell / kettlebell activities</u> ○ <u>Manual resistance activities</u> ○ <u>Resistance band activities</u> ○ <u>Resistance machines</u> <p><u>Sport analysis example (tennis) (PF.3.d):</u></p> <ul style="list-style-type: none"> • <u>Health-related fitness components</u> <ul style="list-style-type: none"> ○ <u>cardiorespiratory endurance – continuous sprinting/movement throughout games, sets</u> 	<ul style="list-style-type: none"> • <u>design a personal strength training program (PF.3.c)</u> • <u>analyze how different activities/sports develop health- and skill-related fitness components (PF.3.d)</u> • <u>use technology to assess, improve, and maintain personal health- and skill-related fitness levels (PF.3.e)</u> • <u>evaluate fitness and physical conditioning programs, products, and services (PF.3.f)</u> • <u>research and evaluate claims and outcomes for fitness products and services (PF.3.g)</u> <p><u>Additional resources:</u> <u>Health Smart Virginia</u></p>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> ○ <u>muscular strength and endurance – force needed for serves and strokes; strength/endurance for continuous sprinting/movement throughout games and sets, stability for continuous changing body positions</u> ○ <u>flexibility – for the different strokes, change of direction, change of speed, reach, changing body positions</u> ○ <u>body composition – overall demands of aerobic and anaerobic needs, continuous movements, changes in direction, changes in body position</u> • <u>Skill-related fitness components</u> <ul style="list-style-type: none"> ○ <u>Agility – moving quickly; quick changes of direction</u> ○ <u>Balance – stability for all body positions, for strokes and movements</u> ○ <u>Coordination – eye-hand coordination to strike an object; changing movements and body positions</u> ○ <u>Power – hitting a ball for speed, distance, placement; power needed by legs for quick movements</u> ○ <u>Reaction time – time between seeing a ball being hit by an opponent and moving to a position to strike/return the ball</u> ○ <u>Speed – change of directions and movements</u> <p><u>Technology may include (PF.3.e).</u></p> <ul style="list-style-type: none"> • <u>Heart rate monitors– 2 types: wireless chest/arm straps that use an electrical pulse to read heart rate (tend to be more accurate) and wrist-based/head phones trackers that use optical technology (light). Both can send continuous data to a monitor (watch/phone). Other heart rate monitors and technology may be available.</u> • <u>Pedometers– track steps taken by indicating each time the wearer’s hips move or some models can track foot movement via a GPS tracker or built-in sensors on your phone.</u> 	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> • <u>Accelerometers– measure acceleration; able to capture intensity of physical activity; able to distinguish between walking and running; can separate human movement from mechanical vibration such as riding in a car</u> • <u>Bioelectrical Impedance Analysis - person places hands on a device for about 20 seconds that runs a small current of electricity through the body to gauge body composition</u> • <u>Variety of applications for devices to track/monitor for progress</u> <p><u>Programs, products, and services can be evaluated for needs of an individual, intended outcomes, research-based results, medically appropriate, includes accommodations for a variety of needs, cost, time, ease of implementation, needed equipment, access to equipment/facilities, need for professional oversight or monitoring, and benefits and challenges (PF.3.f).</u></p> <p><u>Fitness products and services should be researched using multiple valid and reliable resources (online, user reviews, professionals in the field) to analyze claims and outcomes. (PF.3.g)</u></p>	

Social and Emotional Development

PF.4 The student will demonstrate social-competency skills in physical activity settings.

- a) Explain and demonstrate appropriate etiquette that exhibits respects for self and others within school and recreational fitness activity settings.
- b) Demonstrate safe practices, rules, and procedures in a physical activity setting.
- c) Explain the importance of inclusive and helpful behaviors in school and recreational fitness activity settings that promote feelings of belonging, acceptance, and value.

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>Etiquette is defined as the rules indicating the proper and polite way to behave (e.g., shaking hands/giving high fives/congratulating other team at the end of a game; wiping off equipment after use in a facility; taking turns with facility equipment; being mindful of others waiting to use equipment; appropriate clothing for activity/facility) (PF.4.a).</u></p> <p><u>Safe practices may include using appropriate safety equipment, proper skills needed for the activity and environment, weather-related concerns, proper equipment for the activity, access to guides for outdoor pursuits, specialized trainers, physical safety – use of sidewalks, traffic, bike lanes, free of debris and obstacles, lighting, and access to assistance if needed. Rules and procedures are dependent upon activities selected (PF.4.b).</u></p> <p><u>Creating an inclusive culture for physical education/school and physical activity in the community helps every student learn to lead a healthy and active lifestyle and have a sense of belonging, acceptance and value (CDC).</u></p> <ul style="list-style-type: none"> • <u>Strategies for inclusion may include modifying/adapting equipment, rules, environment, activity</u> 	<p><u>In order to meet these standards, it is expected that students will</u></p> <ul style="list-style-type: none"> • <u>explain and demonstrate appropriate etiquette for school and recreational fitness activities (PF.4.a)</u> • <u>demonstrate safe practices, rules, and procedures (PF.4.b)</u> • <u>explain the importance of inclusive and helpful behaviors in school and recreational fitness activity settings that promote feelings of belonging, acceptance, and value (PF.4.c)</u> <p><u>Additional resources:</u> Health Smart Virginia</p>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<u>Creating a welcoming/inclusive environment, one that supports, uplifts, and promotes feelings of belonging, acceptance, and value (PF.4.c).</u>	

Energy Balance

PF.5 The student will explain energy balance in relation to health-enhancing nutritional and activity practices.

- a) Analyze nutrient needs and sound nutritional practices associated with physical activity and fitness.
- b) Analyze the consequences and risks associated with an inactive lifestyle.
- c) Analyze the benefits gained from participation in strength training, conditioning, and fitness programs.
- d) Explain the role of nutrition and fitness in relation to weight management.
- e) Evaluate the risks of performance-enhancing (ergogenic) supplements.
- f) Explain the potential consequences of energy imbalance (e.g., over-exercising, under eating, overeating, sedentary lifestyle).

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>Expenditure and intake needs vary with age and physical activity levels. Refer to Dietary Guidelines for Americans for adolescent and adult guidelines for caloric expenditure and intake. Also see DRI Calculator for Healthcare Professionals tool that calculates daily nutrient recommendations based on the Dietary Reference Intakes (DRIs) established by the Health and Medicine Division of the National Academies of Sciences, Engineering and Medicine. The data represents the most current scientific knowledge on nutrient needs; however, individual requirements may be higher or lower than DRI recommendations (PF.5.a).</u></p> <p><u>According to the CDC, physical activity is one of the best things people can do to improve their health. It is vital for healthy aging and can reduce the burden of chronic diseases and prevent early death. Active people generally live longer and are at less risk for serious health problems like heart disease, type 2 diabetes, obesity, and some cancers. For people with chronic diseases, physical activity can</u></p>	<p><u>In order to meet these standards, it is expected that students will</u></p> <ul style="list-style-type: none"> • <u>analyze nutrient needs and sound nutritional practices associated with physical activity and fitness (PF.5.a)</u> • <u>analyze the consequences and risks associated with an inactive lifestyle (PF.5.b)</u> • <u>analyze the benefits gained from participation in strength training, conditioning, and fitness programs (PF.5.c)</u> • <u>explain the role of nutrition and fitness in relation to weight management (PF.5.d)</u>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>help manage these conditions and complications. Physical activity matters because (PF.5.b):</u></p> <ul style="list-style-type: none"> • <u>1 in 2 adults live with a chronic disease</u> • <u>Only half of adults get the physical activity they need to help reduce and prevent chronic diseases.</u> • <u>Getting enough physical activity could prevent 1 in 10 premature deaths.</u> • <u>Over \$100 billion annually in health care costs are associated with inadequate physical activity.</u> • <u>Physical activity has positive physical, emotional, social, and mental wellness impacts for children, adults, and healthy aging.</u> • <u>Work force impacts - Absenteeism and lost productivity from employee illness, injury, obesity or chronic conditions. One study reports that obesity alone has been estimated to cost employers almost \$2,500 per employee per year, including direct medical expenditures and absenteeism (Steps to Wellness– Physical Activity in the Workplace; CDC).</u> • <u>Building active, safe, and walkable communities may help increase retail activity and employment, increase property values, reduce health care costs, improve safety, and positively impact workforce (fewer sick days).</u> <p><u>For benefits gained from participation in strength training, conditioning, and fitness programs see PF.2.d (PF.5.c).</u></p> <p><u>According to the CDC, the key to achieving and maintaining a healthy weight isn't about short-term dietary changes. It's about a lifestyle that includes healthy eating, regular physical activity, and balancing calories consumed with the calories the body uses. When it comes to weight loss, there's no lack of fad diets promising fast results. But such diets limit nutritional intake, can be unhealthy, and tend to fail in the long run. Safe ways to help manage weight include getting</u></p>	<ul style="list-style-type: none"> • <u>evaluate the risks of performance-enhancing (ergogenic) supplements (PF.5.e)</u> • <u>explain potential consequences of energy imbalance including over-exercising, under eating, overeating, and sedentary lifestyle (PF.5.f)</u> <p><u>Additional resources:</u> <u>Health Smart Virginia</u></p>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>optimal sleep, reducing stress, maintaining healthy eating habits (eating more fruits and vegetables), and regular physical activity (PF.5.d).</u></p> <p><u>Appearance and performance enhancing drugs (APEDs) are most often used by to improve appearance by building muscle mass or to enhance athletic performance. Although they may directly and indirectly have effects on a user’s mood, they do not produce a euphoric high, which makes APEDs distinct from other drugs such as cocaine, heroin, and marijuana. However, users may develop a substance use disorder, defined as continued use despite adverse consequences. Anabolic-androgenic steroids, the best-studied class of APEDs can boost a user’s confidence and strength, leading users to overlook the severe, long-lasting, and in some cases, irreversible damage they can cause. They can lead to early heart attacks, strokes, liver tumors, kidney failure, and psychiatric problems. In addition, stopping use can cause depression, often leading to resumption of use. Because steroids are often injected, users who share needles or use nonsterile injecting techniques are also at risk for contracting dangerous infections such as viral hepatitis and HIV (NIDA) (PF.5.e).</u></p> <p><u>Energy imbalance results from consuming too many or too few calories for what is needed for daily activities. (PF.5.f)</u></p> <ul style="list-style-type: none"> • <u>Two important consequences of energy imbalance for adolescents are obesity (excessive energy intake and/or insufficient energy output) and undernutrition (insufficient intake of both calories and specific nutrients and/or excessive energy output). Note: Obesity can also be caused by genetic predisposition, family history of obesity, individual metabolism, and behavioral factors.</u> • <u>Over exercising can result in (Are you getting too much exercise?)</u> <ul style="list-style-type: none"> ○ <u>Being unable to perform at the same level</u> 	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> ○ <u>Needing longer periods of rest</u> ○ <u>Feeling tired</u> ○ <u>Being depressed</u> ○ <u>Having mood swings or irritability</u> ○ <u>Having trouble sleeping</u> ○ <u>Feeling sore muscles or heavy limbs</u> ○ <u>Getting overuse injuries</u> ○ <u>Losing motivation</u> ○ <u>Getting more colds</u> ○ <u>Losing weight</u> ○ <u>Feeling anxiety</u> ● <u>Under eating - consuming fewer calories than their body needs to function correctly. This can have a severe impact on energy levels, causing feelings of physical tiredness and mental fatigue, which may impair a person’s daily functioning. (Nine signs and symptoms of under eating)</u> ● <u>Overeating may (7 Harmful Effects of Overeating)</u> <ul style="list-style-type: none"> ○ <u>Promote excess body fat</u> ○ <u>Disrupt hunger regulation</u> ○ <u>Increase disease risk</u> ○ <u>Impair brain function</u> ○ <u>Cause nausea and indigestion</u> ○ <u>Cause excessive gas and bloating</u> ○ <u>Cause sleepiness (sluggish or tired)</u> ● <u>Sedentary lifestyle can increase all causes of mortality, double the risk of cardiovascular diseases, diabetes, and obesity, and increase the risks of colon cancer, high blood pressure, osteoporosis, lipid disorders, depression and anxiety. (Physical inactivity a leading cause of disease and disability, warns WHO)</u> 	

FITNESS INSTRUCTOR (ELECTIVE)

The purpose of the Fitness Instructor elective course is to provide students with the knowledge, skills, and experience needed to become certified in personal training, strength and physical conditioning, group fitness, or in other health fitness specialty areas. Students will learn to develop individualized programs with goals that are based on factors that affect one's overall health, including genetic and chronic health conditions, sports injuries, age and gender, level of fitness, and lifestyle factors. Students will gain knowledge and skills to help improve posture, movement, flexibility, balance, core function, cardiorespiratory fitness, and muscular endurance and strength. Students will learn business skills, including effective communication, leadership skills, marketing strategies, consumer advocacy, résumé writing, and interviewing skills. Students will also earn a certification in CPR and AED.

Motor Skill Development

FL.1 The student will demonstrate mastery of the movement skills and patterns used to perform a variety of strength-training, conditioning, and fitness activities.

- a) Demonstrate correct movement skills and patterns for strength-training, physical conditioning, and fitness activities.
- b) Analyze movement activities for component skills and movement patterns.
- c) Describe and demonstrate activities specific to improving the skill-related components of fitness.
- d) Define and identify *activities of daily living* (ADL) as the tasks of everyday life.
- e) Apply movement skills and patterns to functional fitness activities that support ADL.
- f) Identify and describe advanced resistance-training techniques.
- g) Apply principles of exercise progression to improve fitness.
- h) Demonstrate correct and safe techniques and form when performing strength-training, physical conditioning, and fitness activities and exercises.
- i) Demonstrate the proper use of fitness equipment, selectorized weight machines, and free weights.
- j) Demonstrate safety protocols and procedures for strength-training, physical conditioning, and fitness activities.
- k) Identify contraindications to advanced resistance-training techniques.
- l) Identify and describe factors that influence participation in physical activity and adherence to an exercise program.
- m) Explain principles that result in behavior change.
- n) Describe psychological factors that may influence a person's adherence to an exercise program.
- o) Identify and apply strategies to increase adherence in an exercise program.

- p) Explain the role of the personal trainer in promoting an individual’s adherence to an exercise program.
- q) Identify and explain considerations for special populations.

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>Strength training activity skills may include (FI.1.a):</u></p> <ul style="list-style-type: none"> • <u>Free weight activities</u> • <u>Olympic lifts</u> • <u>Dumbbell / kettlebell activities</u> • <u>Manual resistance activities</u> • <u>Resistance band activities</u> • <u>Resistance machines</u> <p><u>Physical conditioning and fitness activities may include (FI.1.a):</u></p> <ul style="list-style-type: none"> • <u>Speed and agility activities</u> • <u>Endurance activities</u> • <u>Flexibility activities</u> • <u>Plyometric activities</u> <p><u>Component skills and movement patterns may include (FI.1.b):</u></p> <ul style="list-style-type: none"> • <u>Squat</u> • <u>Lunge</u> • <u>Push</u> • <u>Pull</u> • <u>Bend</u> • <u>Twist</u> <p><u>Skill-related fitness components (FI.1.c).</u></p> <ul style="list-style-type: none"> • <u>Agility – ability to move with quick easy grace; quick change of direction</u> • <u>Balance – stability produced by even distribution of weight; muscles tense to keep the body in a balanced position</u> • <u>Coordination – harmonious functioning of parts for effective results; it takes eye hand coordination to strike an object</u> 	<p><u>In order to meet these standards, it is expected that students will</u></p> <ul style="list-style-type: none"> • <u>demonstrate correct movement skills and patterns for strength-training, physical conditioning, and fitness activities (FI.1.a)</u> • <u>use video to analyze movement activities for component skills and movement patterns (FI.1.b)</u> • <u>describe and demonstrate activities specific to improving skill-related components of fitness (FI.1.c)</u> • <u>define and identify <i>activities of daily living</i> (ADL) (FI.1.d)</u> • <u>apply movement skills and patterns to functional fitness activities that support ADL (FI.1.e)</u> • <u>identify and describe advanced resistance-training techniques (FI.1.f)</u> • <u>apply principles of exercise progression to improve fitness (FI.1.g)</u> • <u>demonstrate correct and safe techniques and form when performing strength-training, physical conditioning, and fitness activities and exercises (FI.1.h)</u>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> • <u>Power – physical might, ability to act or produce an effect; kicking a ball for distance</u> • <u>Reaction time – the time required for a subject to initiate a prearranged response to a defined stimulus; time between hearing a whistle and starting to run or time between seeing a ball being thrown to a place out of reach and moving to catch it</u> • <u>Speed – rate of motion, ability to move swiftly</u> <p><u>Activities of Daily Living (ADL): basic tasks of everyday life, such as eating, bathing, dressing, and transferring (FI.1.d).</u></p> <p><u>Movement skills and patterns used in ADL include (FI.1.e):</u></p> <ul style="list-style-type: none"> • <u>Bending/raising and lifting/lowering movements (e.g. squatting)</u> • <u>Single-leg movements</u> • <u>Pushing movements in vertical/horizontal planes and resultant movement</u> • <u>Pulling movements in vertical/horizontal planes and resultant movement</u> • <u>Rotational movements</u> <p><u>Advanced resistance-training techniques may include (FI.1.f):</u></p> <ul style="list-style-type: none"> • <u>Olympic lifts: two exercises, the snatch and the clean and jerk, performed in the modern Olympic program</u> • <u>Plyometric exercises: a system of exercise in which the muscles are repeatedly stretched then suddenly contracted; explosive exercise used to develop muscular power such as chops, throws, push-ups, twists, jumps (depth jumps, multiple jumps, lateral jumps)</u> • <u>Pyramid training: training methodology in which high repetition, lower weight sets are paired with high weight, lower repetition sets</u> <ul style="list-style-type: none"> ○ <u>Ascending– weight is increased and repetitions decrease each set</u> ○ <u>Descending– weight is decreased and repetitions increase each set</u> ○ <u>Triangle– weight increases as reps decrease, then weight decreases as reps increase each set</u> 	<ul style="list-style-type: none"> • <u>demonstrate proper use of fitness equipment, selectorized weight machines, and free weights (FI.1.i)</u> • <u>demonstrate safety protocols and procedures for strength-training, physical conditioning, and fitness activities (FI.1.j)</u> • <u>identify contraindications to advanced resistance-training techniques (FI.1.k)</u> • <u>identify and describe factors that influence participation in physical activity and adherence to an exercise program (FI.1.l)</u> • <u>explain principles that result in behavior change (FI.1.m)</u> • <u>describe psychological factors that may influence a person’s adherence to an exercise program (FI.1.n)</u> • <u>identify and apply strategies to increase adherence in an exercise program (FI.1.o)</u> • <u>explain the role of the personal trainer in promoting an individual’s adherence to an exercise program (FI.1.p)</u> • <u>select one or more special populations and identify and explain considerations for exercise/physical activity (FI.1.q)</u> <p><u>Additional resources:</u></p>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> • <u>Super sets: performing multiple exercises with little to no rest between</u> <ul style="list-style-type: none"> ○ <u>Compound sets– two+ exercises for same muscle group performed in succession</u> ○ <u>Isolation sets– exercises for two different muscle groups combined in superset</u> <p><u>Principle of Progression: to effectively improve fitness, an individual must apply an optimal level of overload within a certain time period (FI.1.g)</u></p> <ul style="list-style-type: none"> • <u>Active Recovery: low intensity activities completed during recovery periods to speed up recovery process</u> • <u>Passive Recovery: completely resting during scheduled recovery periods</u> • <u>Ten Percent Rule: To meet optimal levels of overload, it is recommended to increase frequency, intensity, or duration by no more than 10% per week.</u> <p><u>Correct and safe techniques and form when performing strength-training, physical conditioning, and fitness activities and exercises should include consistent, correct performance of all critical elements and safety practices for skills and activities (FI.1.h).</u></p> <p><u>Proper use of fitness equipment, selectorized weight machines, and free weights may include following manufacturer guidelines, classroom procedures and protocols (for use and cleaning), and using equipment for intended purpose only (FI.1.i).</u></p> <p><u>Safety protocols and procedures for strength-training, physical conditioning, and fitness activities include proper form, technique, and use and following classroom procedures (FI.1.j).</u></p> <p><u>Contraindication is any condition that renders some particular movement, activity, or treatment improper or undesirable. Contraindications for participation in advanced resistance training may include (FI.1.k):</u></p> <ul style="list-style-type: none"> • <u>Pain</u> 	<p><u>SHAPE America National Standards and Grade-Level Outcomes</u></p> <p><u>OPEN Online Physical Education Network</u></p> <p><u>Health Smart Virginia</u></p> <p><u>PE Central</u></p> <p><u>Dynamic PE ASAP</u></p>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> • <u>Inflammation</u> • <u>Severe cardiac diseases</u> • <u>Cardiac symptoms such as chest pain (angina) or arrhythmias</u> • <u>Hypertension > 160/105</u> • <u>Inability to perform basic resistance-training techniques</u> • <u>Lack of muscular strength (Squat 1RM of less than 1.5 times body weight; Bench press 1RM of less than 1-1.5 times body weight)</u> • <u>Low levels of skill-related fitness</u> • <u>Deconditioned</u> <p><u>Factors that may influence participation in physical activity and adherence to an exercise program may include (FI.1.1):</u></p> <ul style="list-style-type: none"> • <u>Personal Attributes:</u> <ul style="list-style-type: none"> ○ <u>Activity history- past program participation is the most reliable predictor of current participation</u> ○ <u>Demographic variables– adherence is related to education, income, age, and gender; lower activity levels are seen in individuals with older age, lower education, and lower income; men demonstrate more adherence to exercise programs than women</u> ○ <u>Health perception– an individual’s perception of their own health is a factor in exercise adherence as individuals that perceive themselves to be healthier tend to demonstrate more adherence</u> ○ <u>Health status– individuals with chronic illness are less likely to adhere to an exercise program</u> ○ <u>Knowledge, attitudes, beliefs– the more knowledge an individual has, the more likely they will adhere to an exercise program; individuals with an internal locus of control, or belief that internal</u> 	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>or personal factors control events or outcomes, are more likely to adhere to an exercise program</u></p> <ul style="list-style-type: none"> • <u>Environmental Factors:</u> <ul style="list-style-type: none"> ○ <u>Access to facilities– an individual is more likely to adhere to an exercise program if the facility is conveniently located near a person’s home or work</u> ○ <u>Time– individuals that have the perception that there is not enough time to participate in physical activity is less likely to adhere to an exercise program</u> ○ <u>Social support– individuals with support from family and friends are more likely to adhere to an exercise program</u> • <u>Physical-Activity Factors:</u> <ul style="list-style-type: none"> ○ <u>Intensity– individuals participating in vigorous intensity exercises are much more likely to drop out of the physical activity program; individuals participating in moderate intensity programs are more likely to adhere to the exercise program</u> ○ <u>Injury– individuals that experience injury are less likely to adhere to an exercise program</u> • <u>Feedback:</u> <ul style="list-style-type: none"> ○ <u>Intrinsic– information individuals provide to themselves based on their own sensory systems; adherence to an exercise program is dependent on intrinsic feedback</u> ○ <u>Extrinsic– feedback provided from outside sources, including coaches or other fitness professionals; early in an exercise program, extrinsic feedback is key to program adherence</u> <p><u>Transtheoretical Model of Behavior Change Stages of Change (FI.1.m):</u></p> <ul style="list-style-type: none"> • <u>Precontemplation – unaware that a behavior change is needed</u> • <u>Contemplation – considering a behavior change</u> 	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> • <u>Preparation – starting behavior change; inconsistent patterns of change</u> • <u>Action – consistent behavior change; <6 months after starting change</u> • <u>Maintenance – regular change in behavior; change becomes part of lifestyle; >6 months after starting change</u> <p><u>Psychological factors that may influence a person’s adherence to an exercise program may include (FI.1.n):</u></p> <ul style="list-style-type: none"> • <u>Motivation– an individual’s motivation correlates with their adherence to an exercise program</u> • <u>Self-motivation– reflective of one’s ability to set goals, monitor progress, and self-reinforce, shows a positive relationship with adherence to an exercise program</u> • <u>Self-efficacy- an individual’s belief in his or her capacity to execute behaviors necessary to produce specific performance attainments; individuals with high levels of self-efficacy are more likely to adhere to an exercise program.</u> <p><u>Processes of Change: providing a process to move from one stage to the next; interventions necessary (ACE TTM) (FI.1.n).</u></p> <ul style="list-style-type: none"> • <u>Self-Efficacy: development of the belief that an individual can master the behavior change</u> • <u>Decisional Balance: development of an understanding that the behavior change will benefit the individual</u> • <u>Operant Conditioning: process by which behaviors are influenced by their consequences (positive and negative)</u> • <u>Shaping: process of using reinforcements to gradually achieve a target behavior</u> • <u>Observational Learning: learning which occurs through observing the behaviors of others</u> 	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> • <u>Cognitions and Behavior: The influence a person’s beliefs have on their behaviors</u> <p><u>Adherence Strategies (FI.1.o)</u></p> <ul style="list-style-type: none"> • <u>Stimulus Control: making adjustments to the environment to increase the likelihood of engagement in a behavior (e.g. changing schedule to include workout times, laying out exercise clothes before bed, choosing a fitness location between home and school/work)</u> • <u>Written Agreements and Behavior Contracting: specific written agreements which outline roles and behaviors of all involved in the behavior change</u> • <u>Individualized Goal Setting: goals must be effectively written and tailored to the individual to elicit changes in behavior (e.g. SMART goal)</u> <p><u>Personal trainer can promote an individual’s adherence to an exercise program through program design; effective communication and role clarity; goal setting; and developing contracts or agreements (FI.1.p).</u></p> <p><u>Considerations for special populations may include the following. NOTE: All individuals must obtain physician clearance before beginning any exercise program; (FI.1.q):</u></p> <ul style="list-style-type: none"> • <u>Arthritis– focus on duration rather than intensity, ensure proper body alignment and exercise technique, put all joints through full range of motion (ROM) at least once daily; avoid exercise during periods of inflammation for rheumatoid arthritis patients</u> • <u>Asthma– medical clearance; ensure rescue medication at all times; avoid asthma triggers prior to exercise; gradual and prolonged warm-up and cool down; gradually increase intensity</u> • <u>Cancer– obtain physician clearance before any exercise program; gradual build-up focusing more on duration than intensity; light to moderate intensity; resistance-training activities utilizing low weights for 10-15</u> 	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>repetitions; proper warm-up and cool down; individuals with low white blood cell counts should avoid exercising in public gyms; encourage proper nutrition and hydration; monitor for swollen ankles, unexplained weight gain, and/or shortness of breath at rest or with limited exertion; people should not exercise within two hours of chemotherapy or radiation.</u></p> <ul style="list-style-type: none"> • <u>Cardiovascular disease– all individuals with coronary artery disease (CAD) should have a physician-supervised maximal graded exercise test to determine functional capacity to establish safe exercise levels; heart rates should not exceed training targets, Rating of Perceived Exertion (RPE) should not exceed 11-14 on the Borg scale (6-20 scale).</u> • <u>Chronic Fatigue Syndrome– use a 1:3 exercise to rest ratio; limit deconditioned individuals to ADL; develop low-intensity activities</u> • <u>Diabetes– monitor blood glucose levels and avoid exercise if fasting glucose levels are ≥ 250 mg/dL and ketosis is present or if blood glucose levels are > 300 mg/dL and no ketosis is present; avoid injecting insulin into the primary muscle groups that will be used during exercise; avoid exercise during peak insulin activity; exercise at the same time daily to establish a consistent routine; ensure that individuals with diabetes exercise with a partner and wear a medical ID; focus on hydration</u> • <u>Dyslipidemia– individuals with dyslipidemia may also have other risk factors for cardiovascular diseases; fitness professionals should follow physician recommendations in the development of an exercise plan; individuals that do not exhibit any other risk factors may follow age-specific guidelines</u> • <u>Fibromyalgia– discuss exercise goals and obtain medical clearance from physician prior to starting an exercise program; low-impact, low intensity</u> 	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>activities (9-13 RPE on Borg scale) with intensity levels lowered during periods of flare-up; warm-water exercise is especially beneficial</u></p> <ul style="list-style-type: none"> • <u>Hypertension– participation in 30 minutes of regular exercise five times per week; aerobic activities supplemented with low-intensity resistance-training; avoid isometric training and teach proper technique and breathing; monitor blood pressure during and after bouts of exercise</u> • <u>Low-back pain– specific low-back exercises supplemented with aerobic activity for cardiorespiratory health; ensure proper form and alignment; focus on good posture</u> • <u>Metabolic syndrome– medical clearance prior to starting a program; exercise program should be designed around guidelines for treatment of overweight and obese individuals; aerobic modes of activity including walking, elliptical training/ergometers, stationary cycling, and other non-weight bearing activities such as aquatic exercise are recommended</u> • <u>Older adults– decrease in maximum heart rate, muscle mass, basal metabolic rate, balance, and coordination are common in older adults; older adults should consult a physician prior to starting an exercise program; older adults without other underlying factors can follow age-specific guidelines</u> • <u>Osteoporosis– weight bearing and resistance activities with intensities that stimulate bone adaptation; avoid spinal flexion, jumping, high-impact aerobics, abducting or adducting legs against resistance</u> • <u>Peripheral Vascular Disease (PVD)– complete medical evaluation with a medical professional; walking that is short in duration and includes multiple opportunities for rest; general, non-impact conditioning activities with an RPE of 9-13 on the Borg scale</u> 	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> • <u>Pre and postnatal– pregnant women with preeclampsia, vaginal bleeding, premature rupture of membranes, or risk factors for pre-term labor should not exercise;</u> • <u>Pregnant women who have a doctor’s permission to exercise should follow the following guidelines:</u> <ul style="list-style-type: none"> ○ <u>use light to moderate intensity; avoid activities that require extensive running, hopping, skipping, jumping, or bouncing, deep knee bends, full sit-ups, double-leg raises, and contact sports; women should obtain medical clearance to begin exercise postpartum, and should begin slowly and work to increase duration</u> • <u>Stroke– focus on optimizing activities of daily living (ADL) to regain balance, coordination, and functional independence; light to moderate intensity activities focusing on gait, balance, and coordination such as walking, bicycle ergometer, water, and weight-supported treadmill activities</u> • <u>Weight Management– low to moderate levels of intensity; dose-response relationship states the more exercise done the greater the response; recommended at least 150-200 minutes of physical activity/week</u> <p><u>Youth– obtain medical clearance and parental consent; proper supervision; ensure facility is safe for children prior to use; avoid single maximal lifts or sudden explosive movements; avoid competition with children; teach children how to breathe properly; allow for appropriate rest (at least two minutes between each exercise); encourage nutrition, hydration, and proper communication</u></p>	

Anatomical Basis of Movement

FI.2 The student will apply knowledge of anatomy and movement principles and concepts to skill performance in strength training, conditioning, and fitness activities.

- a) Identify the planes of motion and types of movement that occur in the frontal, sagittal, and transverse planes.
- b) Define common anatomical terms.
- c) Identify the major bones of the skeletal system.
- d) Identify and describe the types of joints, including hinge and multiaxial (ball and socket).
- e) Explain muscle structure and function, including major muscles of the body, terms related to muscles, and muscle origins and insertions.
- f) Explain movements that result based on muscle origin and insertion.
- g) Explain how muscles contract, including agonist and antagonist movements in relation to muscle contraction.
- h) Identify and explain curvatures of the spine.
- i) Perform and analyze postural evaluation of another individual.
- j) Perform and analyze movement evaluation for stability and mobility of the joints of another individual.
- k) Perform and analyze flexibility evaluation of another individual.
- l) Perform and analyze balance and core-strength evaluations of another individual.
- m) Identify contraindications to assessments of movement.
- n) Perform assessments to evaluate the health-related components of fitness.
- o) Perform assessments to evaluate the skill-related components of fitness.
- p) Identify contraindications to health-related and skill-related fitness assessments.
- q) Identify and explain different methods for determining body composition.
- r) Explain the benefits and challenges of different methods for determining body composition.
- s) Differentiate between recommendations for physical activity and training principles to meet goals for general health benefits, weight management, fitness improvements, and athletic performance enhancement.
- t) Explain the effects of acute and chronic exercise on aerobic and anaerobic energy systems.
- u) Explain the body's response to cardiorespiratory exercise.
- v) Explain the body's response to resistance training.
- w) Explain the body's response to warm-up and cool-down.
- x) Explain blood-pressure response related to acute exercise, chronic exercise, and changes in posture.

- y) Explain reversibility or deconditioning and the effect on fitness and performance.
- z) Define common musculoskeletal injuries.
- aa) Compare and contrast muscle fatigue and delayed onset muscle soreness (DOMS) with musculoskeletal injury/overuse.
- bb) Explain inflammatory response and the healing process.
- cc) Identify and describe upper-extremity injuries.
- dd) Identify and describe lower-extremity injuries.
- ee) Identify and explain exercise modifications appropriate when participant is injured.

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>Planes of motion and types of movement that occur in each plane (FI.2.a).</u></p> <ul style="list-style-type: none"> • <u>Sagittal plane is a vertical plane passing from the rear (posterior) to the front (anterior) dividing the body into left and right halves. It is also known as the anteroposterior plane. Most sport and exercise movements that are almost two-dimensional, forward and backward movements, such as running and long jumping, take place in this plane. Flexion and extension take place in the sagittal plane.</u> • <u>Frontal plane is also vertical and passes from left to right, dividing the body into posterior and anterior halves. It is also known as the coronal or the mediolateral plane. Abduction and adduction is often in the frontal plane; side-to-side movements.</u> • <u>Transverse/horizontal plane divides the body into top (superior) and bottom (inferior) halves. Twisting movements; any time there is rotation in a joint.</u> <p><u>Anatomical terms (FI.2.b):</u></p> <ul style="list-style-type: none"> • <u>Abduction– movements away from the midline of the body</u> • <u>Adduction– movements toward the midline of the body</u> • <u>Circumduction– a combination of flexion, extension, abduction, and adduction; circular movement; performed at shoulder, hip, wrist, and ankle (e.g. tennis overhead serve)</u> 	<p><u>In order to meet these standards, it is expected that students will</u></p> <p><u>Additional resources:</u> Health Smart Virginia</p>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> • <u>Distal</u>– distant from the main mass of the body (e.g. the hands are at the distal end of the arms) • <u>Dorsiflexion</u>– flexion of the ankle joint in an upward direction • <u>Extension</u>– movement which increases the angle between the bones of a joint • <u>External Rotation</u>– rotation away from the center of the body • <u>Flexion</u>– movement which decrease the angle between the bones of a joint • <u>Hyperextension</u>– extension which increases the angle between bones of a joint to a point which is greater than normal • <u>Inferior</u>– low, or lower in body position • <u>Internal Rotation</u>– rotation towards the center of the body • <u>Lateral</u>– furthest away from the midline of the body (e.g. the lateral collateral ligament of the knee is on the outside of the knee) • <u>Medial</u>– closest to the midline of the body (e.g. the medial collateral ligaments of the knee is on the inside of the knee) • <u>Plantar flexion</u>– flexion of the ankle joint in a downward direction • <u>Pronation</u>– internal rotation of the forearm or foot; pronation of the forearm/wrist will result in the thumb being medial; pronation of the foot will result in weight being borne on the medial part of the foot • <u>Proximal</u>– closest to the main mass of the body (e.g. the shoulder joint is at the proximal end of the arms) • <u>Rotation</u>– movement around a central axis • <u>Superior</u>– high, or higher in body position • <u>Supination</u>– external rotation of the forearm or foot; supination of the forearm/wrist will result in the thumb being lateral (carrying a cup of soup); supination of the foot will result in weight being borne on the lateral part of the foot. <p><u>Major bones of the skeletal system (FI.2.c):</u></p>	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> • <u>Skull – cranium, mandible, maxilla</u> • <u>Shoulder girdle – clavicle, scapula</u> • <u>Arm – humerus, radius, ulna</u> • <u>Hand – carpals, metacarpals, phalanges</u> • <u>Chest – sternum, ribs</u> • <u>Spine – cervical vertebrae (7), thoracic vertebrae (12), lumbar vertebrae (5), sacrum (5 vertebrae fused together), coccyx</u> • <u>Pelvis – ilium, ischium, pubis</u> • <u>Leg – femur, tibia, fibula, patella</u> • <u>Ankle – talus, calcaneus</u> • <u>Foot – tarsals, metatarsals, phalanges</u> <p><u>Types of joints (FI.2.d):</u></p> <ul style="list-style-type: none"> • <u>Hinge – joint in which movement is restricted to only one plane; allows for flexion/extension movements; e.g. elbow, knee</u> • <u>Multiaxial (ball and socket) – joint in which a spherical head lies in a socket, allowing for multidirectional movement; allows for flexion/extension, abduction/adduction, and rotation movements; e.g. shoulder, hip</u> • <u>Pivot - cervical vertebrae allows head to move side to side; radius and ulna and humerus allow for twist motion (movement of arm for forehand and backhand swing); movement - rotation of one bone around another</u> <p><u>Muscles function to produce force and motion; muscles move bones by working in pairs; and muscles provide stability by tensing to keep the body in a balanced position (FI.2.e).</u></p> <ul style="list-style-type: none"> • <u>Muscle structure</u> <ul style="list-style-type: none"> ○ <u>Actin– thin protein filament that works with Myosin to cause muscles to contract</u> ○ <u>Epimysium– connective tissue surrounding muscle</u> 	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> ○ <u>Fasciculi</u>– bundles of muscle fibers ○ <u>Motor Neuron</u>– a nerve cell that causes the muscles to produce movement ○ <u>Motor Units</u>– one motor neuron and all of the muscle fibers that it innervates ○ <u>Muscle fibers</u>– cylindrical muscle cell that contracts when stimulated ○ <u>Myofibril</u>– contractile unit of a muscle fiber, containing contractile proteins actin and myosin ○ <u>Myosin</u>– Thick protein filament that works with Actin to cause muscle contraction ○ <u>Sarcomere</u>– functional segment of a myofibril which shorten in a concentric muscle contraction ○ <u>Sliding Filament Theory</u> - Method by which muscles contract; Release of energy causes Myosin filaments to pull Actin filaments and the Z line inwards toward the H zone of the sarcomere to cause muscle to contract and generate force • <u>Major muscles of the body (FI.2.e):</u> <ul style="list-style-type: none"> ○ <u>The muscular system is made up of cardiac (heart beat), smooth (circulation, digestion, breathing), and striated or skeletal (mobility, stability, posture) muscle. Smooth and cardiac muscles are involuntary and skeletal muscles are voluntary (can consciously control) (Healthline). 600 muscles in the body.</u> ○ <u>Skeletal muscle major groups include</u> <ul style="list-style-type: none"> ▪ <u>back – erector spinae, latissimus dorsi</u> ▪ <u>chest – pectoralis major, teres major, diaphragm</u> ▪ <u>arms and shoulders – biceps brachii, triceps brachii, trapezius, rhomboideus major and minor, pectoralis minor,</u> 	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>pectoralis major, deltoid, rotator cuff muscles (subscapularis, supraspinatus, infraspinatus and teres minor)</u></p> <ul style="list-style-type: none"> ▪ <u>abdominals – rectus abdominis, external oblique, internal oblique, transversus abdominus</u> ▪ <u>legs – quadriceps (rectus femoris, vastus lateralis, vastus medialis, vastus intermedius), hamstrings (long head of the biceps femoris, short head of the biceps femoris, semitendinosus, and semimembranosus), gastrocnemius, tibialis anterior, soleus</u> ▪ <u>buttocks – gluteus maximus, medius and minimus</u> <ul style="list-style-type: none"> • <u>Terms related to muscles (FL.2.e):</u> <ul style="list-style-type: none"> ○ <u>Agonist Muscle - muscle causing body to move (e.g. biceps brachii in a biceps curl movement)</u> ○ <u>Antagonist Muscle - muscle lengthening causing body to move (e.g., triceps brachii in a biceps curl movement)</u> ○ <u>Atrophy - decrease in muscle mass</u> ○ <u>Concentric Contraction - contraction in which force causes muscle to shorten and change angle of a joint</u> ○ <u>Eccentric Contraction - muscle elongates while under tension due to an opposing force greater than the muscle generates</u> ○ <u>Hypertrophy - increase in muscle mass</u> ○ <u>Hyperplasia - increase the number of muscle cells present in tissue</u> ○ <u>Insertion - distal attachment point of a muscle; tends to be the more mobile structure of which the muscle is attached</u> ○ <u>Isometric Contraction - muscular force precisely matches the load, and no movement results</u> 	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> ○ <u>Origin - proximal attachment point of a muscle; tends to be the more stationary structure of which the muscle is attached</u> <p><u>Movements result based on muscle origin and insertion - when muscle contracts, the attachment points are pulled closer together; when it relaxes, the attachment points move apart. (e.g., the point of origin of the biceps brachii is the scapula, which stays stationary while the biceps contracts, while the point of insertion is the radius, which is moved to reduce the angle of the elbow when the biceps contracts) (FI.2.f).</u></p> <p><u>Muscles can pull bones, they cannot push bones so muscles work in pairs - agonist muscle (muscle causing body to move; e.g. biceps brachii in a biceps curl movement) and antagonist muscle (muscle lengthening causing body to move; e.g. triceps brachii in a biceps curl movement) (FI.2.g).</u></p> <p><u>Curvatures of the spine include (FI.2.h):</u></p> <ul style="list-style-type: none"> • <u>Kyphosis – excessive outward curvature of the spine which causes a hunching of the back</u> • <u>Lordosis – excessive inward curvature of the spine</u> • <u>Scoliosis – abnormal lateral curvature of the spine</u> <p><u>Muscle Imbalances:</u></p> <ul style="list-style-type: none"> • <u>Kyphosis/lordosis:</u> <ul style="list-style-type: none"> ○ <u>Facilitated/hypertonic (shortened): hip flexors, lumbar extensors, anterior chest/shoulders, latissimus dorsi, neck extensors</u> ○ <u>Inhibited (lengthened) – hip extensors, external obliques, upper-back extensors, scapular stabilizers, neck flexors</u> • <u>Flat back:</u> 	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> ○ <u>Facilitated/hypertonic (shortened): rectus abdominus, upper-back extensors, neck extensors, ankle plantarflexors</u> ○ <u>Inhibited (lengthened): iliacus/psoas major, internal oblique, lumbar extensors, neck flexors</u> • <u>Sway back:</u> <ul style="list-style-type: none"> ○ <u>Facilitated/hypertonic (shortened): hamstrings, upper posterior obliques, lumbar extensors, neck extensors</u> ○ <u>Inhibited (lengthened): iliacus/psoas major, rectus femoris, external oblique, upper back extensors, neck flexors</u> <p>Postural evaluations may include the Plumb Line Assessment (FI.2.i)</p> <p><u>Plumb Line Assessment: A static assessment in which a fitness professional/observer uses a centered line to look at alignment in the frontal, sagittal, and transverse planes to note asymmetries.</u></p> <ul style="list-style-type: none"> • <u>Frontal Plane</u> <ul style="list-style-type: none"> ○ <u>Anterior view: Position the plumb line with the feet equidistant from line, using the inside of heels as a point of reference; an individual with good posture will have the line pass equidistant between the feet and ankles and will intersect the pubis, umbilicus, sternum, chin, maxilla (face), and forehead.</u> ○ <u>Posterior view: Position the plumb line behind the client with the line equidistant from the inside of the heels; an individual with good posture will have the line bisecting the sacrum and overlapping with the spinous processes of the vertebrae.</u> • <u>Sagittal Plane</u> <ul style="list-style-type: none"> ○ <u>Position the individual between the plumb line and a wall with individual facing sideways and line immediately anterior to the lateral malleolus (ankle); with good posture, the plumb line will pass through the anterior</u> 	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>third of the knee, the greater trochanter of the femur, and the acromioclavicular joint, and will pass slightly anterior to the mastoid process of the temporal bone (in line with, or slightly behind the earlobe).</u></p> <p><u>Postural Deviations</u></p> <p>1- <u>Ankle pronation/supination and the effect on tibial and femoral rotation</u></p> <ul style="list-style-type: none"> - <u>Pronation with internal rotation: places additional stresses on knee ligaments; eversion of calcaneus; tightens calf muscles and may limit dorsiflexion</u> - <u>Supination with external rotation: tightness of gluteal muscles</u> <p>2- <u>Hip adduction</u></p> <ul style="list-style-type: none"> - <u>Progressively lengthens and weakens adductor muscles</u> <p>3- <u>Pelvic tilting</u></p> <ul style="list-style-type: none"> - <u>Anterior pelvic tilt: indicative of tight hip flexors and erector spinae muscles; indicative of a sedentary lifestyle</u> - <u>Posterior pelvic tilt: indicative of an overdominant rectus abdominus and tight hamstrings</u> <p>4- <u>Shoulder positioning and the thoracic spine</u></p> <ul style="list-style-type: none"> - <u>Non-level shoulders: indicative of tight upper trapezius muscles, levator scapulae, rhomboids</u> - <u>Asymmetry to midline: indicative of tight lateral trunk flexors</u> - <u>Protracted (forward and rounded shoulders): indicates tight serratus anterior, anterior scapulo-humeral muscles, and upper trapezius</u> - <u>Medially rotated humerus: indicates tightness in pectoralis major, latissimus dorsi, and subscapularis</u> - <u>Kyphosis and depressed chest: indicates tightness in shoulder adductors, pectoralis minor, rectus abdominus, and internal obliques</u> <p>5- <u>Head position</u></p>	

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<ul style="list-style-type: none"> - <u>Forward head position (ear forward of acromioclavicular joint or cheekbone anterior to collarbone in sagittal view): indicates tightness in cervical spine extensors, upper trapezius, and levator scapulae</u> <p><u>Movement evaluation for stability and mobility of various joints may include the following: (FI.2.j).</u></p> <p><u>Bend and lift screen: The individual will bend and lift at the ankle, knee, and hip to pick up two dowels/broomsticks from the floor, measuring symmetrical lower-body extremity mobility and stability and upper-body stability</u></p> <ul style="list-style-type: none"> - <u>Lack of foot stability indicates tight soleus, lateral gastrocnemius, and peroneals; indicates weak medial gastrocnemius, gracilis, Sartorius, and tibialis group.</u> - <u>Inward moving knees indicate tight hip adductors and tensor fascia latae; indicate weak gluteal muscles.</u> - <u>Lateral shifting to one side indicates a dominance and muscle imbalance due to potential lack of stability in lower extremity during joint loading.</u> - <u>Heels lifting from floor indicates tight plantar flexors.</u> - <u>Movement being initiated at the knees indicates quadriceps and hip flexor dominance and insufficient activation of gluteal muscles.</u> - <u>Being unable to achieve parallel between tibia and torso indicates poor mechanics and a lack of dorsiflexion due to tight plantar flexors.</u> - <u>Hamstrings contacting calves indicates muscle weakness and poor mechanics.</u> 	

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<ul style="list-style-type: none"> - <u>Excessively arched back indicates tightness in hip flexors, back extensors, and latissimus dorsi; indicates weakness in rectus abdominus, gluteal muscles, and hamstrings.</u> - <u>Rounded back indicates tightness in latissimus dorsi, teres major, pectoralis major and minor muscles; indicates weakness in upper back extensors.</u> - <u>Downward-facing head indicates increased hip and trunk flexion.</u> - <u>Upward-facing head indicates compression and tightness in cervical extensor region.</u> <p><u>Hurdle step screen: The individual will step and raise one heel to and over a string placed at a height of the middle of the tibia to assess the mobility of one limb and the stability of the contralateral limb, while maintain hip and torso stabilization</u></p> <ul style="list-style-type: none"> - <u>Lack of foot stability indicates tight soleus, lateral gastrocnemius, and peroneals; indicates weak medial gastrocnemius, gracilis, Sartorius, tibialis group, gluteal group; indicates inability to control internal rotation.</u> - <u>Inward moving knees indicate tight hip adductors and tensor fascia latae; indicate weak gluteal muscles.</u> - <u>Hip adduction indicates tight hip adductors and tensor fascia latae; indicates weak gluteal muscles.</u> - <u>Inward rotation of the hip indicates tight internal rotators and weak external rotators.</u> - <u>A lateral torso tilt indicates a lack of core stability.</u> - <u>A lack of ankle dorsiflexion indicates tight ankle plantarflexors and weak ankle dorsiflexors.</u> 	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> - <u>A limb deviating from the sagittal plane indicates tight raised-leg hip extensors and weak raised-leg hip flexors.</u> - <u>A hiking of the raised hip indicates tight stance-leg hip flexors.</u> - <u>An anterior tilt with forward torso lean indicates tight stance-leg hip flexors and weak rectus abdominus and hip extensors.</u> - <u>A posterior tilt with hunched torso indicates tight rectus abdominus and hip extensors and weak stance-leg hip flexors.</u> <p><u>Shoulder push stabilization screen: The individual will execute several push-ups to full arm extension to examine stabilization of the scapulothoracic joint and core control during closed kinetic chain movements.</u></p> <ul style="list-style-type: none"> - <u>Winging in the scapula indicates an inability of the serratus anterior, trapezius, levator scapula, and rhomboids to stabilize the scapulae against the rib cage.</u> - <u>Collapsing of the low back indicates a lack of core, abdominal, and low-back strength.</u> <p><u>Thoracic spine mobility screen: The individual will sit with a dowel/broomstick across the shoulders and will rotate bilaterally to examine the bilateral mobility of the thoracic spine.</u></p> <p><u>A bilateral discrepancy can indicate biomechanical issues, such as a side dominance, differences in paraspinal development, and issues with torso rotation (possibly associated with some hip rotation).</u></p> <p><u>Performance of multiple flexibility evaluations of another individual may include: (FI.2.k).</u></p>	

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<p><u>Thomas test: Assesses the length of muscles involved in hip flexion (hip flexors/iliopsoas and rectus femoris) through moving from a sitting position to a laying position while pulling one thigh toward the chest.</u></p> <ul style="list-style-type: none"> - <u>Observations include whether the back of the lowered thigh touches the table, whether the knee of the lowered leg achieves 80 degrees of flexion, and whether the knee remains aligned straight or falls into internal or external rotation.</u> <p><u>Passive straight-leg raise (PSL): Assesses the length of the hamstrings by attempting to lift one leg from a lying position to a 90° position; inability to reach at least 80° indicates tight hamstrings.</u></p> <p><u>Shoulder flexion/extension assessment: Assesses shoulder flexion and extension through an individual lying flat on the back with elevated knees and moving the arms simultaneously into shoulder flexion and down to the ground (flexion); the individual will lay prone and bring the shoulders into extension while lifting arms off the floor (extension).</u></p> <ul style="list-style-type: none"> - <u>Inability to flex to 170° or discrepancies in limbs indicates tightness in pectoralis major and minor, latissimus dorsi, teres minor, rhomboids, and subscapularis.</u> - <u>Inability to extend to 50° or discrepancies between limbs indicates tightness in pectoralis major, abdominals, subscapularis, anterior deltoid, coracobrachialis, and biceps brachii.</u> <p><u>Internal/external rotation assessments: Assess the internal (medial) and external (lateral) rotation of the humerus at the shoulder joint through rotating the shoulders while laying down and with arms bent at elbow.</u></p>	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> - <u>Inability to externally rotate the forearms to the floor (90°) overhead indicates potential tightness in subscapularis as well as tightness in the joint capsule and ligaments.</u> - <u>Inability to internally rotate the forearms forward to 70° indicates potential tightness in infraspinatus and teres minor, as well as tightness in the joint capsule and ligaments.</u> <p><u>Apley’s scratch test: Assesses simultaneous movements of the shoulder girdle (scapulothoracic and glenohumeral joints). Shoulder flexion, external rotation, and scapular abduction are measured by the individual raising one arm overhead, bending the elbow, and reaching behind the head with palms inward in an attempt to touch the medial border of the contralateral scapula, or to touch the vertebrae as low as possible.</u></p> <p><u>Shoulder extension, internal rotation, and scapular adduction are measured by the individual reaching an arm behind the lat and rotating the arm inward with the palm facing outward in an attempt to touch the inferior angle of the contralateral scapula, or to reach up the spine as far as possible</u></p> <ul style="list-style-type: none"> - <u>Inability to reach specific landmarks indicates a need for further evaluation to determine the source of the limitation.</u> <p><u>Balance and core-strength evaluations of another individual may include: (FI.2.1).</u></p> <p><u>Sharpened Romberg Test: An assessment in which an individual stands with one foot in front of the other, with arms crossed and eyes closed in order to assess static balance by standing with a reduced base of support while removing visual sensory information; the individual will be timed, and a time of less than 30 seconds is indicative of inadequate static balance and postural control.</u></p>	

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<p><u>Stork-Stand Balance Test: An assessment in which an individual stands in a stork position with the heel elevated, meant to assess static balance;</u></p> <p><u>Rating Scale:</u></p> <ul style="list-style-type: none"> - <u>Excellent:</u> <ul style="list-style-type: none"> o <u>Female: > 30 seconds</u> o <u>Male: > 50 seconds</u> - <u>Good:</u> <ul style="list-style-type: none"> o <u>Female: 25-30 seconds</u> o <u>Male: 41-50 seconds</u> - <u>Average:</u> <ul style="list-style-type: none"> o <u>Female: 16-24 seconds</u> o <u>Male: 31-40 seconds</u> - <u>Fair:</u> <ul style="list-style-type: none"> o <u>Female: 10-15 seconds</u> o <u>Male: 20-30 seconds</u> - <u>Poor:</u> <ul style="list-style-type: none"> o <u>Female: < 10 seconds</u> o <u>Male: < 20 seconds</u> <p><u>Contraindications to assessments of movement may include movement assessment, such as pain, inability to complete the assessment, and low levels of health-related fitness / deconditioned (FI.2.m). Also refer to (FI.2.j)</u></p> <p><u>Assessments to evaluate the health-related components of fitness may include: (FI.2.n)</u></p> <p><u>Criterion-referenced fitness assessments, such as the FitnessGram assessments.</u></p>	

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<p><u>Cardiorespiratory assessments such as the YMCA Submaximal Step Test, YMCA Bike Test, Submaximal Talk Test, VT2 Threshold Test, Rockport Fitness Walking Test, and/or the 1.5 Mile Run Test.</u></p> <p><u>YMCA Submaximal Step Test: The individual will step up and down a 12-inch step at a rhythm of 96 beats per minute. At the conclusion, the individual will take their pulse for one minute, indicating relative levels of cardiorespiratory fitness.</u></p> <p><u>Muscular endurance assessments, such as the push-up test, curl-up test, and body-weight squat test.</u></p> <p><u>Muscular strength assessments, such as the 1 repetition max (1RM), 3RM, and estimated 1RM strength assessments.</u></p> <p><u>Body composition assessments (e.g., bioelectrical impedance analysis, BMI, skinfold measures)</u></p> <p><u>Assessments to evaluate the skill-related components of fitness may include:</u> <u>(FI.2.o)</u></p> <ul style="list-style-type: none"> • <u>Agility assessments (e.g., shuttle run, pro agility run, Illinois agility run)</u> • <u>Balance assessments (e.g., Romberg test)</u> • <u>Coordination assessments (e.g., stick test)</u> • <u>Power assessments, (e.g., vertical jump and broad jump)</u> • <u>Reaction time assessments (e.g., ruler drop test)</u> • <u>Speed assessments (e.g., 40-yard dash, 100-meter dash)</u> 	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>Contraindications to health-related and skill-related fitness assessments may involve exertion (cardiorespiratory, muscular strength, muscular endurance) (FI.2.p).</u></p> <ul style="list-style-type: none"> • <u>Onset of angina or chest pain</u> • <u>Significant drop in systolic blood pressure</u> • <u>Significant increase in diastolic blood pressure</u> • <u>Excess fatigue</u> • <u>Subject requests to stop</u> <p><u>Different methods for determining body composition may include: (FI.2.q)</u></p> <ul style="list-style-type: none"> • <u>Bioelectrical impedance analysis (BIA)</u> • <u>Body mass index (BMI)</u> • <u>Dual-energy X-ray absorptiometry (DEXA)</u> • <u>Hydrostatic weighing</u> • <u>Near-infrared interactance</u> • <u>Skinfold measurements</u> • <u>Waist-to-hip ratio (WHR)</u> • <u>Whole-body air displacement plethysmography (Bod Pod)</u> <p><u>Benefits and challenges of different methods for determining body composition (FI.2.r).</u></p> <p><u>Bioelectrical impedance analysis (BIA): a simple, non-invasive technique that uses electrical conductivity to estimate lean body mass. This test is dependent upon hydration status because muscle holds most of the water in the body; so, the more muscle, the better the conduction. The error of bioelectrical impedance is 3-3.5%. BIA can be done using a device in a</u></p>	

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<p><u>fitness setting; however, more accurate whole-body machines are found only in laboratory settings.</u></p> <p><u>Body mass index (BMI): The ratio of height to weight; easy to complete; does not take into account lean mass and fat mass.</u></p> <p><u>Dual-energy X-ray absorptiometry (DEXA): A whole-body scanning system that delivers low-radiation X-ray to determine bone and soft-tissue mass; very accurate, yet found only in laboratory settings.</u></p> <p><u>Hydrostatic weighing: A measurement that determines body fat through submerging an individual in water and measuring water displacement; seen as the gold standard of body composition measures, yet found primarily in laboratory settings.</u></p> <p><u>Near-infrared interactance: The measurement of tissue composition through use of near-infrared light, usually at the biceps brachii. Easy to use in a fitness setting; however, it is not seen to be as accurate as laboratory techniques.</u></p> <p><u>Skinfold measurements: The use of a caliper to pinch a fold of skin and fat at several sites on the body (see Jackson-Pollock for measurement sites), with measurements plugged in to an equation to calculate body fat percentage; easy to use in a fitness setting and provides accurate measurements as long as the individual taking the measurements has been properly trained in this method.</u></p> <p><u>Waist-to-hip ratio (WHR): The measurement of the difference in body circumference at the waist and hip; ratios indicative of higher</u></p>	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>circumference in the waist are indicative of greater health risks.</u></p> <p><u>To meet goals for general health benefits, weight management, fitness improvements, and athletic performance enhancement, refer to (FI.1.q) to differentiate between recommendations for physical activity and training principles (FI.2.s).</u></p> <p><u>To explain the effects of acute and chronic exercise on aerobic and anaerobic energy systems review the previous year’s content and vocabulary as appropriate to include: (FI.2.t)</u></p> <p><u>An acute bout of exercise increases cardiac output, blood flow, blood pressure, circulation, respiration</u></p> <p><u>Long-term adaptive responses include hypertrophy of the cardiac muscle fibers (i.e., increases in the size of each fiber). This hypertrophy increases the muscle mass of the ventricles, permitting greater force to be exerted with each beat of the heart. Increases in the thickness of the posterior and septal walls of the left ventricle can lead to a more forceful contraction of the left ventricle, thus emptying more of the blood from the left ventricle</u></p> <p><u>The musculoskeletal system is to define and move the body. To provide efficient and effective force, muscle adapts to demands. Refer to (FI.2.e) to review muscle fiber types.</u></p> <p><u>Skeletal muscle is composed of two basic types of muscle fibers distinguished by their speed of contraction—slow-twitch and fast-twitch</u></p> <p><u>Slow-twitch muscle fibers contain a large number of capillaries, mitochondria (which transform energy from food into adenosine</u></p>	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>triphosphate (ATP), or cellular energy), and myoglobin (which allows for improved delivery of oxygen)</u></p> <p><u>Fast-twitch muscle fibers generally contain fewer capillaries, mitochondria, and myoglobin – they have a lower capacity to use oxygen and fatigue quickly</u></p> <p><u>Major metabolic pathways involved in energy production include:</u></p> <p><u>The ATP-PCr system provides energy from the ATP stored in all of the body’s cells. PCr, also found in all cells, is a high-energy phosphate molecule that stores energy. As ATP concentrations in the cell are reduced by the breakdown of ATP to adenosine diphosphate (ADP) to release energy for muscle contraction, PCr is broken down to release both energy and a phosphate to allow reconstitution of ATP from ADP. This process describes the primary energy system for short, high intensity exercise, such as a 40- to 200-meter sprint; during such exercise, the system can produce energy at very high rates, and ATP and PCr stores, which are depleted in 10–20 seconds, will last just long enough to complete the exercise. At high rates of work, the active muscle cell’s oxygen demand exceeds its supply. The cell must then rely on the glycolytic energy system to produce ATP in the absence of oxygen (i.e., anaerobically). This system can only use glucose, available in the blood plasma and stored in both muscle and the liver as glycogen.</u></p> <p><u>The glycolytic energy system is the primary energy system for all-out bouts of exercise lasting from 30 seconds to 2 minutes, such as an 800-meter run. The major limitation of this energy system is</u></p>	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>that it produces lactate, which lowers the pH of both the muscle and blood. Once the pH drops below a value of 6.4 to 6.6, enzymes critical for producing energy are no longer able to function, and ATP production stops.</u></p> <p><u>The oxidative energy system uses oxygen to produce ATP within the mitochondria, which are special cell organelles within muscle. This process cannot generate ATP at a high enough rate to sustain an all-out sprint, but it is highly effective at lower rates of work (e.g., long distance running). ATP can also be produced from fat and protein metabolism through the oxidative energy system. Typically, carbohydrate and fat provide most of the ATP; under most conditions, protein contributes only 5 to 10 percent at rest and during exercise.</u></p> <p><u>Adequate fluid intake during exercise sessions is critical to prevent impairments induced by dehydration from endurance, muscular power, and/or strength exercises.</u></p> <p><u>Cardiorespiratory exercise has a profound effect on physical and mental health. The body's response to cardiorespiratory exercise is predictable to the increased demands of exercise. With few exceptions, the cardiovascular response to exercise is directly proportional to the skeletal muscle oxygen demands for any given rate of work, and oxygen uptake (VO₂) increases linearly with increasing rates of work. (FI.2.u). The body's physiological, physical, and performance-based response to cardiorespiratory training includes the points below. Also refer to (FI.2.t).</u></p>	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> • <u>Stronger and more efficient heart, improved ability to pump blood (enhanced cardiac output)</u> • <u>Reduced risk of heart disease, obesity, or diabetes</u> • <u>Lower resting heart rate</u> • <u>More efficient breathing, stronger respiratory muscles</u> • <u>Improved oxygen transport and ability of muscles to use oxygen</u> • <u>Reduced cholesterol levels and blood pressure</u> • <u>Improved fuel supply (improved ability to use fatty acids, sparing muscle glycogen stores)</u> • <u>Improvement in mental alertness, tolerance to stress, ability to relax and sleep</u> • <u>Reduced tendency for depression and anxiety</u> • <u>Increase in lean body mass and metabolic rate</u> <p><u>The body’s physiological, physical, and performance-based response to resistance training includes (FI.2.v):</u></p> <ul style="list-style-type: none"> • <u>Improved cardiovascular efficiency</u> • <u>Beneficial endocrine (hormone) and serum lipid (cholesterol) adaptations</u> • <u>Increased bone density</u> • <u>Increased metabolic efficiency (metabolism)</u> • <u>Increased tissue (muscle, tendons, ligaments) tensile strength</u> • <u>Increased cross-sectional area of muscle fibers</u> • <u>Decreased body fat</u> • <u>Increase neuromuscular control (coordination)</u> • <u>Increased endurance, strength, and power</u> 	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>A warm-up is generally described as preparing the body for physical activity while the cool-down is to provide the body with a smooth transition from exercise back to a steady state of rest. It can be either general in nature or more specific to the activity (FI.2.w).</u></p> <p><u>The purpose of the warm-up period is to increase heart and respiration rates, increase tissue temperature, and psychologically prepare the individual for higher training intensities. A warm-up should last between 5-10 minutes depending on the goals and objectives of the participant.</u></p> <p><u>The purpose of the cool-down is to reduce heart and breathing rates, gradually cool body temperature, return muscles to their optimal length-tension relationships, and prevent venous pooling of blood in the lower extremities. A cool-down of 5 to 10 minutes provides the body with an essential transition from exercise back to rest.</u></p> <p><u>Blood-pressure response related to acute exercise, chronic exercise, and changes in posture include systolic blood pressure increasing linearly with increases in exercise intensity. In a healthy person with a “normal” systolic pressure of 120 mmHg, vigorous aerobic fitness training can increase systolic pressure to 180 mmHg and take 10-20 minutes to return to resting levels. The higher the intensity of exercise, the greater the rise in heart rate will be and consequently the larger the increase in systolic blood pressure. With most types of exercise, there is minimal change in diastolic blood pressure (FI.2.x).</u></p> <p><u>Explain reversibility or deconditioning and the effect on fitness and performance (FI.2.y).</u></p>	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>Reversibility means that an athlete can lose the effects of training when they stop and can gain the effects when they begin to train again.</u></p> <p><u>Deconditioning, or detraining, occurs once an individual stops exercising and can be impacted by age, fitness level, how long the individual has been exercising, and the type of exercise the individual was doing and at what level</u></p> <p><u>Cardiovascular (aerobic) gains made with exercise: notably the heart’s ability to pump blood more efficiently, the muscles’ improved capacity to process oxygen, and the body’s enhanced ability to use carbohydrates for fuel.</u></p> <p><u>Even two weeks of detraining can lead to a significant decline in cardio fitness, according to the American College of Sports Medicine. Not exercising for two to eight months leads to loss of virtually all fitness gains. In general, the loss of aerobic capacity occurs more rapidly than declines in muscle strength.</u></p> <p><u>A musculoskeletal injury affects the body’s muscular or skeletal system and interferes with the body’s ability to move freely and without pain. Common musculoskeletal injuries include (FI.2.z):</u></p> <ul style="list-style-type: none"> • <u>Ankle sprains</u> • <u>Knee injuries involving ligaments</u> • <u>Low-back injuries</u> • <u>Shoulder injuries</u> • <u>Other injuries</u> • <u>Past surgeries</u> 	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>Delayed onset muscle soreness (DOMS) is exercise-related muscle pain. It develops after excessive and unaccustomed exercise and can cause tiny, microscopic tears in your muscle fibers. It is particularly prevalent if that exercise has an eccentric component during which the muscle exerts force while lengthening, as can happen when a person runs down a steep hill or lowers a weight from a fully flexed to a fully extended position (e.g., the two-arm curl). Overuse or overtraining is the excessive frequency, volume, or intensity of training, resulting in fatigue (which is also caused by a lack of proper rest and recovery). Overtraining may reduce the response of T-lymphocytes, decrease antibody synthesis, and contribute to adverse effects on the immune system (FI.2.aa).</u></p> <p><u>The inflammatory response is triggered by damage to living tissues. Your body responds to the damage from excessive and unaccustomed exercise by activating the body’s pain receptors and initiates a protective mechanism, increasing muscle tension or causing a muscle spasm. The healing process takes time and can include lower intensity recovery movements, topical analgesics, cold bath, warm bath, anti-inflammatory foods, or massage (FI.2.bb).</u></p> <p><u>Common upper-extremity injuries include muscle strains, ligament sprains, pectoralis major tendon ruptures, distal biceps tendon ruptures, and chronic shoulder pain. While each injury is unique in its specific anatomic location and mechanism, each is preventable with proper exercise technique, safety, and maintenance of muscle balance (FI.2.cc).</u></p>	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> • <u>Low-back injuries can cause decreased neural control to stabilizing muscles of the core, resulting in poor stabilization of the spine. This can further lead to dysfunction in the upper and lower extremities.</u> • <u>Shoulder injuries cause altered neural control of the rotator cuff muscles, which can lead to instability of the shoulder joint during functional activities.</u> <p><u>Common lower-extremity injuries that result from human movement imbalances can include repetitive hamstring strains, groin strains, patellar tendonitis (jumper’s knee), plantar fasciitis (pain in the heel and bottom of the foot), and posterior tibialis tendonitis (shin splints). While each injury is unique in its specific anatomic location and mechanism, each is preventable with proper exercise technique, safety, and maintenance of muscle balance. Balance training programs are frequently used to help prevent lower extremity injuries (FI.2.dd).</u></p> <ul style="list-style-type: none"> • <u>Ankle sprains have been shown to decrease the neural control to the gluteus medius and gluteus maximus muscles. This, in turn, can lead to poor control of the lower extremities during many functional activities, which can lead to injury.</u> • <u>Knee injuries involving ligaments can cause a decrease in the neural control to muscles that stabilize the patella (kneecap) and lead to further injury. Knee injuries that are not the result of contact (noncontact injuries) are often the result of ankle or hip dysfunctions, such as the result of an ankle sprain.</u> <p><u>Appropriate modifications for an injured participant may be based on many factors such as the location of the injury, the movement patterns involved, joint angles, weight bearing or not, and/or the original program structure (FI.2.ee).</u></p>	

Fitness Planning

FI.3 The student will plan and describe a personalized fitness and conditioning program for others that includes skill-related and health-related fitness components to achieve and maintain a health-enhancing level of physical fitness for a lifetime.

- a) Identify the components of a health/medical history.
- b) Identify the limitations of a health/medical history.
- c) Identify the common signs and symptoms of cardiovascular, metabolic, or pulmonary diseases.
- d) Conduct a health and exercise history with another individual.
- e) Develop SMART fitness goals with another individual based on fitness assessments and personal desired outcomes.
- f) Apply the FITT (frequency, intensity, time, and type of exercise) principles to improve or maintain cardiovascular and musculoskeletal fitness in healthy adults, seniors, youth, adolescents, and pregnant women.
- g) Develop functional programming for stability, mobility, and movement.
- h) Develop a resistance-training program with appropriate progressions.
- i) Develop a cardiorespiratory training program with appropriate progressions.
- j) Evaluate fitness programming for others to determine effectiveness.
- k) Identify contraindications of cardiorespiratory exercise.
- l) Define and explain exercises to improve range of motion, including dynamic stretching, passive stretching, proprioceptive neuromuscular facilitation (PNF), and partner stretching.
- m) Identify contraindications of range of motion exercises.
- n) Describe different forms of mind-body exercise (e.g., yoga, Pilates, tai chi).
- o) Identify indications for use of mind-body exercise.
- p) Identify contraindications for mind-body exercise.

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<u>Obtaining a participant’s medical history is vitally important because it provides information about known or suspected chronic disease, such as coronary heart disease, high blood pressure, or diabetes. A medical history provides information about the client’s past and current health status, as well as any past or recent</u>	<u>In order to meet these standards, it is expected that students will</u> <ul style="list-style-type: none">• <u>identify components of health/medical history (FI.3.a)</u>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>injuries, surgeries, or other chronic health conditions. Identify components of health/medical history (FI.3.a).</u></p> <p><u>Identify limitations of health/medical history (FI.3.b).</u> <u>PAR-Q: The Physical Activity Readiness Questionnaire is designed to determine the safety or possible risk of exercising for a client based on the answers to specific health history questions.</u></p> <p><u>Identify signs and symptoms common for cardiovascular, metabolic, or pulmonary diseases (FI.3.c).</u></p> <ul style="list-style-type: none"> • <u>Cardiovascular disease</u> <ul style="list-style-type: none"> ○ <u>Heart attack: Chest pain or discomfort, upper back or neck pain, indigestion, heartburn, nausea or vomiting, extreme fatigue, upper body discomfort, dizziness, and shortness of breath.</u> ○ <u>Arrhythmia: Fluttering feelings in the chest (palpitations).</u> ○ <u>Heart failure: Shortness of breath, fatigue, or swelling of the feet, ankles, legs, abdomen, or neck veins.</u> • <u>Metabolic syndrome: defined as the presence of at least 3 of these components: elevated waist circumference, elevated triglycerides, reduced high-density lipoprotein cholesterol, high blood pressure, and elevated fasting blood glucose.</u> • <u>Pulmonary disease</u> <ul style="list-style-type: none"> ○ <u>Chronic obstructive pulmonary disease, or COPD, refers to a group of diseases that cause airflow blockage and breathing-related problems. It includes emphysema and chronic bronchitis. Symptoms of COPD include, frequent coughing or wheezing, excess phlegm, mucus, or sputum production, shortness of breath, trouble taking a deep breath.</u> 	<ul style="list-style-type: none"> • <u>identify limitations of health/medical history (FI.3.b)</u> • <u>identify signs and symptoms common for cardiovascular, metabolic, or pulmonary diseases (FI.3.c)</u> • <u>conduct health and exercise history with another individual (FI.3.d)</u> • <u>develop SMART fitness goals with another individual based on fitness assessments and personal desired outcomes (FI.3.e)</u> • <u>apply FITT principle to improve or maintain cardiovascular and musculoskeletal fitness in healthy adults, seniors, youth, adolescents, and pregnant women (FI.3.f)</u> • <u>develop functional programming for stability, mobility, and movement (FI.3.g)</u> • <u>develop a resistance-training program with appropriate progressions (FI.3.h)</u> • <u>develop a cardiorespiratory-training program with appropriate progressions (FI.3.i)</u> • <u>valuate fitness programming for others to determine effectiveness (FI.3.j)</u> • <u>identify contraindications of cardiorespiratory exercise (FI.3.k)</u>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>Refer to (FI.3.a-b) to conduct a health and exercise history with another individual (FI.3.d).</u></p> <p><u>A SMART goal is a best practice framework for setting goals – they are Specific, Measurable, Achievable, Realistic/Relevant and Time-bound to clarify exactly what will be required for achieving success and to be able to share that clarification with others based on individual fitness assessments and personal desired outcomes (FI.3.e).</u></p> <p><u>The FITT principle is a set of rules that dictates the frequency, intensity, type and time of exercise. The FITT principle varies based on different groups and populations (FI.3.f).</u></p> <ul style="list-style-type: none"> • <u>Seniors</u> <ul style="list-style-type: none"> ○ <u>F: 3-5 days/wk</u> ○ <u>I: 40-85% of VO2 Max</u> ○ <u>T: 30-60 mins/day w/ 8-10 min bouts</u> ○ <u>T: Stationary or recumbent cycling, aquatic exercise, treadmill with hand support</u> ○ <u>Physiological considerations and implications for training include:</u> <ul style="list-style-type: none"> ▪ <u>Maximal oxygen uptake and exercise heart rate decrease with increasing age – initial exercise workloads should be low and progressed gradually</u> ▪ <u>Percentage of body fat will increase, and both bone mass and lean body mass will decrease with increasing age – resistance exercise is recommended, with lower initial weights and slower progression</u> 	<ul style="list-style-type: none"> • <u>define and explain exercises to improve range of motion, to include dynamic stretching, passive stretching, proprioceptive neuromuscular facilitation (PNF), and partner stretching (FI.3.1)</u> • <u>identify contraindications of range of motion exercises (FI.3.m)</u> • <u>describe different forms of mind-body exercise (e.g., yoga, Pilates, tai chi) (FI.3.n)</u> • <u>identify indications for use of mind-body exercise (FI.3.o)</u> • <u>identify contraindications for mind-body exercise (FI.3.p)</u> <p><u>Additional resources:</u> <u>Health Smart Virginia</u></p>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> <ul style="list-style-type: none"> ▪ <u>Balance, gait, and neuromuscular coordination may be impaired – exercise options should be chosen and progressed to safeguard against falls</u> ▪ <u>There is a higher rate or diagnosed and undetected heart disease in the elderly – knowledge of pulse assessment during exercise is critical</u> ▪ <u>Pulse irregularity is more frequent – careful analysis of medication use and possible exercise side effects</u> • <u>Youth / Adolescents</u> <ul style="list-style-type: none"> ○ <u>F: 5-7 days/wk</u> ○ <u>I: Moderate to vigorous</u> ○ <u>T: 60 mins/day</u> ○ <u>T: walking, jogging, running, games, activities, sports, water activity, resistance training</u> ○ <u>Special considerations: progression should be based on postural control and not on the amount of weight</u> • <u>Pregnant Women</u> <ul style="list-style-type: none"> ○ <u>F: 3-5 days/wk</u> ○ <u>I: Physician’s advice</u> ○ <u>T: 15-30 mins/day</u> ○ <u>T: low-impact, walking, stationary cycling, water activity</u> ○ <u>Physiologic Considerations:</u> <ul style="list-style-type: none"> ▪ <u>Contraindications include persistent bleeding 2nd to 3rd trimester, medical documentation of incompetent cervix or intrauterine growth retardation, pregnancy-induced hypertension, preterm rupture of membrane, or preterm labor during current or prior pregnancy</u> ▪ <u>Decreased oxygen available for aerobic exercise</u> 	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> ▪ <u>Posture can affect blood flow to uterus during vigorous exercise</u> ▪ <u>Even in the absence of exercise, pregnancy may increase metabolic demand by 300 kcal per day to maintain energy balance</u> ▪ <u>High-risk pregnancy considerations include individuals older than the age of 35, history or miscarriage, diabetes, thyroid disorder, anemia, obesity, and a sedentary lifestyle</u> <p><u>Functional programming is an approach to training used a little or a lot to increase strength, correct imbalances, improve movement quality, and gain comfort and confidence in positions (FI.3.g).</u></p> <p><u>To develop a resistance-training program with appropriate progressions, the following concepts are key to understanding (FI.3.h):</u></p> <ul style="list-style-type: none"> • <u>Acute variables – important components that specify how each exercise is to be performed</u> • <u>Repetition (or “rep”) – one complete movement of a single exercise; each phase of training has specific goals and requires a specific number of repetitions</u> • <u>Sets – a group of consecutive repetitions</u> • <u>Training intensity – an individual’s level of effort, compared with their maximal effort, which is usually expressed as a percentage</u> • <u>Repetition temp – the speed with which each repetition is performed</u> • <u>Rest interval – the time taken to recuperate between sets</u> • <u>Training volume – amount of physical training performed within a specified period</u> 	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> • <u>Training frequency – the number of training sessions performed during a specified (usually 1 week)</u> • <u>Training duration – the timeframe of a workout or the length of time spent in one phase of training</u> • <u>Exercise selection – the process of choosing appropriate exercises for a client’s program</u> • <u>Training plans – the specific outline, created by a fitness professional to meet a client’s goals, that details the form of training, length or time, future changes, and specific exercises to be performed</u> • <u>Annual, monthly, weekly plan</u> • <u>Various resistance-training modalities include:</u> <ul style="list-style-type: none"> ○ <u>Strength machines, free weights, cable machines, resistance bands, medicine ball, kettlebell, body-weight, suspension body-weight, stability ball, BOSU ball, vibration</u> <p><u>Cardiorespiratory-training programs that with appropriate progressions through various stages to achieve optimal levels of physiologic, physical, and performance adaptations. Key elements include (FI.3.i):</u></p> <ul style="list-style-type: none"> • <u>Rate of progression – critical to helping clients achieve personal health and fitness goals in the most efficient and effective use of time and energy without resulting in injury</u> • <u>Each cardio-respiratory session should include a warm-up phase, conditioning phase, and a cool-down phase</u> • <u>Methods of Prescribing Exercise Intensity</u> <ul style="list-style-type: none"> ○ <u>Maximal oxygen consumption (VO2 max) – the highest rate of oxygen transport and utilization achieved at maximal physical exertion</u> 	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> ○ <u>Oxygen uptake reserve (VO2R) – the difference between resting and maximal or peak oxygen consumption</u> ○ <u>Peak Metabolic Equivalent (MET) Method – METs describe the energy cost of physical activity as multiples of metabolic rate</u> ○ <u>Peak Maximal Heart Rate (MHR) Method – a formula not meant to design a cardio program 220-age</u> ○ <u>HR Reserve (HRR) Method – aka the Karvonen method, establishing training intensity based on the difference between a client’s predicted maximal heart rate and their resting heart rate</u> ○ <u>Ratings of Perceived Exertion Method – a subjective rating scale of perceived exertion used to express or validate how hard a client feels they are working during exercise</u> ○ <u>Talk Test Method – the ability to speak during activity can identify exercise intensity and ventilatory threshold</u> <ul style="list-style-type: none"> ● <u>Enjoyment of the mode or type of cardio activity selected</u> <p><u>Evaluation for effectiveness of a fitness program will follow a process similar to one used to create an initial fitness program. (FI.3.j)</u></p> <ul style="list-style-type: none"> ● <u>First revisit the goals or objectives of the workout program.</u> ● <u>Next determine if any goals have been met by the program, and which goals may be outstanding or not attained.</u> ● <u>Discussion with the individual/client should focus on their opinion relating to the pros, cons and personal adherence to the program that is being followed currently.</u> ● <u>Evaluation of the individual’s current fitness levels and areas of improvement needed may be obtained by completing testing on cardiovascular fitness, muscular strength and functional strength.</u> 	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> • <u>Once all information has been obtained, a new or modified fitness program can be established using a template that will address any weaknesses or areas needing improvement for the individual/client.</u> • <u>Fitness programming may require a Corrective approach, a Performance approach, or a more Generalized approach but must be driven by the needs and compliance of the individual/client.</u> • <u>Regular evaluation and appropriate modification of fitness programming is key to meeting goals.</u> <p><u>Contraindications of cardiorespiratory exercise can include (FI.3.k):</u></p> <ul style="list-style-type: none"> • <u>Pain</u> • <u>Inflammation</u> • <u>Severe cardiac diseases</u> • <u>Cardiac symptoms such as chest pain (angina) or arrhythmias</u> • <u>Hypertension > 160/105</u> • <u>Chest pain</u> • <u>Deconditioned</u> • <u>Postural considerations such as:</u> <ul style="list-style-type: none"> ○ <u>Upper Crossed Syndrome</u> ○ <u>Lower Crossed Syndrome</u> ○ <u>Pronation Distortion Syndrome</u> <p><u>Exercises that improve range of motion, may include (FI.3.l):</u></p> <ul style="list-style-type: none"> • <u>Dynamic stretching is the use of movement to stretch muscles before exercise and relies on momentum to engage the muscles, rather than holding a stretch at a standstill.</u> • <u>Static stretching is stretching to the farthest point and holding the stretch.</u> 	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> • <u>Passive stretching (while also being a static stretch), where an external force is created by an outside force, such as a partner.</u> • <u>Proprioceptive neuromuscular facilitation (PNF) involves stretching and contracting the muscle group to be stretched is positioned so muscles are stretched and under tension. Then the individual contracts the stretched muscle group for 5-6 seconds while a partner applies sufficient resistance to inhibit movement. The contracted muscle group is then relaxed and a controlled stretch is applied for 20-30 seconds.</u> <p><u>Contraindications of range of motion exercises include (FI.3.m):</u></p> <ul style="list-style-type: none"> • <u>Healing from an injury</u> • <u>Soft tissue trauma</u> • <u>DOMS</u> • <u>Deconditioned</u> <p><u>Instruction on mind-body exercises that combine body movement, mental focus, and controlled breathing to improve strength, balance, flexibility, and overall health are helpful in reducing stress, creating a sense of calm, decreasing chronic pain, and improving sleep patterns. Experience yoga, Pilates, and martial arts, such as tai chi, tae kwon do, and qi gong, which are the most commonly known types of physical activity classified as mind-body exercises (FI.3.n).</u></p> <ul style="list-style-type: none"> • <u>Yoga is a type of exercise in which you move your body into various positions to become more fit or flexible, to improve your breathing, and to relax your mind.</u> • <u>Pilates is a system of exercises, using special apparatus, designed to improve physical strength, flexibility, and posture, and enhance mental awareness.</u> 	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> • <u>Tai chi is a Chinese martial art and form of stylized, meditative exercise, characterized by methodically slow circular and stretching movements and positions of bodily balance.</u> <p><u>Identify indications for use of mind-body exercise (FI.3.o).</u></p> <ul style="list-style-type: none"> • <u>Chronic diseases and conditions such as Parkinson’s Disease, Cardiovascular Disease, Alzheimer’s Disease, Migraine headaches, Epilepsy, Stroke, Neuropathy and ADHD have shown positive changes in postural stability, blood pressure, vital capacity, flexibility, pain management and aerobic capacity as a result of regular mind-body exercise. (NIH PUB MED or doi: 10.1212/01.wnl.0000314667.16386.5e)</u> • <u>Mind-body exercise often produces a decrease in both mental/emotional and physiological symptoms associated with various diseases/conditions.</u> • <u>Mental clarity and emotional resilience has also shown improvement among those with mild mental or emotional disabilities.</u> • <u>In the generally healthy population, mind-body exercise improves overall flexibility, core strength, focus and mood, along with decreased levels of stress and increased capacity to manage stress.</u> <p><u>Mind-body exercise is generally safe with the exception of a few contraindications that include (FI.3.p):</u></p> <ul style="list-style-type: none"> • <u>When practiced appropriately, yoga has no known side effects. One should exercise caution when attempting new postures. Certain postures, particularly headstands, should not be attempted during pregnancy or by patients with hypertension or heart disease. Individuals with diabetes, hernias, bone cancer, or a history of eye, ear, or brain problems should</u> 	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>consult with their healthcare providers prior to beginning any yoga program.</u></p> <ul style="list-style-type: none"> • <u>Individuals with epilepsy or schizophrenia should avoid practicing meditation and exercises requiring altered levels of consciousness because of reports of grand mal seizures in the former and acute psychotic events in the latter.</u> <p><u>No known side effects or contraindications have been identified with Qigong or Tai Chi; however, individuals with bone tumors or those with severe bone osteoporosis should contact their healthcare providers prior to attempting any type of exercise.</u></p>	

Social and Emotional Development

FI.4 The student will accept responsibility for taking a leadership role as well as demonstrate the ability to follow, in order to accomplish group goals.

- a) Define and explain *cultural competence* and its importance in developing rapport with another individual.
- b) Demonstrate effective teaching techniques for working with individuals of different learning styles, motivation levels, and physical activity levels.
- c) Explain learning styles and instructional strategies, including visual, auditory, and kinesthetic.
- d) Demonstrate effective and varied teaching techniques for a variety of exercises.
- e) Demonstrate and explain how to respond in an emergency situation.
- f) Identify signs of cardiac emergency.
- g) Demonstrate CPR and AED procedures for adults and children.
- h) Identify emergency situations requiring first aid.
- i) Demonstrate first-aid techniques used in emergency situations.
- j) Identify and describe universal precautions and personal protection used during CPR and first aid.

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>Cultural competence describes the ability of an individual or organization to interact effectively with people of different cultures. Cultural competence improves sustainability by reinforcing the value of diversity, flexibility, and responsiveness in addressing the current and changing needs of clients, communities, and the personal fitness training environments (FI.4.a).</u></p> <p><u>Individual learning style refers to the preferential way in which a person absorbs, processes, comprehends and retains information</u></p> <ul style="list-style-type: none"> • <u>Explore Intrinsic motivators that may include fascination with the subject, a sense of its relevance to life and the world, a sense of accomplishment in mastering it, and a sense of calling to it.</u> 	<p><u>In order to meet these standards, it is expected that students will</u></p> <ul style="list-style-type: none"> • <u>define and explain cultural competence and its importance in developing rapport with another individual (FI.4.a)</u> • <u>demonstrate effective teaching techniques for working with individuals of different learning styles, motivation levels, and physical activity levels (FI.4.b)</u> • <u>explain learning styles and instructional strategies, to include visual, auditory, and kinesthetic (FI.4.c)</u>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> • <u>Intrinsic motivation can be long-lasting and self-sustaining when compared to Extrinsic motivators that may include following doctors’ or family members’ advice.</u> <p><u>Deep learners respond well to the challenge of mastering a difficult and complex subject and are intrinsically motivated students. Everybody learns differently (FI.4.b, FI.4.c, FI.4.d).</u></p> <p><u>Client safety is top priority. Develop an emergency action plan (EAP) that includes the identification of an emergency response team (ERT), is specific to each fitness venue and reflects the following important considerations related to managing emergency situations (FI.4.e):</u></p> <ul style="list-style-type: none"> • <u>emergency personnel</u> • <u>emergency communication</u> • <u>emergency equipment</u> • <u>medical emergency transportation.</u> <p><u>Common cardiac emergencies include cardiac arrest and a heart attack. Cardiac arrest is when a person’s heart stops beating. A heart attack, also called a myocardial infarction, happens when a part of the heart muscle doesn’t get enough blood. The more time that passes without treatment to restore blood flow, the greater the damage to the heart muscle. The major symptoms of a heart attack are:</u></p> <ul style="list-style-type: none"> • <u>Chest pain or discomfort. Most heart attacks involve discomfort in the center or left side of the chest that lasts for more than a few minutes or that goes away and comes back. The discomfort can feel like uncomfortable pressure, squeezing, fullness, or pain.</u> • <u>Feeling weak, light-headed, or faint. You may also break out into a cold sweat.</u> 	<ul style="list-style-type: none"> • <u>demonstrate effective and varied teaching techniques for a variety of exercises (FI.4.d)</u> • <u>demonstrate and explain how to respond in an emergency situation (FI.4.e)</u> • <u>identify signs of cardiac emergency (FI.4.f)</u> • <u>demonstrate CPR and AED procedures for adults and children (FI.4.g)</u> • <u>identify emergency situations requiring first aid (FI.4.h)</u> • <u>demonstrate first-aid techniques used in emergency situations (FI.4.i)</u> • <u>identify and describe universal precautions and personal protection used during CPR and first aid (FI.4.j)</u> • <u>describe the mental wellness supports available for individuals in the community (FI.4.k)</u> • <u>analyze and explain the benefits of exercise to alleviate stress and support mental wellness of individuals (FI.4.l)</u> <p><u>Additional resources:</u> <u>Health Smart Virginia</u></p>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> • <u>Pain or discomfort in the jaw, neck, or back.</u> • <u>Pain or discomfort in one or both arms or shoulders.</u> • <u>Shortness of breath. This often comes along with chest discomfort, but shortness of breath also can happen before chest discomfort. (FI.4.f)</u> <p><u>Adult and child cardiopulmonary resuscitation (CPR), the use of an automated external defibrillator (AED). CPR should follow current guidelines as set by the International Liaison Committee on Resuscitation/American Heart Association (guidelines are reviewed and revised every five years) (FI.4.g)</u></p> <p><u>Emergency situations requiring first aid may choking, bleeding, contusions, fractures, or anaphylactic shock (FI.4.h).</u></p> <p><u>Demonstrate first-aid techniques used in emergency situations (FI.4.i).</u></p> <ul style="list-style-type: none"> • <u>Choking can occur at any time and requires immediate action.</u> <ul style="list-style-type: none"> ○ <u>Conscious choking victims require performing 5 back blows, then 5 abdominal thrusts repeatedly until the object is forced out, the person can cough forcefully or breathe or the person becomes unconscious. (American Red Cross Choking Guidelines)</u> ○ <u>Once the person becomes unconscious, ensure that 911 has been called and follow the procedures for CPR. (FI.4.g)</u> • <u>Bleeding is a common situation requiring first aid.</u> <ul style="list-style-type: none"> ○ <u>Non-life-threatening bleeding is characterized as a minor wound with slowly trickling or oozing blood. This type of bleeding is controlled with direct pressure over the wound using a sterile or clean gauze/cloth. Once the bleeding is controlled, clean the area with sterile water and apply a bandage to the wound.</u> 	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> ○ <u>Potentially life-threatening bleeding is characterized as a significant wound with steady, dark colored blood flow. This type of bleeding is controlled with direct pressure over the wound and additional pressure applied to a pulse point above or proximal to the wound. The wound will likely require a pressure dressing which applies continuous pressure over the bleeding site and may require sutures or closure by a physician. All large wounds should be evaluated by medical personnel and be monitored for infection.</u> ○ <u>Life-threatening bleeding is characterized by a large, full-thickness wound which has injured or severed a major vein or an artery. This wound results in a spurting or pulsating bright red bleeding. This wound will require the use of a tourniquet to slow or stop the bleeding. A tourniquet is any strap-like material that can be tightly applied proximal to or above the wound to slow blood flow to the area. This type of wound will also require initiation of 9-1-1 services. Monitor for signs of shock.</u> ○ <u>Do not apply direct pressure to any wound that could be superficial to an associated bone injury/fracture.</u> ○ <u>Nosebleeds are commonly seen during physical activity due to direct blows to the nose/face or simply from changes in temperature or pressure in the environment. Treatment for a nosebleed is similar to any other wound. Pressure is applied to the nostrils using clean/sterile cloth or gauze. Keep the person sitting upright and leaning slightly forward. Do not lean the head back or lay the victim down. If the bleeding is more difficult to stop, application of ice to the nose can sometimes help. If the nosebleed is not controlled within 15 minutes, seek out medical assistance.</u> 	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> • <u>Contusions are bruises to bone and soft tissue caused by a direct blow to the area.</u> <ul style="list-style-type: none"> ○ <u>Characterized by pain, discoloration and swelling in the area of the direct blow, bruises are easy to assess.</u> ○ <u>Application of an ice pack or cold compress to the area within the first 24-36 hours of the injury will help reduce the pain and inflammation.</u> ○ <u>Ice should be applied to an area for 10-15 minutes every 1-2 hours. Continuous application of ice is not necessary.</u> ○ <u>If the discoloration or pain is immediate or excessive, damage to underlying tissue/bone may be significant, seek medical assistance.</u> • <u>Fracture is the medical term used to diagnose a broken bone. A fracture and a break are the same injury.</u> <ul style="list-style-type: none"> ○ <u>Injury to a bone that produces a “crack, snap or pop” sound could potentially result in a fracture.</u> ○ <u>If there is significant pain over a bone or inability to bear weight or pressure to a body part, a fracture should be suspected.</u> ○ <u>Immobilize the body part by applying a rigid material (splint) to the injury and cover the joints above and below the suspected injured bone.</u> ○ <u>Apply a sling, use crutches or assist the person in any movement so that further injury to the area is avoided.</u> ○ <u>Monitor for signs of shock.</u> ○ <u>If the injury is to a major bone such as the femur, humerus, pelvis or if the victim is in excessive pain, 911 should be called.</u> ○ <u>If the injury is to a smaller bone, such as a finger, toe, foot or hand bone and the victim is stable, transport by private vehicle can be initiated.</u> 	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> • <u>Anaphylaxis is a severe, potentially life-threatening allergic reaction causing shock, which is when blood pressure suddenly drops and the airways narrow causing breathing restrictions.</u> <ul style="list-style-type: none"> ○ <u>Causes of anaphylaxis include foods (nuts, eggs, wheat), insect venom (bee sting), latex and some medications.</u> ○ <u>The only effective treatment for anaphylaxis is epinephrine injection and follow-up care in the emergency department. This requires the initiation of 911.</u> ○ <u>An Epi-Pen is a single-dose of epinephrine used to treat anaphylaxis and can be used easily by any layperson, including self-injection.</u> <p><u>Universal precautions refer to the practice, in medicine, of avoiding contact with patients’ bodily fluids, by means of the wearing of nonporous articles such as medical gloves and face shields during CPR and first aid (FI.4.j).</u></p> <p><u>Social and emotional networks can strongly influence behavior and beliefs. People who are trying to change their exercise behavior and who have strong social support fare better. The following are various supports available for individuals (FI.4.k):</u></p> <ul style="list-style-type: none"> • <u>Instrumental support – tangible, practical factors (i.e. transportation, babysitter, spotter, etc.)</u> • <u>Emotional support – expressed through encouragement, caring, empathy, and concern; enhances self-esteem and reduces anxiety</u> • <u>Information support – directions, advice, suggestions, feedback regarding progress</u> 	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> • <u>Companionship support – availability of family, friends, co-worker(s), other group(s)</u> <p><u>Stress is the outcome of challenging situations that can cause physical symptoms such as headaches and stomachaches. Exercise has been shown to be effective at reducing stress and can lead to immediate and long-term results. Other well-documented mental wellness benefits include promoting a positive mood, improving sleep, and reducing depression and anxiety (FI.4.1).</u></p>	

Energy Balance

FI.5 The student will explain energy balance.

- a) Identify and explain dietary guidelines based on USDA recommendations.
- b) Identify macronutrients used by the body for energy.
- c) Identify the number of kilocalories found in macronutrients that provide energy.
- d) Explain energy balance and relationship to weight gain, weight loss, or weight maintenance.
- e) Explain lipid and lipoprotein profiles.
- f) Explain the influences of nutrition and physical activity on lipid and lipoprotein profiles.
- g) Explain the importance of hydration.
- h) Explain how to maintain hydration in a physically active individual, including effective methods to rehydrate after exercise.
- i) Identify and describe common supplements and ergogenic aids used by individuals in training programs.
- j) Explain potential risks, benefits, and contraindications associated with use of supplements and ergogenic aids.
- k) Explain the relationship between body composition and health.
- l) Define terms related to body composition, including *body mass index (BMI)*, *lean body mass*, and *fat mass*.
- m) Explain influences on body composition, including diet, exercise, and behavior modification.
- n) Identify and explain inappropriate weight-loss methods.
- o) Identify and explain eating disorders including anorexia nervosa and bulimia nervosa.
- p) Explain the female athlete triad.

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>Dietary Guidelines</u> reflect the current body of nutrition science, help health professionals and policymakers guide Americans to make healthy food and beverage choices, and serve as the science-based foundation for vital nutrition policies and programs across the United States (FI.5.a).</p> <p>Macronutrient is an essential nutrient used by the body for energy that has a large minimal daily requirement, including proteins, fats, carbohydrates, and water (FI.5.b).</p> <p>A calorie (or thermochemical calorie) is a unit of energy. There are 1,000 calories in a kilocalorie. The number of calories a person needs depends on their age, height, weight, gender, and activity level. People who consume more calories than they burn off in normal daily activity or during exercise are more likely to be overweight. One gram of fat contains 9 calories. Protein and carbohydrates contain 4 calories per gram (FI.5.c).</p> <p>Instruction includes an explanation that energy balance is the relationship between “energy in” (food calories taken into the body through food and drink) and “energy out” (calories being used in the body for our daily energy requirements).</p> <p>This relationship, which is defined by the laws of thermodynamics, dictates whether weight is lost, gained, or remains the same. According to these laws, energy is never really created, and it’s never really destroyed. Rather, energy is transferred between entities. We convert potential energy that’s stored within our</p>	<p>In order to meet these standards, it is expected that students will</p> <ul style="list-style-type: none"> • <u>identify and explain dietary guidelines based on USDA recommendations (FI.5.a)</u> • <u>identify macronutrients used by the body for energy (FI.5.b)</u> • <u>identify the number of kilocalories found in macronutrients that provide energy (FI.5.c)</u> • <u>explain energy balance and relationship to weight gain, weight loss, or weight maintenance (FI.5.d)</u> • <u>explain lipid and lipoprotein profiles (FI.5.e)</u> • <u>explain the influences of nutrition and physical activity on lipid and lipoprotein profiles (FI.5.f)</u> • <u>explain the importance of hydration (FI.5.g)</u> • <u>explain how to maintain hydration in a physically active individual, including effective methods to rehydrate after exercise (FI.5.h)</u>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>food (measured in calories, or kcals) into three major “destinations”: work, heat and storage.</u></p> <p><u>Resting metabolic rate refers to the minimal amount of caloric energy required to maintain basic physiological needs, such as breathing, heart rate, thinking and sleeping (FI.5.d).</u></p> <p><u>Lipid profile is a pattern of lipids in the blood. A lipid profile usually includes the levels of total cholesterol, high-density lipoprotein (HDL) cholesterol, triglycerides, and the calculated low-density lipoprotein (LDL) cholesterol.</u></p> <p><u>Lipoproteins are molecules that have a globular shape and are a combination of lipid and protein.</u></p> <p><u>Total blood cholesterol as a measure of the cholesterol components LDL (low-density lipoprotein) cholesterol, HDL (high-density lipoprotein) cholesterol, and VLDL (very low-density lipoprotein, which is the triglyceride-carrying component of lipids). Explain that triglycerides are the chemical form in which most fat exists in food and the body. Triglycerides are mostly carried in VLDL and chylomicrons. VLDL comes from the liver and also has cholesterol. Chylomicrons come from dietary fat.</u></p> <p><u>Along with cholesterol, triglycerides form plasma lipids. Excess triglycerides in plasma have been linked to the occurrence of coronary artery disease in some people. Like cholesterol, increases in triglyceride levels can be detected by plasma measurements. These measurements should be made after an overnight food and alcohol fast (FI.5.e).</u></p>	<ul style="list-style-type: none"> • <u>identify and describe common supplements and ergogenic aids used by individuals in training programs (FI.5.i)</u> • <u>explain potential risks, benefits, and contraindications associated with use of supplements and ergogenic aids (FI.5.j)</u> • <u>explain the relationship between body composition and health (FI.5.k)</u> • <u>define terms related to body composition including body mass index (BMI), lean body mass, and fat mass (FI.5.l)</u> • <u>explain influences on body composition including diet, exercise, and behavior modification (FI.5.m)</u> • <u>identify and explain inappropriate weight loss methods (FI.5.n)</u> • <u>identify and explain eating disorders including anorexia nervosa and bulimia nervosa (FI.5.o)</u> • <u>explain the female athlete triad (FI.5.p)</u> <p><u>Additional resources:</u> <u>Health Smart Virginia</u></p>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>The standard clinical approach for reducing cardiovascular disease risk due to dyslipidemia is to prescribe changes in diet and physical activity and individualized physical activity programs to enhance lipid lipoprotein profiles by reducing triglycerides (TG), increasing HDL, and lowering LDL/HDL for clients (FI.5.f).</u></p> <p><u>Good hydration means getting the right amount of water before, during, and after exercise. Water regulates your body temperature and lubricates your joints. It helps transport nutrients to give you energy and keep you healthy. Your body cannot perform at its highest level if you are not hydrated. Dehydration happens when your body does not have as much water as it need to function properly (FI.5.g).</u></p> <p><u>Hydration: Fluids help prevent dehydration. When we are physically active, our bodies sweat to help cool us down. Electrolytes such as sodium are also lost in our sweat. For this reason, many sports drinks contain a mix of water and electrolytes. The presence of these electrolytes also helps the water to diffuse through the small intestine, back into the body (FI.5.h).</u></p> <p><u>The DSHEA defines dietary supplements as a substance that completes or makes an addition to daily dietary intake. Dietary supplements are an umbrella for a wide range of products, including weight loss pills and substances that promise to increase physical performance.</u></p> <p><u>Ergogenic aids are classified as nutritional, pharmacologic, physiologic, or psychological; methods to enhance athletic performance range from use of accepted techniques, such as carbohydrate loading, to illegal and unsafe approaches, such as use of anabolic/androgenic steroids (FI.5.i).</u></p>	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>Dietary supplements used to prevent or treat a specific health problem or enhance exercise and athletic performance that come in a variety of forms, including tablets, capsules, liquids, powders, and bars. Many of these products contain numerous ingredients in varied combinations and amounts. Among the more common ingredients are amino acids, protein, creatine, and caffeine.</u></p> <p><u>Because the Food and Drug Administration (FDA) does not need to approve dietary supplements before being sold and instead the sole responsibility for determining the safety and effectiveness of a dietary supplement falls on the shoulders of the company that manufactures and markets it.</u></p> <p><u>There is no substitute for an appropriate training regimen and attitude, nor is there a magic pill that creates a world-class athlete out of anyone. If deciding to explore the possible use or supplements or ergogenic aid, ask three simple questions, Does it work? Is it safe? Is it ethical and legal (FI.5.j)?</u></p> <p><u>Benefits of having a healthy body composition:</u></p> <ul style="list-style-type: none"> - <u>Normal blood pressure level</u> - <u>Improved quality of sleep</u> - <u>Improved mood and self-confidence</u> - <u>Increased energy and endurance throughout the day</u> - <u>Reduced pain in joints, hips, and lower back</u> - <u>Improved blood circulation, leading to lower risk for heart disease</u> - <u>Higher fertility rates and lower risk for pregnancy-related complications</u> - <u>Improved breathing, respiration, and lung function</u> - <u>Improved glucose tolerance and insulin sensitivity</u> 	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>Review factors that can lead to altered body composition:</u></p> <ul style="list-style-type: none"> - <u>Lack of exercise and physical activity</u> - <u>Eating large portion sizes and overeating in general</u> - <u>High-fat, high-sugar diet</u> - <u>Lack of whole foods in the diet such as fruits, vegetables, nuts, seeds, legumes</u> - <u>Excessive alcohol intake (FI.5.k).</u> <p><u>Body mass index (BMI) is a measure of body fat based on height and weight.</u></p> <p><u>Lean body mass refers to all of your body components except fat. It includes your body’s water, bone, organs and muscle content. However, when it comes to weight management and body composition, fat-free mass refers primarily to muscle mass.</u></p> <p><u>Fat mass is total body fat and can be measured with dual energy absorptiometry or bioelectrical impedance techniques (FI.5.l).</u></p> <p><u>Influences on body composition include gender, age, diet, activity level, and genes. Men tend to have more muscle mass than women, and women tend to have more fat mass than men. As people age, lean muscle mass decreases, making it somewhat more difficult to maintain optimal body composition.</u></p> <p><u>Barrier(s) to making positive behavior changes, and skill in assisting them to address/remove barrier(s). Ability to identify and use adherence strategies for long-term maintenance of healthy behaviors (FI.5.m).</u></p>	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>Starvation, fasting, or very-low-calorie diets are inappropriate weight loss methods that can include the following risks (FI.5.n):</u></p> <ul style="list-style-type: none"> • <u>Increased risk of malnutrition</u> • <u>Poor energy and inability to complete the essential fitness program</u> • <u>A behavioral “pendulum” swing – an inability to reintroduce “forbidden foods” in a moderate manner</u> • <u>Other side effects – fatigue, constipation, nausea, diarrhea, gallstones</u> <p><u>Anorexia nervosa is a psychological and possibly life-threatening eating disorder defined by an extremely low body weight relative to stature, extreme and needless weight loss, illogical fear of weight gain, and distorted perception of self-image and body.</u></p> <p><u>Bulimia nervosa is a psychological and possibly life-threatening eating disorder in which people (bulimics) consume large amounts of food (binge) and then trying to rid themselves of the food and calories (purge) by fasting, excessive exercise, vomiting, or using laxatives (FI.5.o).</u></p> <p><u>Female athlete triad is an interrelationship of menstrual dysfunction, low energy availability (with or without an eating disorder), and decreased bone mineral density; it is relatively common among young women participating in sports. Diagnosis and treatment of this potentially serious condition is complicated (https://dx.doi.org/10.1177%2F1941738112439685). (FI.5.p)</u></p>	

Professional Responsibilities

FI.6 The student will identify and explain professional and legal responsibilities to manage a personal business and be employed as a personal fitness instructor.

- a) Identify and explain requirements to become a certified personal fitness instructor and maintain certification, including certification requirements, requirements to maintain certification, and resources for professional development to increase knowledge and skill and maintain certification.
- b) Identify and explain the role, scope of practice, and code of ethics of a personal fitness instructor.
- c) Identify and describe the professional responsibilities of a personal fitness instructor.
- d) Identify and describe necessary facility maintenance.
- e) Explain and describe appropriate inspection and care of equipment to maintain safety and maximize use.
- f) Identify and describe appropriate facility supervision to maintain safety of users.
- g) Identify and describe legal considerations of working as a personal fitness instructor.

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<p><u>There are various credentialing bodies in the health and fitness industry. One example is National Academy of Sports Medicine. To be a NASM certified personal trainer, this means an individual has taken a course and passed an exam on personal training topics, including anatomy, physiology, and fitness basics. NASM-CPT’s are required to recertify every two years by earning 1.9 continuing education units (CEUs) (FI.6.a).</u></p> <p><u>The role, scope of practice, and code of ethics of a personal fitness instructor may vary based on the credentialing body – NASM’s Code of Professional Conduct includes (FI.6.b):</u></p> <ul style="list-style-type: none"> • <u>Maintain competencies through continuing education</u> • <u>Adhere to safe and ethical training practices</u> • <u>Adhere to strict facility maintenance</u> 	<p><u>In order to meet these standards, it is expected that students will</u></p> <ul style="list-style-type: none"> • <u>identify and explain requirements to become a certified personal fitness instructor and maintain certification, including certification requirements, requirements to maintain certification, and resources for professional development to increase knowledge and skill and maintain certification (FI.6.a)</u> • <u>identify and explain the role, scope of practice, and code of ethics of a personal fitness instructor (FI.6.b)</u>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> • <u>Understand scope of practice of the role and professional limitations of a personal trainer (i.e. referral to registered dietitians, shall not diagnose, or treat and injury or illness etc.)</u> • <u>Adhere to professionalism and ethical business practices</u> <ul style="list-style-type: none"> ○ <u>Liability insurance</u> ○ <u>Record keeping</u> ○ <u>Medical clearance</u> ○ <u>Physical appearance and attire</u> ○ <u>Timeliness</u> ○ <u>Sexual harassment awareness</u> ○ <u>Client confidentiality</u> <p><u>Professional responsibilities of a personal fitness instructor with NASM is to uphold the highest level of professional and ethical conduct, which shall include information from (FI.6.a-b). NASM-CPT are health and fitness professionals who are responsible for performing individualized assessments and design safe, effective, and individualized exercise and conditioning programs that are scientifically valid and based on clinical evidence for clients who have no medical or special needs. They provide guidance to help clients achieve their personal health, fitness, and performance goals via the implantation of exercise programs, nutritional recommendations, and suggestions for lifestyle modification (FI.6.c).</u></p> <p><u>Identify and describe necessary facility maintenance (FI.6.d).</u></p> <ul style="list-style-type: none"> • <u>Maintaining a clean and orderly facility is necessary to encourage regular use of the facility and to reduce liability.</u> • <u>Insure that all pathways are clear of debris and equipment is properly stored to prevent injury.</u> 	<ul style="list-style-type: none"> • <u>identify and describe the professional responsibilities of a personal fitness instructor (FI.6.c)</u> • <u>identify and describe necessary facility maintenance (FI.6.d)</u> • <u>explain and describe appropriate inspection and care of equipment to maintain safety and maximize use (FI.6.e)</u> • <u>identify and describe appropriate facility supervision to maintain safety of users (FI.6.f)</u> • <u>identify and describe legal considerations of working as a personal fitness instructor (FI.6.g)</u> <p><u>Additional resources:</u> Health Smart Virginia</p>

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> • <u>Specific areas for designated activities such as powerlifting heavy weights or swinging kettlebells is well demarcated.</u> • <u>Proper floor coverings are present to prevent falls, damage to the floor from weights or injury to individuals exercising.</u> • <u>Materials used in the facility should meet local health code for fitness facility requirements and be easy to clean.</u> • <u>All surfaces and floors must be cleaned daily at minimum and more frequently based upon higher use.</u> <p><u>Explain and describe appropriate inspection and care of equipment to maintain safety and maximize use (FI.6.e).</u></p> <ul style="list-style-type: none"> • <u>Ability to inspect and maintain fitness equipment and physical activity surroundings to ensure safety is necessary to reduce injury and reduce liability.</u> • <u>All equipment should be inspected daily for proper function and cleanliness. Equipment should always work optimally and never partially.</u> • <u>The following areas should be inspected daily:</u> <ul style="list-style-type: none"> ○ <u>Electrical equipment (treadmills, bikes, audio/video equipment) should have cords free of damage and be plugged into appropriately loaded outlets.</u> ○ <u>Cables, pulleys, straps and bands should be solid, no fraying and properly seated in machines where applicable.</u> ○ <u>Metal weights, plates and bars should be free from cracks with no rust.</u> ○ <u>All benches and racks must be properly installed, properly bolted together and have proper padding to protect the user.</u> 	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<ul style="list-style-type: none"> • <u>Equipment manufacturers will provide recommendations for proper solutions and materials used to clean the equipment used.</u> • <u>Users should be instructed on how to wipe down or clean equipment after each use. Facility managers should insure that the equipment is thoroughly cleaned/disinfected several times per day, depending upon use.</u> <p><u>Appropriate facility supervision to maintain safety of users includes the following (FI.6.f):</u></p> <ul style="list-style-type: none"> • <u>Educating clients and enforce policies regarding the safe and proper use of equipment and facilities</u> • <u>Instructing clients on basic exercise physiology and inform them as to proper lifting and exercise technique</u> • <u>Ability to teach and demonstrate the use of resistance training equipment (weight machines, free weights, small apparatuses, resistance tubing, others) using proper exercise form and technique</u> <p><u>There are many legal considerations of working as a personal fitness instructor which may include the following (FI.6.g):</u></p> <ul style="list-style-type: none"> • <u>Act of omission: Failing to act responsibly. Example: A trainer who fails to spot a client who is lifting a considerable amount of weight.</u> • <u>Act of commission: Performing an act or allowing an individual to perform an act that causes harm. Example: A trainer who asks a client to perform a squat jump, knowing that the client has a knee injury.</u> • <u>Liability waivers potentially provide protection for trainers, in the event a client suffers an injury, preventing the client from recovering for damages.</u> 	

<u>Essential Understandings</u>	<u>Essential Knowledge and Skills</u>
<u>General liability insurance is specific to the industry and protects in the case of injury due to slips and falls in fitness facilities.</u>	

VA SOL Standard: K.1 The student will demonstrate progress toward the mature form of selected locomotor, non-locomotor, and manipulative skills to understand the various ways the body can move.

ESSENTIAL UNDERSTANDINGS

- The variety of ways the body moves and how the body balances during movement.
- Critical elements of movement must be done correctly to move efficiently and effectively.
- Performing a variety of movements in games and with music will lead to effective body management.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>Suggested/Sample Assessments</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>Suggested/Sample Activities</p>
<p>K.1.a. Demonstrate and differentiate between walking, running, hopping, galloping, and jumping.</p> <p>I can walk, run, hop, gallop, and jump in my own space and around the gym with my class.</p> <p>I can identify pictures for hopping, jumping, and walking.</p> <p>K.1.b. Demonstrate bending, pushing, pulling, turning, and balancing on one foot.</p> <p>I can bend and turn my body.</p> <p>I can show how to push and pull a ball.</p> <p>I can stand on one foot.</p>	<p>Assessment for Learning</p> <ul style="list-style-type: none"> • Skill rubric Perform each locomotor skill and movement correctly (at least two critical elements) <p>Assessment of Learning</p> <ul style="list-style-type: none"> • Teacher observation • Cognitive Assessment <ul style="list-style-type: none"> • Verbal • Identify pictures of movements • Skill rubric <p style="text-align: center;">Sample Rubric</p> <p>4 Consistently demonstrates (name movement)</p> <ul style="list-style-type: none"> • Student consistently performs all critical elements. • Student needs no reminders. <p>3 Usually demonstrates (name movement)</p> <ul style="list-style-type: none"> • Student usually performs at least two critical elements. • Student needs occasional reminders. <p>2 Sometimes demonstrates (name movement)</p> <ul style="list-style-type: none"> • Student sometimes performs at least two critical elements. • Student needs several reminders. <p>1 Seldom demonstrates (name movement)</p>	<ul style="list-style-type: none"> • Walk • Run • Hop • Gallop • Jump • Bend • Push • Pull • Turn • Balance <p>Critical Elements (* denotes suggested essential elements for Kindergarten)</p> <p><u>Walking</u></p> <ul style="list-style-type: none"> • Toes point forward • Foot lands heel to toe* • Arms swing forward and backward in opposition to legs—arms do not cross midline* <p><u>Running</u></p> <ul style="list-style-type: none"> • Toes point forward • Foot lands heel to toe* • Arms swing forward and backward in opposition to legs—arms do not cross midline* 	<ul style="list-style-type: none"> • Perform the movements in personal space, general space, in games, and with music. • Move in relation to self and various obstacles and equipment that may include moving under/over, on/off, in front/behind, near/away, around, and alongside. • Using the body, explore the shapes of different letters of the alphabet Bend (egg roll, bear walk) • Push (egg roll, leap, jump)

	<ul style="list-style-type: none"> • Student performs less than two critical elements. • Student needs repeated reminders. 	<ul style="list-style-type: none"> • Brief period when both feet are off the ground between each running step (flight) • Trunk leans slightly forward <p><u>Hopping</u> (able to hop on the right and left foot)</p> <ul style="list-style-type: none"> • Foot of nonsupport leg is bent and carried in back of body* • Nonsupport leg swings in pendular fashion to produce force • Arms bent at elbows and swing forward on take-off • Takeoff and land on same foot* <p><u>Galloping</u></p> <ul style="list-style-type: none"> • Step one foot forward* • Bring back foot to front foot (back foot does not go ahead of front foot)* • Shoulders squared to the front • Lead with right and left foot <p><u>Jumping</u></p> <ul style="list-style-type: none"> • Arms back and knees bend in preparation for jumping action • Arms extend forward/upward as body propels forward/upward* • Body extends and stretches slightly upward while in flight • Hips, knees, and ankles bend on landing • Shoulders, knees, and ankles align for balance after landing • Two feet takeoff, two feet landing* 	
<p>Resources: SHAPE America National Standards and Grade Level Outcomes</p>			

VA SOL Standard: K.1 The student will demonstrate progress toward the mature form of selected locomotor, non-locomotor, and manipulative skills to understand the various ways the body can move.

ESSENTIAL UNDERSTANDINGS

- There are basic critical elements associated with the performance of manipulative skills.
- Skills need to be practiced and learned in isolation before applying or adapting them to unpredictable games/activities.
- Self and peer assessments/observations help students to learn to move and execute skill patterns correctly, efficiently, and effectively.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>Suggested/Sample Assessments</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>Suggested/Sample Activities</p>
<p>K.1.c. Demonstrate approaching-mature form (at least two critical elements: which are small, isolated parts of the whole skill or movement) used in stationary manipulative skills for tossing and throwing underhand to targets; bounce and catch; toss and catch; kicking stationary ball to target; striking stationary object with paddle; dribbling; rolling ball underhand to target; and trapping and volleying with hand.</p> <p>I can throw a ball.</p> <p>I can catch a ball.</p> <p>I can throw and catch a ball with a partner.</p> <p>I can bounce and catch a ball.</p> <p>I can kick a ball.</p> <p>I can hit a ball.</p> <p>I can dribble a ball.</p> <p>I can roll a ball.</p> <p>I can keep a balloon in the air.</p>	<p>Assessment for Learning</p> <ul style="list-style-type: none"> • Skill checklist • Skill rubric Perform each locomotor skill and movement correctly <p>Assessment of Learning</p> <ul style="list-style-type: none"> • Skill rubric Perform each locomotor skill and movement correctly 	<p>Critical Elements</p> <p><u>Toss</u></p> <ul style="list-style-type: none"> • Face target • Arm swings back and forward <p><u>Throw Underhand</u></p> <ul style="list-style-type: none"> • Face target* • Arm back in preparation for action • Step with opposite foot as throwing arm moves forward* • Release ball between knee and waist level • Follow through to target <p><u>Catch</u></p> <ul style="list-style-type: none"> • Extend arms outward to reach for ball* ○ Thumbs in for catch above the waist ○ Thumbs out for catch at or below the waist • Watch the ball all the way into hands* • Catch with hands only; no cradling against the body • Pull the ball in to the body as the catch is made • Curl the body slightly around the ball <p><u>Bouncing</u></p>	<ul style="list-style-type: none"> • Throw & catch to self, with partner, and/or to a stationary target • Low organized activities involving throwing & catching • Strike a light weight ball/balloon up using two hands • Bounce and strike a light weight ball toward a wall or partner • Bat off a tee or bat using a suspended ball • Use target activities to develop the ability to aim and project an object (toss bean bags into hoops of various sizes and at various distances)

		<ul style="list-style-type: none">• Knees slightly bent• Firm contact with top of ball <p><u>Kicking</u></p> <ul style="list-style-type: none">• Keep eyes on the ball; head down• Take at least two running steps <p><u>Striking with paddle</u></p> <ul style="list-style-type: none">• Watch the ball• Hit with a flat surface <p><u>Volleying</u></p> <ul style="list-style-type: none">• Watch the ball• Strike the ball with finger pads	
Resources: SHAPE America National Standards and Grade-Level Outcomes			

VA SOL Standard: K.1 The student will demonstrate progress toward the mature form of selected locomotor, non-locomotor, and manipulative skills to understand the various ways the body can move.

ESSENTIAL UNDERSTANDINGS

- There are basic critical elements associated with the performance of manipulative skills.
- Skills need to be practiced and learned in isolation before applying or adapting them to unpredictable games/activities.
- Self and peer assessments/observations help students learn to move and execute skill patterns correctly, efficiently, and effectively.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>Suggested/Sample Assessments</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>Suggested/Sample Activities</p>
<p>K.1.d. Demonstrate a minimum of two critical elements used in manipulative skills while moving, to include dribbling with continuous kick (taps) of ball while walking.</p> <p>I can walk and kick a ball with the inside of my foot.</p> <p>I can bounce a ball using my finger pads.</p> <p>I can bounce a ball sitting, kneeling, and standing.</p> <p>I can walk and bounce a ball.</p>	<p>Assessment for Learning</p> <ul style="list-style-type: none"> • Skill rubric <p>Assessment of Learning</p> <ul style="list-style-type: none"> • Skill rubric <p style="text-align: center;">Sample Rubric</p> <p>4 Consistently demonstrates (name movement)</p> <ul style="list-style-type: none"> • Student consistently performs all critical elements. • Student needs no reminders. • Student can perform skill when moving. <p>3 Usually demonstrates (name movement)</p> <ul style="list-style-type: none"> • Student usually performs the critical elements. • Student needs occasional reminders. • Student can perform skill when moving. <p>2 Sometimes demonstrates (name movement)</p> <ul style="list-style-type: none"> • Student sometimes performs some of the critical elements. • Student needs several reminders. • Student can perform skill when stationary. <p>1 Seldom demonstrates (name movement)</p> <ul style="list-style-type: none"> • Student seldom performs the critical elements. • Student needs repeated reminders. • Student can perform skill when stationary. 	<p>Critical Elements</p> <p><u>Dribbling with Feet</u></p> <ul style="list-style-type: none"> • Keep ball close to feet • Use the inside of the foot <p><u>Dribbling with Hands</u></p> <ul style="list-style-type: none"> • Use finger pads • Push ball to floor 	<p><u>Dribbling with feet</u></p> <ul style="list-style-type: none"> • Dribbling and kicking/passing to a stationary target • Dribbling in open spaces using different pathways <p><u>Dribbling with Hands</u></p> <ul style="list-style-type: none"> • Dribble at different levels (low to the ground and waist level) • Low organized activities involving dribbling • Dribble in personal space and general space

Resources: SHAPE America National Standards and Grade-Level Outcomes

VA SOL Standard: K.1 The student will demonstrate progress toward the mature form of selected locomotor, non-locomotor, and manipulative skills to understand the various ways the body can move.

ESSENTIAL UNDERSTANDINGS

- Locomotor and non-locomotor skills form a basis for the performance of various movement challenges.
- Performing a variety of movements with music/rhythms will lead to effective body management.
- Creative dance for students can help develop critical thinking skills, body awareness, and social interaction.

<p>VDQE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>Suggested/Sample Assessments</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>Suggested/Sample Activities</p>
<p>K.1.e. Demonstrate moving to a beat and to rhythmic patterns using basic locomotor and non-locomotor rhythmic patterns.</p> <p>I can match my movements to different music and sounds.</p> <p>I can move to music safely.</p>	<p>Assessment for Learning</p> <ul style="list-style-type: none"> • Teacher observation • Skill check list • Skill rubric <p>Assessment of Learning</p> <ul style="list-style-type: none"> • Teacher observation • Skill check list • Skill rubric 	<ul style="list-style-type: none"> • Rhythm • Beat • Movement • Combinations • Pattern • Leading/following • Mirroring/matching 	<ul style="list-style-type: none"> • Locomotor and non-locomotor movement combinations with/without partner. Use locomotor skills in a rhythmic pattern for self-expression. • Rhythmic activities with manipulatives (e.g., parachutes, rhythm sticks) • Movements with a partner such as leading/following and mirroring/matching • Incorporate ways to communicate rhythms as a basis for dances (action words, rhyme, poetry, story and music) <p>Note: Music for use with students should be pre-approved by the teacher for appropriate lyrics.</p>

Resources: SHAPE America National Standards and Grade-Level Outcomes

VA SOL Standard: K.1 The student will demonstrate progress toward the mature form of selected locomotor, non-locomotor, and manipulative skills to understand the various ways the body can move.

ESSENTIAL UNDERSTANDINGS

- The variety of directions, pathways, and speeds the body moves and how the body balances during these changing movements.
- Critical elements of movement must be done correctly to move efficiently and effectively.
- Performing a variety of movements alone and when moving with others will lead to effective body management.
- Moving at low levels requires a wider base of support for balance.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>Suggested/Sample Assessments</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>Suggested/Sample Activities</p>
<p>K.1.f. Demonstrate moving forward, sideways, and in side-to-side directions. I can show the teacher how to move forward, sideways, and side-to-side.</p> <p>K.1.g. Demonstrate moving at low, medium, and high levels. I can show the teacher how to move when I am (small) and when I am (tall).</p> <p>K.1.h. Demonstrate traveling in straight, curving, and zig zagging pathways. I can the teacher how to move in a straight line, a curved line, and in a zigzag.</p> <p>K.1.i. Demonstrate fast, slow, and moderate speeds. I can move slowly like a (turtle) and fast like a (rabbit). I can start, stop, and change directions when I hear the signal.</p>	<p>Assessment for Learning</p> <ul style="list-style-type: none"> • Teacher observation • Skill check list • Skill rubric • Draw pictures of different pathways <p>Assessment of Learning</p> <ul style="list-style-type: none"> • Skill check list • Skill rubric 	<p>Directions include forward, sideways, and side-to-side</p> <p>Levels include high, medium, and low</p> <p>Pathways include straight, curved, and zigzag</p> <p>Speeds include fast, slow, and moderate</p>	<ul style="list-style-type: none"> • Movement activities in self-space and general space that include static and dynamic movement situations while engaged in locomotor skills • Students locate a personal space, and then perform warm-up exercises • Use specific locomotor skills, pathways and effort to travel through a general space without entering into another student's personal space

Resources: SHAPE America National Standards and Grade-Level Outcomes

VA SOL Standard: K.1 The student will demonstrate progress toward the mature form of selected locomotor, non-locomotor, and manipulative skills to understand the various ways the body can move.

ESSENTIAL UNDERSTANDINGS

- There are basic critical elements associated with the performance of manipulative skills.
- Skills need to be practiced and learned in isolation before applying or adapting to higher level skills.
- Self- and peer-assessments/observations help students learn to move and execute skill patterns correctly, efficiently, and effectively.

<p>VDOE Standard(s) <u>Student Friendly Language</u> What will the student know and be able to do?</p>	<p><u>Suggested/Sample Assessments</u></p>	<p>Terms (Vocabulary) and Content Information</p>	<p><u>Suggested/Sample Activities</u></p>
<p>K.1.j. Demonstrate jumping over a stationary rope and a self-turn single jump.</p> <p>I can jump over a rope.</p> <p>I can turn a rope and jump over it.</p>	<p>Assessment for Learning</p> <ul style="list-style-type: none"> • Teacher observation • Skill check list • Skill rubric <p>Assessment of Learning</p> <ul style="list-style-type: none"> • Skill check list • Skill rubric 	<p>Critical Elements</p> <p><u>Jumping stationary rope</u></p> <ul style="list-style-type: none"> • Face forward, eyes looking straight ahead (not down at rope) • Two feet take off, two feet land <p><u>Jumping self-turn rope</u></p> <ul style="list-style-type: none"> • Face forward, eyes looking straight ahead (not down at rope) • Two feet take off, two feet land • Hands at sides, rope over the head and under feet (timed for jump to occur) 	<ul style="list-style-type: none"> • Basic jump rope skills using a line, stationary rope, and a self-turn rope • Rope turn may be added by a partner or teacher

Resources: SHAPE America National Standards and Grade-Level Outcomes

VA SOL Standard: K.1 The student will demonstrate progress toward the mature form of selected locomotor, non-locomotor, and manipulative skills to understand the various ways the body can move.

ESSENTIAL UNDERSTANDINGS

- The variety of ways the body moves and how the body balances during movement.
- Critical elements of movement must be done correctly to move efficiently and effectively.
- Performing a variety of movements will lead to effective body management.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>Suggested/Sample Assessments</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>Suggested/Sample Activities</p>
<p>K.1.k. Demonstrate one type of roll (narrow or curled).</p> <p>I can roll like a log (pencil).</p> <p>I can roll like an egg.</p>	<p>Assessment for Learning Teacher observation Skill check list Skill rubric</p> <p>Assessment of Learning Skill check list Skill rubric</p>	<ul style="list-style-type: none"> • Tuck • Layout • Extend • Balance • Roll • Bend <p><u>Log (Pencil) Roll (on a mat)</u></p> <ul style="list-style-type: none"> • Lie on back • Arms extended straight over head with hands together • Legs straight and toes pointed, knees together • Body forms a log/pencil (body is long and narrow) • Roll in one direction for a complete turn keeping body in a straight pathway <p><u>Egg Roll (on a mat)</u></p> <ul style="list-style-type: none"> • Lie on back • Knees on chest • Elbows at sides • Chin tucked • Roll sideways onto knees • Push with hands and knees 	<p><u>Static Balances</u> Using different body parts</p> <p>Using different body shapes</p> <p><u>Rotation/Rolling</u> Log roll Egg roll</p> <p><u>Traveling movements</u> Different directions, speed, pathways Animal walks Low balance beam</p>

Resources: SHAPE America National Standards and Grade Level Outcomes

VA SOL Standard: ~~K.2 The student will identify basic structures of the body and basic spatial awareness concepts.~~

ESSENTIAL UNDERSTANDINGS

- ~~• The ability to move in a variety of directions is because of bones and muscles.~~
- ~~• The health of bones and muscles depends on movement.~~
- ~~• The heart is a muscle that needs activity to be strong.~~

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>Suggested/Sample Assessments</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>Suggested/Sample Activities</p>
<p>K.2.a. Explain that the body has muscles and bones that help the body move.</p> <p>I can tell the teacher that bones help me move (give example of a movement or activity).</p> <p>I can tell the teacher that muscles help me move in many ways.</p> <p>K.2.b. Identify that the heart as a special muscle that helps the body move.</p> <p>I can tell the teacher that the heart is a muscle.</p> <p>K.2.c. Explain that moving faster makes the heart beat faster.</p> <p>I can tell the teacher that running makes make my heart beat faster.</p>	<p>Assessment for Learning Teacher observation -Identify picture of the heart</p> <p>Assessment of Learning Identify picture of bones and picture of muscles Identify picture of the heart Identify (name, circle, draw a picture of) one activity that makes the heart beat faster</p>	<ul style="list-style-type: none"> • Bones • Muscles • Heart • Muscle 	<ul style="list-style-type: none"> • Use visuals to depict bones and muscles • Incorporate knowledge concepts into movement activities • Incorporate music—students listen for the music to stop and put the body part specified by the teacher into a particular level or touching the floor (foot—low height/medium height; whole body—low (small), high (tall) height)
<p>Resources: SHAPE America National Standards and Grade Level Outcomes</p>			

VA SOL Standard: K.2 The student will identify basic structures of the body and basic spatial awareness concepts.

ESSENTIAL UNDERSTANDING

- The ability to move and control the body without touching others, objects, and remaining within defined boundaries.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>Suggested/Sample Assessments</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>Suggested/Sample Activities</p>
<p>K.2.d. Demonstrate the concept of personal space.</p> <p>I can move and not touch anyone or anything.</p>	<p>Assessment for Learning Teacher observation Skill check list</p> <p>Assessment of Learning Skill check list</p>	<p>• Personal space</p>	<p>Perform a variety of movements in personal space and general space in games and with music.</p>
<p>Resources: SHAPE America National Standards and Grade Level Outcomes</p>			

VA SOL Standard: K.3 The student will identify basic fitness concepts.

ESSENTIAL UNDERSTANDINGS

- What physical activities are and explore ways to participate in them.
- Identify the health benefits of physical activity.
- The health of bones and muscles depends on movement.
- Physical activity can be done at school, home, and in the community alone, with friends, and family members.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>Suggested/Sample Assessments</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>Suggested/Sample Activities</p>
<p>K.3.a Explain that physical activity helps the body grow.</p> <p>I can tell the teacher one good thing about playing/being active.</p> <p>K.3.b. Identify activities that can be done at home to keep the body healthy.</p> <p>I can draw (or select from pictures) one activity that I can do at home to keep me healthy.</p> <p>K.3.c. Identify physical activities that are done with family and with friends for fun.</p> <p>I can draw one activity to do with my family (or friends) when I am not in school.</p>	<p>Assessment for Learning Student names benefits of physical activities (tells a partner)</p> <p>Select/identify pictures of physical activities that have health benefits</p> <p>Assessment of Learning Oral: Student can name one health benefit of physical activities such as “makes me strong,” “makes my heart strong,” or “makes me feel good.”</p> <p>Written: Draw (or select from several pictures) one activity that can be done at home.</p> <p>Draw (or select from several pictures) one activity that can be done at home with family and/or friends.</p>	<ul style="list-style-type: none"> • Physical activity • Health benefit 	<ul style="list-style-type: none"> • Participate in a variety of moderate and vigorous physical activities. • At various levels of physical activity, have students check their heart rate (fast/slow) by placing their hands over their heart. • At various levels of physical activity, have students check their breathing rate (fast/slow) by placing their hand near their mouth.

Resources: SHAPE America National Standards and Grade Level Outcomes

VA SOL Standard: K.4 The student will use appropriate behaviors and safe practices in physical activity settings.

ESSENTIAL UNDERSTANDINGS

- Safe participation is needed in all physical activity settings when participating alone or with others.
- Safe participation includes cooperative, respectful, and safe behavior.
- Safe participation includes good listening skills, including the student's ability to follow rules and directions.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>Suggested/Sample Assessments</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>Suggested/Sample Activities</p>
<p>K.4.a. Demonstrate cooperative and safe play.</p> <p>I can follow directions. I can follow rules. I can play safely and help my classmates play safely. I can share equipment and space with my class.</p> <p>K.4.b. Demonstrate general and personal space.</p> <p>I can do physical activities by myself. I can control my body. I can stay on task.</p> <p>K.4.c. Identify three classroom (procedural) rules.</p> <p>I can tell the teacher three safety rules for the physical education.</p>	<p>Assessment for Learning Questioning to check for understanding Teacher observation Draw a picture of a safety rule</p> <p>Assessment of Learning Teacher observation (checklist) — Active listening skills by executing procedures and instructions — Demonstrate safety rules for classroom safety and activity-specific safety — Demonstrate ability to work productively and cooperatively with peers during practice of skills and/or during physical activity — Demonstrate ability to work independently and on-task during physical education activities — Move in a safe and controlled manner in personal and general space</p> <p>Written: Draw (or select from several pictures) classroom procedural rules</p>	<ul style="list-style-type: none"> • Cooperation • Safety <p>Safe is defined as not apt to cause harm, injury, or danger.</p> <p>Cooperative is described as:</p> <ul style="list-style-type: none"> • following rules; • encouraging others; • complimenting others; • controlling temper; • wanting everyone to play well and succeed; • working together toward a common goal; • helping classmates; • playing under control; • sharing; and • showing concern for classmates' feelings. 	<ul style="list-style-type: none"> • Students and teachers create classroom rules and expectations • Practice of routines and expectations for behavior • Students participate in activities they can do alone or with a partner • Cooperative games and activities

Resources: SHAPE America National Standards and Grade-Level Outcomes

VA SOL Standard: K.5 The student will identify basic concepts of energy balance.

ESSENTIAL UNDERSTANDINGS

- The body needs energy.
- Energy comes from the foods we eat.
- Fruits and vegetables are important to grow and be healthy.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>Suggested/Sample Assessments</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>Suggested/Sample Activities</p>
<p>K.5.a. Explain that food provides energy for movement. I can tell the teacher that my body needs food to work and to play.</p> <p>K.5.b. Identify one fruit and one vegetable. I can draw a picture of one fruit and one vegetable.</p> <p>K.5.c. Explain that fruits and vegetables help the body keep moving. I can tell the teacher that fruits and vegetables give me energy to move.</p>	<p>Assessment for Learning Student names fruits and vegetables (tells a partner)</p> <p>Select/identify pictures of fruits and vegetables</p> <p>Assessment of Learning Oral: Student can tell the teacher that food gives the body energy.</p> <p>Student can tell the teacher that fruits and vegetables give the body energy.</p> <p>Written: Draw (or select from several pictures) one fruit and one vegetable</p>	<ul style="list-style-type: none"> • Fruit • Vegetable • Energy <p>Note: Be inclusive of a variety of fruits and vegetables that may be more familiar to various cultures.</p>	<ul style="list-style-type: none"> • Use names of fruit and vegetables for small group activities • Use visuals to depict a variety of fruits and vegetables • Incorporate concepts into movement activities • Incorporate poems or songs about fruits and vegetables into rhythmic activities
<p>Resources: http://www.choosemyplate.gov/. See education resources and curriculum ideas</p>			

VA SOL Standard: 1.1 The student will demonstrate approaching mature form and the correct critical elements (small, isolated parts of the whole skill or movement) of locomotor, non-locomotor and manipulative skills.

ESSENTIAL UNDERSTANDINGS

- The body can balance and move in a variety of ways even without traveling.
- Locomotor skills are used in everyday activities.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>
<p>1.1 a) Demonstrate critical elements and distinguish between galloping, leaping, skipping, and sliding.</p> <p>Suggested Learning Targets: I can show how to gallop, leap, skip and slide in my own space.</p> <p>I can identify pictures of (or describe with words) galloping, leaping, skipping, and sliding.</p> <p>1.1 b) Demonstrate non-locomotor skills of twisting, curling, bending, stretching and balancing on different body parts.</p> <p>Suggested Learning Targets: I can show a twist, curl, bend and stretch with my body.</p> <p>I can safely perform balances with different body parts.</p> <p>I can show how to imitate animal movements (i.e.; bear, alligator, frog, inch worm) through a gallop, slide, jump and crawl.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • Teacher observation. • Skill checklist: Perform each locomotor skill and movement correctly. <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> • Cognitive Assessment <ul style="list-style-type: none"> ◦ Verbal ◦ Identify pictures of movements • Skill rubric <p style="text-align: center;">Sample Rubric</p> <p>4— Consistently demonstrates (name movement):</p> <ul style="list-style-type: none"> • Student consistently performs all critical elements. • Student needs no reminders. <p>3— Usually demonstrates (name movement):</p> <ul style="list-style-type: none"> • Student usually performs the critical elements. • Student needs occasional reminders. <p>2— Sometimes demonstrates (name movement):</p>	<ul style="list-style-type: none"> • Gallop <ul style="list-style-type: none"> ◦ Step one foot forward ◦ Bring back foot to front foot (back foot does not go ahead of front foot). • Leap <ul style="list-style-type: none"> ◦ Take off on one foot. ◦ Land on the opposite foot • Skip <ul style="list-style-type: none"> ◦ Step one foot forward ◦ Hop on that foot ◦ Step forward on other foot and hop ◦ Repeat • Sliding <ul style="list-style-type: none"> ◦ Side leads ◦ Stay on balls of feet ◦ Step/close, step/close ◦ Bend knees ◦ No crossover ◦ Both directions • Body Awareness: <ul style="list-style-type: none"> ◦ Body parts (e.g., arms, legs, elbows, knees, head, neck, shoulders, wrist, feet, chest, waist, hips, back, hands) ◦ Body shape (e.g., stretched, curled, wide, narrow, twisted, symmetrical and asymmetrical) ◦ Body action (e.g., flexion, extension, rotation, swing, push, pull) 	<ul style="list-style-type: none"> • Perform the movements in personal space, general space, in games and with music. • Movement related activities such as: <ul style="list-style-type: none"> ◦ Imitating animal movements. http://www.pecentral.org/lessons/ideas/ViewLesson.asp?ID=12468#.V1h5cbfmrcc ◦ Imitating words such as: Swaying—elephants walking and trees swaying in the wind. ◦ Imitating objects or activity movement. http://www.pecentral.org/lessons/ideas/ViewLesson.asp?ID=11042#.V0S4m7fmrcc • Chasing, fleeing and dodging activities. • Bending in the tuck, pike and squat position. • Stretch (log roll, bear walk). • Curling motions in standing, lying and sitting positions. • Body balance challenges.

	<ul style="list-style-type: none"> • Student sometimes performs some of the critical elements. • Student needs several reminders. ↳ Seldom demonstrates (name movement): • Student seldom performs the critical elements. • Student needs repeated reminders. 	<ul style="list-style-type: none"> • Spatial Awareness: <ul style="list-style-type: none"> ◦ Location (e.g., personal and general space) ◦ Directions (e.g., forward, backward, sideways, up, down) ◦ Levels (e.g., high, middle, low) 	
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Resources:

SHAPE America National Standards and Grade Level Outcomes; VDOE Physical Education Instructional Resources

<http://www.doe.virginia.gov/instruction/physed/index.shtml>; <http://www.pecentral.org/lessonideas/cues/CueSearchresults.asp>; www.PEUniverse.com;
http://www.shapeamerica.org/publications/resources/teachingtools/lesson_plans.cfm

VA SOL Standard: 1.1 The student will demonstrate approaching mature form and the correct critical elements (small, isolated parts of the whole skill or movement) of locomotor, non-locomotor and manipulative skills.

ESSENTIAL UNDERSTANDINGS

- There are basic critical elements associated with manipulative skills.
- Skills need to be practiced and learned in isolation before applying or adapting them to unpredictable games/activities.
- Self and peer assessments/observations help students learn to move and execute skill patterns correctly, efficiently and effectively.

VDOE Standard(s) Student Friendly Language What will the student know and be able to do	SUGGESTED / SAMPLE ASSESSMENTS	Terms (Vocabulary) and Content Information	SUGGESTED / SAMPLE ACTIVITIES
<p>1.1 c) Demonstrate approaching mature forms (at least two critical elements) for use in manipulative skills (e.g., rolling ball underhand to target; throwing underhand to targets; underhand toss and catch to self and with a partner; dribbling with hand in general space; dribbling with foot; kicking stationary ball to target; striking stationary object with hand or with short-handled implement; throwing underhand and volleying object upward with various body parts).</p> <p>Suggested Learning Targets:</p> <p>I can show rolling/throwing a ball underhand using the correct cues.</p> <p>I can show dribbling a ball with (hand or foot) using the correct cues while (specific movement such as: stationary or moving).</p> <p>I can demonstrate dribbling a ball with (hand or foot) using the correct cues while (e.g.; specific patterns, speeds,</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • Skill checklist • Skill rubric: Perform each locomotor skill and movement correctly. <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> • Skill rubric: Perform each locomotor skill and movement correctly. <p>Sample Volleying/Striking Rubric Elements</p> <ul style="list-style-type: none"> ○ Keep a balloon in the air when sitting ○ Keep a balloon in the air when standing ○ Keep a balloon in the air when moving 	<ul style="list-style-type: none"> • Rolling: <ul style="list-style-type: none"> ○ Face target ○ Arm back ○ Tic toc swing ○ Step with opposite foot ○ Front knee bent ○ Smoothly release ball near the front foot on the floor ○ Follow through • Throwing Underhand: <ul style="list-style-type: none"> ○ Use one hand ○ Use a pendulum swing ○ Step with opposite foot • Catching: <ul style="list-style-type: none"> ○ Pinkies together if ball is below your waist ○ Thumbs together if ball is above your waist ○ Hands give toward body • Dribbling with hand: <ul style="list-style-type: none"> ○ Keep hand on top of the ball using finger pads ○ Eyes up ○ Keep the ball at waist level • Kicking with foot: <ul style="list-style-type: none"> ○ Identify target ○ Eye on ball ○ Contact ball below the middle of the ball. 	<ul style="list-style-type: none"> • Rolling and underhand throwing activities: <ul style="list-style-type: none"> ○ Toward a wall/partner/target ○ For distance and accuracy http://www.pecentral.org/lessonideas/ViewLesson.asp?ID=132742#.V35oiziYbIU • Dribbling with hands activities: <ul style="list-style-type: none"> ○ Striking the ball down and catching it ○ Striking down continuously with both hands ○ Striking down continuously with one hand ○ Dribbling at different heights ○ Dribbling in different places around the body while stationary • Games/activities for dribbling with hand such as: <ul style="list-style-type: none"> http://www.pecentral.org/lessonideas/ViewLesson.asp?ID=357#.V0SwjLfmrcs • Kicking and dribbling with foot activities: <ul style="list-style-type: none"> ○ Tapping the ball along the ground and moving it ○ Starting and stopping the ball ○ Dribbling in pathways ○ Dribbling around stationary obstacles ○ Dribbling while changing directions. ○ Kicking a stationary ball from a stationary position ○ Kicking in the air (distance, accuracy and height) ○ Approaching a stationary ball and kicking ○ Kicking on the ground, in the air ○ Kicking to targets ○ Kicking stationary to a traveling partner • Striking/volleying with hands activities: <ul style="list-style-type: none"> ○ Striking balloons in the air ○ Striking with an underhand pattern

<p>levels, traveling through obstacles).</p> <p>I can show striking a (specific activity e.g.; balloon, beach ball, different types of balls) using the correct cues for (specific type of striking e.g.; underhand, overhand, etc.).</p> <p>I can show striking an object with a (specific implement e.g.; paddle, etc.) using the correct cues.</p>		<ul style="list-style-type: none"> ○ Contact ball with inside of foot or shoe laces ○ Follow through landing on kicking foot ● Dribbling with feet <ul style="list-style-type: none"> ○ Use the inside of the foot ○ Use small taps to control the ball ○ Head up ○ Keep control of the ball (control box) ● Cues for striking/volleying with hands to self. <ul style="list-style-type: none"> ○ Keep eyes on object ○ Stay under the object ○ Keep it up/no catch 	<ul style="list-style-type: none"> ○ Striking a ball to the wall ○ Striking a ball upward continuously ○ Volleying overhand to the wall ○ Volleying underhand to the wall ○ Volleying to a partner ○ Striking a ball over a line ○ Striking over a low barrier ● Striking with short handled implements: <ul style="list-style-type: none"> ○ Striking a balloon with a paddle ○ Striking a self-tossed object ○ Striking an object straight upward ○ Striking upward continuously ○ Striking downward continuously ○ Striking an object upward with both sides of the paddle ○ Striking an object in desired direction ○ Varying the force of the hit ○ Striking through a target <p>http://www.pecentral.org/lessonideas/ViewLesson.asp?ID=8393#.V0S2QLfmrcs</p> <p>http://www.pecentral.org/lessonideas/ViewLesson.asp?ID=7579#.V0S2brfmrcs</p> <p>http://www.pecentral.org/lessonideas/ViewLesson.asp?ID=359#.V0S3N7fmrcs</p> <ul style="list-style-type: none"> ▲ Low organized games involving throwing and/or catching, kicking, striking, volleying ▲ Stations involving throwing and/or catching, kicking, striking, volleying
<p>Resources: SHAPE America National Standards and Grade Level Outcomes; VDOE Physical Education Instructional Resources http://www.doe.virginia.gov/instruction/physed/index.shtml; http://www.pecentral.org/lessonideas/cues/CueSearchresults.asp; www.PEUniverse.com; http://www.shapeamerica.org/publications/resources/teachingtools/lesson_plans.cfm</p>			

VA SOL Standard: 1.1 The student will demonstrate approaching mature form and the correct critical elements (small, isolated parts of the whole skill or movement) of locomotor, non-locomotor and manipulative skills.

ESSENTIAL UNDERSTANDINGS

- There are basic critical elements associated with manipulative skills while moving.
- Skills need to be practiced and learned in isolation before applying or adapting them to unpredictable games/activities
- Self and peer assessments/observations help students learn to move and execute skill patterns correctly, efficiently and effectively.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>
<p>1.1 d) Demonstrate at least two critical elements for the manipulative skills of catching, throwing underhand, striking, dribbling and kicking, while moving.</p> <p>Suggested Learning Targets:</p> <p>I can show throwing and catching a ball with a partner using the correct cues.</p> <p>I can show catching a ball when thrown to me at different levels.</p> <p>I can show dribbling a ball with (hand or foot) while moving using the correct cues.</p> <p>I can demonstrate dribbling a ball with (hand or foot) using the correct cues while (e.g.; specific pattern, speed, level, traveling through obstacles).</p> <p>I can show striking an object with a (specific implement e.g.; paddle, tennis racket) while moving using the correct cues.</p> <p>I can show striking a (specific activity e.g.; balloon, beach ball,</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • Skill rubric • Oral: State skill cues <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> • Skill rubric <p style="text-align: center;">Sample Rubric</p> <p>4— Consistently demonstrates (name movement)</p> <ul style="list-style-type: none"> • Student consistently performs all critical elements • Student needs no reminders. • Student can perform skill when moving <p>3— Usually demonstrates (name movement)</p> <ul style="list-style-type: none"> • Student usually performs the critical elements • Student needs occasional reminders • Student can perform skill when moving <p>2— Sometimes demonstrates (name movement)</p> <ul style="list-style-type: none"> • Student sometimes performs some of the critical elements 	<ul style="list-style-type: none"> • Catching: <ul style="list-style-type: none"> ◦ Eye on ball. ◦ Pinkies together if ball is below your waist. ◦ Thumbs together if ball is above your waist. ◦ Hands give toward body • Throwing underhand: <ul style="list-style-type: none"> ◦ Face target. ◦ Use dominant hand ◦ Use a pendulum (tic toc) swing ◦ Step with opposite foot ◦ Follow through • Cues for underhand striking with one hand to partner: <ul style="list-style-type: none"> ◦ Hold ball in front of hitting hand ◦ Arm back ◦ Step with opposite foot ◦ Flat hand • Dribbling with hands: <ul style="list-style-type: none"> ◦ Keep hand on top of the ball using finger pads ◦ Eyes up ◦ Keep the ball at waist level <p>Dribbling with feet:</p> <ul style="list-style-type: none"> • Use both the inside of the foot 	<ul style="list-style-type: none"> • Catching activities: <ul style="list-style-type: none"> ◦ Catching an object at different levels while traveling • Dribbling with hands activities: <ul style="list-style-type: none"> ◦ Dribbling and changing speed of travel ◦ Dribbling while changing directions ◦ Dribbling in different pathways ◦ Dribbling around stationary obstacles • Games/activities for dribbling with hand such as: <ul style="list-style-type: none"> ◦ http://www.pecentral.org/lessonideas/ViewLesson.asp?ID=12173#.V0Sy-7fmrce ◦ http://www.pecentral.org/lessonideas/ViewLesson.asp?ID=11729#.V0Szg7fmrce • Kicking and dribbling with foot activities: <ul style="list-style-type: none"> ◦ Dribbling in pathways ◦ Dribbling around stationary obstacles ◦ Dribbling while changing directions. ◦ Dribbling, kicking for a goal ◦ Approaching a rolling ball and kicking ◦ Traveling and kicking to a target ◦ Traveling and kicking to a partner • Striking/volleying with hands activities: <ul style="list-style-type: none"> ◦ Striking balloons in the air ◦ Striking with an underhand pattern ◦ Striking a ball to the wall ◦ Striking a ball upward continuously ◦ Volleying overhand to the wall ◦ Volleying underhand to the wall ◦ Volleying to a partner

<p>different types of balls) while moving using the correct cues for (specific type of striking e.g.; underhand, overhand, etc.).</p>	<ul style="list-style-type: none"> • Student needs several reminders • Student can perform skill when stationary <p>1— Seldom demonstrates (name movement)</p> <ul style="list-style-type: none"> • Student seldom performs the critical elements • Student needs repeated reminders • Student can perform skill when stationary 	<ul style="list-style-type: none"> • Use small taps to control the ball • Head up <p>Striking with short handled implements:</p> <ul style="list-style-type: none"> • Side to target • Step with the opposite foot 	<ul style="list-style-type: none"> • Striking with short handled implements: <ul style="list-style-type: none"> ○ Striking an object upward/downward while walking ○ Striking an object upward/downward while walking and changing directions ○ Striking with a forehand motion ○ Striking with a backhand motion <p>http://www.pecentral.org/lessonideas/ViewLesson.asp?ID=8393#.V0S2QLfmrce</p> <p>http://www.pecentral.org/lessonideas/ViewLesson.asp?ID=7579#.V0S2brfmrce</p> <p>http://www.pecentral.org/lessonideas/ViewLesson.asp?ID=359#.V0S3N7fmrce</p> <ul style="list-style-type: none"> • Low organized games involving throwing and/or catching, kicking, striking and volleying. • Stations involving throwing and/or catching, kicking, striking and volleying. • Have students create games using manipulative skills.
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Resources:
SHAPE America National Standards and Grade Level Outcomes; VDOE Physical Education Instructional Resources
<http://www.doe.virginia.gov/instruction/physed/index.shtml>; <http://www.pecentral.org/lessonideas/cues/CueSearchresults.asp>; www.PEUniverse.com;
http://www.shapeamerica.org/publications/resources/teachingtools/lesson_plans.cfm

VA SOL Standard: 1.1 The student will demonstrate approaching mature form and the correct critical elements (small, isolated parts of the whole skill or movement) of locomotor, non-locomotor and manipulative skills.

ESSENTIAL UNDERSTANDINGS

- The variety of ways the body moves and how the body balances during movement.
- Critical elements of movement must be done correctly to move efficiently and effectively.
- Performing a variety of movements and balance will lead to effective body management.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>
<p>1.1 e) Demonstrate simple educational gymnastic skills to include balancing at different levels, two different rolls (narrow or curled), moving in two different directions and transfer of weight.</p> <p>Suggested Learning Targets:</p> <p>I can show how to balance by performing balances at different levels.</p> <p>I can show how to roll by performing different rolls in a tumbling sequence.</p> <p>I can do four skills in a row: balance, roll, turn and leap/kick/jump and perform them in a tumbling sequence.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • Teacher observation • Skill check list • Skill rubric <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> • Skill check list • Demonstrate a tumbling sequence with 5 different components that travels in at least two directions. <p>Gymnastics Sequence Components:</p> <ol style="list-style-type: none"> 1. Clear beginning shape 2. Two different rolls (narrow or curled) 3. Two balances at two different levels 4. One transfer of weight 5. Clear ending shape <p style="text-align: center;">Sample Rubric</p> <p>4—Consistently demonstrates all critical elements without reminders.</p>	<ul style="list-style-type: none"> • Educational gymnastics foundational skills include: <ul style="list-style-type: none"> ◦ Rolling: Weight transfer over adjacent body parts as in a forward roll. ◦ Step-like actions: Weight transfer using nonadjacent body parts as in a cartwheel. ◦ Flight: Weight transfer involving loss of contact with a supporting surface as in a jump. ◦ Balance: Maintaining stillness over the smallest base possible as in a handstand. • Tuck: Knees bent, drawn up to the chest; body is folded at the waist. Also, a jump with knees to chest. • Pike: A position where the body is bent only in the hips. • Straddle: A sitting position with the legs wide. It can also be performed at height. • Layout: A position in which the body is completely stretched, toes pointed and legs straight. • Extend: To make larger or wider. • Sequence: Two or more skills which are performed together creating a different combination skill. • Balance: Grounded and secure position • Static balance: The ability to maintain one's balance when not moving or to hold a certain position without moving. 	<ul style="list-style-type: none"> • Static Balances <ul style="list-style-type: none"> ◦ Use different body parts ◦ Use different body shapes ◦ At different levels (from low to the ground to standing) • Dynamic Balances <ul style="list-style-type: none"> ◦ Transfer weight ◦ Mule kick/donkey kick ◦ Gaining balance when stopping movements • Rotation/Rolling <ul style="list-style-type: none"> ◦ Log roll ◦ Egg roll ◦ Rocking horse • Traveling movements <ul style="list-style-type: none"> ◦ Different directions, speed, size of steps, levels, pathways and force ◦ Animal walks ◦ Walking on a line ◦ Low balance beam • Movements that combine shapes, levels, directions and pathways into simple educational gymnastics sequences that are either teacher or student created

	<p>3—Usually demonstrates the critical elements with occasional reminders.</p> <p>2—Sometimes demonstrates some of the critical elements with several reminders.</p> <p>1—Seldom demonstrates the critical elements with repeated reminders.</p>	<ul style="list-style-type: none"> ●Dynamic balance: The ability of an object to balance while in motion or switching between positions. Examples include: stork stand, scale, tip-up, tripod, headstand. Cues are tight core. ●Transitions: Movement from one position to another ●Mule kick: (donkey kick modification—kick up one foot at a time) <ul style="list-style-type: none"> ○Place hands flat on the mat ○Keep head down ○Keep arms straight ○Jump with two feet (hands remain still) ○Land on two feet ●Rolls <ul style="list-style-type: none"> ○Forward Roll: Balance on feet in tuck position, chin to chest, tip forward, keep body rounded and tight. ○Log Roll: http://www.pecentral.org/lessonideas/cues/ViewCues.asp?ID=30 ○Egg Roll: Bring your knees up to your chest and hold them with your hands. Lower your chin toward your knees as much as possible; Roll down the mat. ○Rocking Horse: http://www.pecentral.org/lessonideas/cues/ViewCues.asp?ID=29 ●Animal Walks <ul style="list-style-type: none"> ○Crab Walk ○Bear Walk ○Frog Jump ○Seal Crawl 	
<p>Resources: SHAPE America National Standards and Grade Level Outcomes; VDOE Physical Education Instructional Resources http://www.doc.virginia.gov/instruction/physed/index.shtml; www.PECentral.com; www.PEUniverse.com http://www.shapeamerica.org/publications/resources/teachingtools/lesson_plans.cfm</p>			

VA SOL Standard: 1.1 The student will demonstrate approaching mature form and the correct critical elements (small, isolated parts of the whole skill or movement) of locomotor, non-locomotor and manipulative skills.

ESSENTIAL UNDERSTANDINGS

- Creative dance for students can help develop critical thinking skills, body awareness and social interaction.
- Movements can be matched to different music and sounds.
- Performing a variety of movements with music/rhythms will lead to effective body management.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>
<p>1.1 f) Demonstrate moving to a beat or rhythmic pattern in personal (self-space) and general space.</p> <p>Suggested Learning Targets:</p> <p>I can match my movements to different music and sounds by using the correct rhythm in my own personal space.</p> <p>1.1 g) Perform a teacher-led dance.</p> <p>Suggested Learning Targets:</p> <p>I can do rhythmic patterns by mirroring and performing a teacher-led dance.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • Teacher observation using skill checklist: <p style="text-align: center;">Sample</p> <ul style="list-style-type: none"> ○ Student follows along with teacher. ○ Student maintains personal space. ○ Student maintains correct beat or rhythmic pattern. <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> • Skill check list: <p style="text-align: center;">Sample</p> <ul style="list-style-type: none"> ○ Travels safely through general space. ○ Maintains good self-space. ○ Moves to the beat of a slow drum. ○ Moves to the beat of a fast drum. ○ Uses locomotor and non-locomotor skill combinations that flow from one movement skill to the next. 	<ul style="list-style-type: none"> • Rhythm: Regular, repeated pattern of sounds or movements. • Beat: Steady pulse of a song. • Combinations: Putting two or more dance moves together. • Pattern: Repeating a sequence. • Mirroring/matching: Copying another individual's actions. • Quarter Turn: Turn toward one wall and repeat sequence. • Four Wall Dance: A dance containing four quarter turns. 	<ul style="list-style-type: none"> • Locomotor and non-locomotor movement combinations with/without partner. Use locomotor skills in a rhythmic pattern for self-expression. • Rhythmic activities with manipulatives (e.g., parachutes, rhythm sticks) Example: Parachute activities such as: ripples and waves; merry-go-round; the mountain and inside the mountain and popcorn. • Stories created by students to act out. • Movements in relation to self and various obstacles and equipment that may include moving under/over, on/off, in front/behind, near/away, around and alongside. <p>Note: Music without lyrics is recommended. Music with lyrics should be reviewed and pre-approved by the school administration prior to use.</p>

	<ul style="list-style-type: none"> • Perform a teacher-led dance. <p>Criteria:</p> <ul style="list-style-type: none"> ○ Must show consistency in the repetition of the performance. ○ Rhythm and timing of the movements are correctly performed to the music. <p style="text-align: center;">Sample rubric</p> <ul style="list-style-type: none"> 4— Consistently demonstrates all critical elements without reminders. 3— Usually demonstrates the critical elements with occasional reminders. 2— Sometimes demonstrates some of the critical elements with several reminders. 1— Seldom demonstrates the critical elements with repeated reminders. 		
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Resources:
 SHAPE America National Standards and Grade-Level Outcomes; VDOE Physical Education Instructional Resources
<http://www.doe.virginia.gov/instruction/physed/index.shtml>
 GoNoodle.com: create a free account for various dance videos and activities
<https://www.youtube.com/watch?v=6BjBJ7DOR-Q>: Pop See Koo by Koo Koo Kangaroo
<http://www.shapeamerica.org/publications/resources/teachingtools/lesson-plans.cfm>

VA SOL Standard: 1.1 The student will demonstrate approaching mature form and the correct critical elements (small, isolated parts of the whole skill or movement) of locomotor, non-locomotor and manipulative skills.

ESSENTIAL UNDERSTANDINGS

- The body balances and moves in a variety of directions, pathways and speeds.
- Critical elements of movement must be done correctly to move efficiently and effectively.
- Performing a variety of movements alone and when moving with others will lead to effective body management.
- Moving at low levels requires a wider base of support for balance.

VDOE Standard(s) Student Friendly Language What will the student know and be able to do	SUGGESTED / SAMPLE ASSESSMENTS	Terms (Vocabulary) and Content Information	SUGGESTED / SAMPLE ACTIVITIES
<p>1.1 h) Demonstrate forward, sideways, backwards (slow) and side-to-side directions.</p> <p>Suggested Learning Targets:</p> <p>I can show the teacher how to move forward, sideways, side-to-side and backwards (slowly) safely in a physical activity/game.</p> <p>1.1 i) Demonstrate low, medium and high levels.</p> <p>Suggested Learning Targets:</p> <p>I can move when I am small and when I am tall by performing these movements in a physical activity/game.</p> <p>1.1 j) Demonstrate straight, curving and zig-zagging pathways.</p> <p>Suggested Learning Targets:</p> <p>I can move in a straight line, a curved line and in a zig-zag pattern in a physical activity/game.</p> <p>1.1 k) Demonstrate fast, slow and moderate speed movements.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • Teacher observation • Skill check list • Skill rubric • Drawing pictures of different pathways. <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> • Sample cues include: <ul style="list-style-type: none"> ○ Quick changes in speed ○ Visual awareness ○ Quick changes in pathways while traveling ○ Quick changes in direction while traveling <p style="text-align: center;">Sample rubric</p> <p>4— Consistently demonstrates all critical elements without reminders.</p> <p>3— Usually demonstrates the critical elements with occasional reminders.</p> <p>2— Sometimes demonstrates some of the critical elements with several reminders.</p>	<ul style="list-style-type: none"> • Body Awareness: <ul style="list-style-type: none"> ○ Body parts (e.g., arms, legs, elbows, knees, head, neck, shoulders, wrist, feet, chest, waist, hips, back, hands) ○ Body shape (e.g., stretched, curled, wide, narrow, twisted, symmetrical and asymmetrical) ○ Body action (e.g., rotation, swing, push, pull) • Spatial Awareness: <ul style="list-style-type: none"> ○ Location (e.g., personal and general space) ○ Directions (e.g., forward, sideways, backwards (slow only) and side-to-side, clockwise, counterclockwise, up, down, right and left) ○ Levels (e.g., high, middle, low). ○ Pathways (e.g., curved, straight, spiral, zigzag) • Relationships: <ul style="list-style-type: none"> ○ Person (e.g., alone, with partner, with group, meet, part, match, mirror, follow, lead, dodge). ○ Equipment/Objects (e.g., near, far, in, out, over, under, around, on, off, above, below, through). ○ Other (e.g., moving in relation to music, to the environment). • Speeds include: fast, slow and moderate. 	<ul style="list-style-type: none"> • Movement activities in self-space and general space that include static and dynamic movements while engaged in locomotor skills. • Activities that include changing shapes, pathways and levels, with or without equipment. http://www.pecentral.org/lessons/ideas/ViewLesson.asp?ID=10190#.V1h8lrfmrcs • Activities that include chasing, fleeing and dodging. • Movements in relation to self and various obstacles and equipment that may include moving under/over, on/off, in front/behind, near/away, around and alongside.

<p>Suggested Learning Targets:</p> <p>I can move slowly like a turtle and fast like a rabbit.</p> <p>I can start, stop and change directions when I hear the signal during a physical activity/game.</p>	<p>1 Seldom demonstrates the critical elements with repeated reminders.</p>		
<p>Resources:</p> <p>SHAPE America National Standards and Grade-Level Outcomes; VDOE Physical Education Instructional Resources http://www.doe.virginia.gov/instruction/physed/index.shtml; http://www.shapeamerica.org/publications/resources/teachingtools/lesson_plans.cfm www.PEUniverse.com</p>			

VA SOL Standard: 1.1 The student will demonstrate approaching mature form and the correct critical elements (small, isolated parts of the whole skill or movement) of locomotor, non-locomotor and manipulative skills.

ESSENTIAL UNDERSTANDINGS

- There are basic critical elements associated with the performance of jumping rope.
- Skills need to be practiced and learned in isolation before applying or adapting them to higher level skills.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>
<p>1.1 l) Demonstrate consecutive jumps (more than one) with a self-turn rope.</p> <p>Suggested Learning Targets:</p> <p>I can show different ways to jump over a short rope.</p> <p>I can consecutively jump over a short rope.</p> <p>1.1 m) Demonstrate consecutive jumps with a long rope (student-turn).</p> <p>Suggested Learning Targets:</p> <p>I can show different ways to jump over a long rope.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • Teacher observation • Skill check list Sample: <ul style="list-style-type: none"> – Forward jumping – Backward jumping – Jog step jumping – One foot jumping – “Skier” jumping – Crisscross jumping • Self/Peer assessments <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> • Perform a jump rope routine. <p>Criteria—</p> <ul style="list-style-type: none"> ○ Student selection of jump rope moves that are each performed with four repetitions before moving on to the next move. ○ The moves should be jumped continuously. ○ Performance of the moves can be to music or with another student. 	<ul style="list-style-type: none"> • Jumping stationary rope <ul style="list-style-type: none"> ○ Face forward, eyes looking straight ahead (not down at rope). ○ Two feet take off, two feet land. • Jumping self-turn rope <ul style="list-style-type: none"> ○ Face forward, eyes looking straight ahead (not down at rope). ○ Two feet take off, two feet land. ○ Hands at sides, rope over the head and under feet (timed for jump to occur). • Teaching cues <ul style="list-style-type: none"> ○ Put the ends (handles) of the jump rope into each hand. Begin with the jump rope behind your body. ○ Swing the jump rope gently to the front of your body and then to the back. Practice this several times going front and back. ○ Swing the jump rope to the front and let it stay on the ground. Keep the rope still and jump over it. ○ Swing the jump rope to the front of your body and when it gets close to your feet, JUMP! 	<ul style="list-style-type: none"> • Rope turn may be added by a partner or teacher. • Teaching Progression for Short Rope: <ul style="list-style-type: none"> ○ Basic jump rope skills using a line and/or stationary rope and a self-turn rope. ○ Turn, catch with toes/feet and step over. ○ Turn, step over (no jump), repeat. ○ Put the ends (handles) of the jump rope into each hand. Begin with the jump rope behind your body. ○ Swing the jump rope gently to the front of your body and then to the back. Practice this several times going front and back. ○ Swing the jump rope to the front and let it stay on the ground. Keep the rope still and jump over it. Practice this step several times. ○ Swing the jump rope to the front of your body and when it gets close to your feet, JUMP! Practice to get the timing just right. Once you get the timing, continue to jump.

	<p style="text-align: center;">Sample Rubric</p> <p>4 Consistently demonstrates all critical elements without reminders.</p> <p>3 Usually demonstrates the critical elements with occasional reminders.</p> <p>2 Sometimes demonstrates some of the critical elements with several reminders.</p> <p>1 Seldom demonstrates the critical elements with repeated reminders.</p>		
<p>Resources: SHAPE America National Standards and Grade-Level Outcomes; VDOE Physical Education Instructional Resources http://www.doe.virginia.gov/instruction/physed/index.shtml; http://www.shapeamerica.org/publications/resources/teachingtools/lesson_plans.cfm; Make your own rubric using: http://www.rcampus.com/indexrubric.cfm; Mark Rothstein's World of Jump Roping: http://www.worldofropejumping.com/; http://www.doe.virginia.gov/instruction/physed/index.shtml; http://www.shapeamerica.org/jump/peresources/adaptedjumprope1.cfm; http://www.buyjumpropes.net/resources/jump-rope-tricks-and-tips/; http://www.brighthubeducation.com/pre-k-and-k-lesson-plans/64118-kindergarten-jump-rope-lesson-plan/</p>			

VA SOL Standard: 1.2 The student will identify basic anatomical structures and basic spatial awareness concepts.

ESSENTIAL UNDERSTANDINGS

- Bones and muscles allow the body to move in a variety of directions.
- The health of bones and muscles depends on movement.
- The heart is a muscle that needs activity to be strong.
- The heart and lungs work together.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>
<p>1.2 a) Identify where the brain is located.</p> <p>Suggested Learning Targets:</p> <p>I can point to where my brain is location.</p> <p>1.2 b) Explain that muscles attach to bones to help the body move.</p> <p>Suggested Learning Targets:</p> <p>I can tell that muscles connect to bones to help me move in many ways.</p> <p>1.2 c) Describe how the heart and lungs work together to keep the body moving.</p> <p>Suggested Learning Targets:</p> <p>I can tell that my lungs bring air into my body.</p> <p>I can that my heart pumps blood in my body that has the oxygen supplied from my heart.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • Teacher observation (oral questions) • Identify picture of the heart, lungs and brain <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> • Written: Identify picture of bones, heart, lungs and brain. • Identify (name, circle, draw a picture of) one activity that makes the heart beat faster. <p style="text-align: center;">Sample Rubric</p> <p>4 Consistently demonstrates concepts and skills.</p> <ul style="list-style-type: none"> - Student can consistently share (muscles and bones are connected to help me move) - Student needs no cues or hints <p>3 Usually demonstrates concepts and skills.</p> <ul style="list-style-type: none"> - Student can consistently share (muscles and bones are connected to help me move) 	<ul style="list-style-type: none"> • Bones: http://kidshealth.org/en/kids/bones.html • Muscles: http://kidshealth.org/en/kids/muscles.html • Heart: Muscle that pumps blood throughout your body, located in your chest. <ul style="list-style-type: none"> ◦ https://kidshealth.org/en/kids/heart.html ◦ http://www.cyh.com/HealthTopics/HealthTopicDetailsKids.aspx?p=335&np=152&id=1446 • Lungs: Large organs that help you breathe, located in your chest. <ul style="list-style-type: none"> ◦ https://kidshealth.org/en/kids/lungs.html ◦ http://www.cyh.com/HealthTopics/HealthTopicDetailsKids.aspx?p=335&np=152&id=2406 • Cardiorespiratory system: Composed of the heart, blood vessels and respiratory system. <ul style="list-style-type: none"> ◦ The heart is a muscle and gets stronger with exercise so a strong heart doesn't have to work as hard to pump blood to the rest of the body. ◦ Exercise also allows your lungs to hold more air. 	<ul style="list-style-type: none"> • Use visuals to depict bones and muscles. • Incorporate knowledge concepts into movement activities. <ul style="list-style-type: none"> http://www.heart.org/idc/groups/heart-public/@wcm/@global/documents/downloadable/ucm_313195.pdf • Videos: <ul style="list-style-type: none"> ◦ Bones: http://kidshealth.org/en/kids/ssmovie.html ◦ Muscles: http://kidshealth.org/en/kids/msmovie.html?WT.ac=en-k-htbw-main-page-g • http://www.pecentral.org/lessonideas/ViewLesson.asp?ID=132892#.V0jbPev2bIU

<p>1.2 d) Explain that the heart is a muscle that gets stronger with movement.</p> <p>Suggested Learning Targets:</p> <p>I can tell that the heart is a muscle that needs me to move to keep it strong.</p>	<ul style="list-style-type: none"> - Student needs an occasional cue or hint. 2 Sometimes demonstrates concepts and skills. - Student can share (muscles and bones are help me move) Student needs several cues and hints. 1 Seldom demonstrates concepts and skills. - Student cannot share (muscles and bones help me move) even with repeated cues and hints. 	<ul style="list-style-type: none"> ◦ With a strong heart and lungs, your cells get oxygen faster and your body works more efficiently. • Cardiorespiratory Endurance: A measurement of how well your heart, lungs and muscles work together to keep your body active over an extended period of time. 	
<p>Resources:</p> <p>VDOE Physical Education Instructional Resources http://www.doe.virginia.gov/instruction/physed/index.shtml ; http://www.heart.org/HEARTORG/Educator/Educator_UCM_001113_SubHomePage.jsp; www.pecentral.org; https://kidshealth.org/en/kids/heart.html http://www.cyh.com/HealthTopics/HealthTopicDetailsKids.aspx?p=335&np=152&id=1446; http://www.heart.org/idc/groups/heart-public/@wcm/@global/documents/downloadable/ucm_313195.pdf</p>			

VA SOL Standard: 1.2 The student will identify basic anatomical structures and basic spatial awareness concepts.

ESSENTIAL UNDERSTANDING

- Appropriate space is the ability to move and control the body without touching others, objects and remaining within defined boundaries.
- Body awareness, spatial awareness and boundaries, promote safety.
- Movement can occur in general and personal space.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>
<p>1.2 e) Demonstrate appropriate use of personal and general space.</p> <p>Suggested Learning Targets:</p> <p>I can show how I can find personal space by moving and not touching anyone or anything in a physical activity/game.</p> <p>I can show how I can find general space by moving and not touching anyone or anything in a physical activity/game.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • Teacher observation • General space assessment: http://www.pecentral.org/assessment/carspaces_mriggs.pdf <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> • Skill checklist 	<ul style="list-style-type: none"> • Personal/Self Space: A place all by myself where I cannot touch anyone or anything. http://www.pecentral.org/lessonideas/cues/ViewCues.asp?ID=12 • Cues for using Proper Self Space: <ul style="list-style-type: none"> ○ Eyes forward. ○ Speed check. ○ Move to open spaces. ○ Balanced stops. ○ Avoid contact with people or objects. • General Space: All of the space in the whole room. http://www.pecentral.org/lessonideas/cues/ViewCues.asp?ID=10 • Cues for using Proper General Space: <ul style="list-style-type: none"> ○ Eyes checking surroundings to maintain personal space ○ Moves in personal/general space without touching anyone or anything. • Defined boundaries: The lines, marked or unmarked, that tell students where a game or activity should be played. 	<ul style="list-style-type: none"> • Perform a variety of movements in personal space and general space in games and with music. <ul style="list-style-type: none"> ○ http://www.pecentral.org/lessonideas/Cues/ViewCues.asp?ID=245 ○ http://www.pecentral.org/Lessonideas/ViewLesson.asp?ID=11920#.V1h2Fbmrct • Students pretend they are cars. They drive around in general space and then park their cars on the cue in their personal space. If they can open their car doors (put our arm straight out to the side) they have found good personal space. (See summative for lesson assessment.)

Resources:

SHAPE America National Standards and Grade Level Outcomes; VDOE Physical Education Instructional Resources <http://www.doe.virginia.gov/instruction/physed/index.shtml>; www.pecentral.org

VA SOL Standard: 1.3 The student will identify changes in the body that occur during moderate to vigorous physical activity.

ESSENTIAL UNDERSTANDINGS

- Activities that create changes in intensity levels will change the heart and breathing rate which results in the heart growing stronger.
- Physical activity can be done at school, home and in the community alone, with friends and/or with family members

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>
<p>1.3 a) Identify activities to do at home to help the body move and grow.</p> <p>Suggested Learning Targets:</p> <p>I can draw one activity that I can do at home to keep me healthy.</p> <p>I can tell what I can do at home to keep me active.</p> <p>I can tell the difference between healthy and unhealthy activities to do at home.</p> <p>1.3 b) Identify one activity that increases heart and breathing rates to make the heart stronger.</p> <p>Suggested Learning Targets:</p> <p>I can name activities that I do at home that make my heart and breathing faster.</p> <p>1.3 c) Describe and demonstrate activity at two or more intensity levels.</p> <p>Suggested Learning Targets:</p> <p>I can show two levels of intensity by doing activities slowly and then fast.</p> <p>I can name activities that I do at home that makes my heart beat faster and makes me breathe heavier.</p> <p>I can show two different activities at different levels.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • Teacher observation Samples: <ul style="list-style-type: none"> ◦ Students feeling heartbeat. ◦ Students use fingers 1-5 to identify which level of intensity they worked in a physical activity. • Student names benefits of physical activities (tells a partner) • Select/identify/draws pictures of physical activities that have health benefits <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> • Oral: Student can name one health benefit of physical activities such as “makes me strong,” “makes my heart strong,” or “makes me feel good.” • Written: Draw (or select from several pictures) one activity that can be done at home. • Draw (or select from several pictures) one activity that can be done at home with family and/or friends. 	<ul style="list-style-type: none"> • Healthy home activities: Activities that help the body move and grow such as: <ul style="list-style-type: none"> ◦ Running, walking your dog, riding your bike, etc. • Unhealthy home activities: Activities that do not physically benefit your body such as: <ul style="list-style-type: none"> ◦ Watching TV, playing on a tablet and playing video games that do not involve moving. • Fitness activities: Activities that you can perform at home such as: <ul style="list-style-type: none"> ◦ Push ups, curl ups and other exercises. • Intensity Levels (Example) <ul style="list-style-type: none"> ◦ Intensity Level 1—Media Seat ◦ Intensity Level 2—Slow—such as walking ◦ Intensity Level 3—Medium—such as skipping, galloping ◦ Intensity Level 4—Fast—such as jogging/running ◦ Intensity Level 5—Sprinting • Intensity: How hard a person is working during an activity. • Low intensity: Working your body minimally. • High intensity: Working your body at a rate in which your heart beats fast and you breathe quicker. 	<ul style="list-style-type: none"> • Participate in a variety of physical activities at different intensity levels Examples: <ul style="list-style-type: none"> ◦ Level 1: Media Seat—Teacher discussing levels as students sit. ◦ Level 2: Students walk and talk about the gym. ◦ Level 3: Students skip or gallop around the gym; perform a well-known dance (one that all students know the steps); or a Just Dance on YouTube. ◦ Level 4: Students jog or perform an intensity video. ◦ Level 5: Students sprint or perform the intensity video for a longer period of time. • Students participate in a variety of stations that vary in intensity levels. Example: At each station, the students will use their hand as if it were their heart. At the end of each station, they will open and close their hand to show how fast their heart is beating. <ul style="list-style-type: none"> ◦ Station examples: Running small lap, scooters, step ups, reading, board games, exercise specific (list 5 exercises the students will repeat), etc. • The students create and demonstrate an activity that can be performed at two different intensity levels.

Resources: SHAPE America National Standards and Grade Level Outcomes; VDOE Physical Education Instructional Resources http://www.doe.virginia.gov/instruction/physed/index.shtml ; http://www.heart.org/HEARTORG/Educator/Educator_UCM_001113_SubHomePage.jsp			

VA SOL Standard: 1.4 The student will demonstrate basic knowledge and skills for safe and cooperative play, individually and with others, without reminders from teacher.

ESSENTIAL UNDERSTANDINGS

- Safe participation is needed in all physical activity settings when participating alone or with others.
- Safe participation includes cooperative, respectful and safe behavior.
- Safe participation includes good listening skills, including the ability to follow rules and directions.
- Behaving well is as important as playing well.
- Rules promote the safety of the activity/games and helps to keep games fair.
- It is important to be aware of your surroundings, equipment and self-space when moving.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>
<p>1.4 a) Work cooperatively and demonstrate safe equipment use with peers.</p> <p>Suggested Learning Targets:</p> <p>I can show how to share equipment and space with my class in a physical activity/game.</p> <p>I can use equipment in a safe way with a group.</p> <p>1.4 b) Demonstrate safety rules for activity.</p> <p>Suggested Learning Targets:</p> <p>I can follow safety rules in a physical activity/game.</p> <p>1.4 c) Demonstrate safe use of space.</p> <p>Suggested Learning Targets:</p> <p>I can find personal and general space by moving and not touching anyone or</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • Questioning to check for understanding Samples: <ul style="list-style-type: none"> ◦ What does it mean to move safely? ◦ Name a classroom rule. ◦ Explain what it means to be safe when using the equipment. ◦ Explain what good equipment care looks like. ◦ Explain the difference between personal and general space. • Teacher observation Sample: Would consist of each individual teacher's safety rules for activities. • Drawing, cutting a picture from a magazine, or downloading a picture from the computer of a safety rule. <p>Assessment of Learning</p>	<ul style="list-style-type: none"> • Cooperation: Working well together to achieve a goal. Defined as: <ul style="list-style-type: none"> ◦ Following rules; ◦ Encouraging others; ◦ Complimenting others; ◦ Controlling temper; ◦ Wanting everyone to play well and succeed; ◦ Working together toward a common goal; ◦ Helping less skilled classmates; ◦ Playing under control; ◦ Sharing; ◦ Showing concern for classmates' feelings. • Safety: Keeping yourself and others free from harm and danger. *See SOL 1.2.e to see information on the demonstration of appropriate use of personal and general space. • Peer: A person who belongs to the same age group or social group as someone else. • Differences between rules and procedures: <ul style="list-style-type: none"> ◦ Rules are concerned about how students behave and have penalties and rewards. They guide student behavior. Examples include: Respect your classmates in your words and actions. Listen when someone 	<ul style="list-style-type: none"> • Students and teachers create classroom rules and expectations and then practice these routines for behavior. Examples include: <ul style="list-style-type: none"> ◦ http://www.pecentral.org/climate/perules.html ◦ First Day Protocol http://www.pecentral.org/lessonideas/ViewLesson.asp?ID=5868#.V02mKstdHIU ◦ Sportsmanship http://www.pecentral.org/bp/indivBPDisplay.asp?ID=2491&votes=47#.V02m5MtdHIU ◦ Gym Gems http://www.pecentral.org/bp/indivBPDisplay.asp?ID=2312&votes=63#.V02jwctdHIU ◦ High Five Hand http://www.pecentral.org/bp/indivBPDisplay.asp?ID=789&votes=59#.V1bJslfmrcs • Review good equipment care: What it looks like (new) and what it looks like when you mistreat the equipment (broken). (*Emphasize this throughout the year at the beginning of each unit.) • Teach and the guide students through

<p>anything in a physical activity/game.</p> <p>1.4 d) Identify classroom (procedural) rules.</p> <p>Suggested Learning Targets:</p> <p>I can tell the teacher the procedure for (specific procedure i.e.; collecting equipment; emergency drills; arriving late to class; etc.).</p>	<p>(Summative)</p> <ul style="list-style-type: none"> ● Teacher observation (checklist) <ul style="list-style-type: none"> — Active listening skills by executing procedures and instructions — Demonstrate safety rules for classroom safety and activity-specific safety — Ability to work productively and cooperatively with peers during practice of skills and/or during physical activity — Ability to work independently and on-task during physical education activities — Move in a safe and controlled manner in personal and general space ● Written: Draw (or select from several pictures) classroom procedural rules. 	<p>else is talking. Follow the teacher's directions.</p> <ul style="list-style-type: none"> ○ Procedures/routines are concerned about how things are done and have no penalties and rewards, only retraining when not met. Examples include: Entering and exiting the classroom. Collection and distribution of equipment. Appropriate times for moving around the gym. Emergency drills and procedures. Students going to the restroom. Late student arrival. Asking the teacher questions. Lining up for dismissal. Signals and response of students for quiet and attention. ● In establishing procedures/routines, it is important to: <ul style="list-style-type: none"> ○ Ensure that students understand the reason for the procedure. Example: So we can function in an acceptable and organized manner. ○ Clarify the procedure through modeling. ○ Allow students opportunities to practice the routine through rehearsal. ○ Try not to overwhelm students by teaching too many routines at once. The process of establishing routines and procedures may take several days. ○ Revisit the procedures/routine process as often as needed. 	<p>appropriate interactions with peers such as:</p> <ul style="list-style-type: none"> ○ Sharing, taking turns, following rules (with teacher guidance and reinforcement). ○ Staying on task (for short periods with teacher supervision). ○ Listening quietly without interruption (for short periods with teacher reinforcement). ○ Exhibiting self-control. ○ Willingness to play with any child in the class and recognize similarities and appreciate differences in people. ○ Showing group cooperation. ○ Lessons such as: <ul style="list-style-type: none"> Incredible Encouragers— http://www.pecentral.org/lessonideas/ViewLesson.asp?ID=3596#.V02licdHIU Sportsperson of the Day http://www.pecentral.org/bp/indivBPDisplay.asp?ID=1043&votes=74#.V02nDstdHIU ● Spatial awareness games <ul style="list-style-type: none"> Examples: <ul style="list-style-type: none"> ○ Poly Spot Driving http://www.pecentral.org/lessonideas/ViewLesson.asp?ID=9649#.V02jRctdHIU ○ Spaghetti and Meatballs http://www.pecentral.org/lessonideas/ViewLesson.asp?ID=11079#.V02fJstdHIU ○ Hula Hoop Car Road Trip http://www.pecentral.org/lessonideas/ViewLesson.asp?ID=9471#.V02iWMtdHIU
<p>Resources:</p> <p>SHAPE America National Standards and Grade Level Outcomes; VDOE Physical Education Instructional Resources http://www.doe.virginia.gov/instruction/physed/index.shtml; www.pecentral.org; http://www.ncpc.org/topics/conflict-resolution/activities-and-lesson-plans/conflict-management-grades-k-1</p>			

VA SOL Standard: 1.5 The student will identify basic nutrition concepts of energy balance.

ESSENTIAL UNDERSTANDINGS

- The body uses energy from food.
- The food groups are fruits, vegetables, grains, protein and dairy.
- Energy comes from the foods we eat.
- Fruits, vegetables and water are important to grow and be healthy.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>
<p>1.5 a) Name the food groups as identified by the U.S. Department of Agriculture (USDA).</p> <p>Suggested Learning Targets:</p> <p>I can tell what the 5 food groups are.</p> <p>1.5 b) Name one food from each (USDA) food group.</p> <p>Suggested Learning Targets:</p> <p>I can find a picture of one fruit, one vegetable, one grain, one protein and one dairy using food cards.</p> <p>1.5 c) Explain that the body needs water.</p> <p>Suggested Learning Targets:</p> <p>I can explain why my body needs water to work and play.</p> <p>1.5 d) Explain that physical activity uses energy from foods.</p> <p>Suggested Learning Targets:</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> ● Questioning to check for understanding. Samples: <ul style="list-style-type: none"> ○ In order for your parents to drive a car, they have to put gas in it to make it move. What do we put in our bodies to make them move? ○ Name two activities that use a lot of energy and two activities that use less energy. ○ What does energy in and energy out mean? ○ Brenda is always tired when she gets home from school. What should she do to give herself some energy? ● Select/identify pictures of fruits and vegetables ● Student names healthy foods for different meals http://kidshealth.org/classroom/prekto2/personal/nutrition/breakfast_handout1.pdf <p>Assessment of Learning (Summative)</p>	<ul style="list-style-type: none"> ● Fruits: Provide vitamins, minerals and fiber to help the body stay healthy. <ul style="list-style-type: none"> ○ Examples: Oranges, strawberries, peaches, cantaloupe, watermelon, grapes, bananas, blueberries and raspberries. ● Vegetables: Provide vitamins, minerals and fiber to help the body stay healthy. <ul style="list-style-type: none"> ○ Examples: Broccoli, peppers, carrots, peas, corn, spinach, lima beans, potatoes and kale. ● Grains: Provide a source of fiber and gives us energy. <ul style="list-style-type: none"> ○ Examples: Whole grain bread, rice, pasta, oatmeal, cereals and tortillas. ● Protein: Helps build muscle, skin and bones. It is also gives us energy. <ul style="list-style-type: none"> ○ Examples: Chicken, turkey, beef, lunch meat, nuts, fish, pork and eggs. ● Dairy: Helps us build strong, healthy bones <ul style="list-style-type: none"> ○ Examples: Milk, cheese and yogurt. ● Balanced Diet: Contains the proper proportions of foods to maintain good health. ● Nutrition: Eating food to help your body grow and stay healthy. ● Water: Clear liquid you take in to help your body move, grow and be healthy. Water makes up more than half your body weight. You can take in water from water, milk, fruits and vegetables. 	<ul style="list-style-type: none"> ● Use names of food groups for small group activities. ● Use visuals to depict a variety of food group examples. ● http://www.togethercounts.com/sites/togethercounts.com/files/downloads/K_Thru_5/K-2_2.1_Healthy_Eating_Patterns.pdf ● http://www.pecentral.org/lessonideas/VieLesson.asp?ID=132691#.V4qZzyT6upo ● http://www.pecentral.org/lessonideas/VieLesson.asp?ID=9549#.V4qZ_ST6upe ● Technology for small group activity stations: My Plate—Food Group Match Game—Dairy Council http://www.healthyeating.org/Healthy-Kids/Kids-Games-Activities/My-Plate-Match-Game.aspx ● Open PE Curriculum—Nutrition Quick Starts http://openphysed.org/open_blog/nutrition-education-program ● Incorporate poems or songs about the food groups into rhythmic activities. ● https://classroom.kidshealth.org/prekto2/personal/nutrition/energy_balance.pdf

<p>I can tell how my body uses energy from food when I move.</p> <p>I can tell what energy in and energy out means by drawing/circling examples of foods and activities.</p> <p>I can name two foods that give me energy.</p>	<ul style="list-style-type: none"> ● Oral: Student can tell the teacher that foods give the body energy ● Draw three ways you can take in water. Samples: Water, milk, fruits such as oranges, watermelon and peaches, vegetables such as celery, corn or green beans. ● Written: Draw (or select from several pictures) foods and activities that show energy balance. <ul style="list-style-type: none"> ○ http://kidshealth.org/classroom/prekto2/personal/nutrition/energy_balance_handout1.pdf ○ http://kidshealth.org/classroom/prekto2/personal/nutrition/energy_balance_quiz.pdf 	<ul style="list-style-type: none"> ● Reasons you need water: <ul style="list-style-type: none"> ○ To help your blood carry oxygen to all your body parts. ○ To help your body fight off illness. ○ To help your body digest food or break it down. ○ To help our body sweat so we can cool down. ● Energy: Fuels our bodies to move, breathe, digest food, think, pump blood, etc. ● Energy In: The energy we get from eating food from the five food groups and drinking water. <ul style="list-style-type: none"> ○ Examples—Fruits, vegetables, protein, whole grains and dairy. ● Energy Out: The energy we burn by doing physical activity. <ul style="list-style-type: none"> ○ Examples—Riding bikes, swimming, running, playing tag, playing sports, jumping rope. ● Energy Balance: The energy you burn equals the energy you consume with food and drinks. ● Calorie: Energy in food and drinks that helps fuel our bodies. <p>Note: Be inclusive of a variety of food examples that may be more familiar to various cultures.</p>	<ul style="list-style-type: none"> ● My Plate and Food Cards: http://www.fns.usda.gov/sites/default/files/dmp_foodcards.pdf ● http://www.fns.usda.gov/multimedia/tn/su/mp_level1.pdf
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Resources:
<http://www.choosemyplate.gov/> ; See education resources and curriculum ideas; VDOE Physical Education Instructional Resources
<http://www.doe.virginia.gov/instruction/physed/index.shtml> ; http://www.heart.org/HEARTORG/Educator/Educator_UCM_001113_SubHomePage.jsp
www.GoNoodle.com ; <http://www.togethercounts.com/sfts/home>; <https://jr.brainpop.com/health> ; www.fns.usda.gov/tn/serving-myplate-yummy-curriculum
You Tube—Albert and Junior: Why do I have to drink water?; <http://kidshealth.org/classroom/prekto2/personal/nutrition/breakfast.pdf>;
http://kidshealth.org/classroom/prekto2/personal/nutrition/school_lunch.pdf
https://classroom.kidshealth.org/prekto2/personal/nutrition/energy_balance.pdf

VA SOL Standard: 2.1 The student will demonstrate approaching (at least two critical elements) and mature form (all correct critical elements) of locomotor, non-locomotor and manipulative skills.

ESSENTIAL UNDERSTANDINGS

- Catching is the receiving and controlling of an object by an individual using their body.
- Kicking and passing requires accuracy, body control, point of contact, force and direction.
- Dribbling is best performed when students use the inside (in-step) or outside edge of their foot.
- Volleying is a specific striking skill using an underhand or overhand pattern.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>
<p>2.1 a) Demonstrate individually and with a partner the mature forms of manipulative skills for throwing underhand; catching underhand tossed or thrown ball; kicking/passing stationary ball to a partner or to a target; foot dribble with control while walking, striking, consecutive upward volleying with hand(s) and stationary hand dribbling.</p> <p>Suggested Learning Targets:</p> <p>I can show throwing a ball underhand using the correct cues.</p> <p>I can show the correct hand positions when catching a ball thrown to me at different levels.</p> <p>I can (kick/pass) a stationary ball to a (partner/target) using the correct cues.</p> <p>I can dribble a ball with my feet showing control while walking.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • Teacher observation with instructional feedback • Skill checklist • Skill rubric – Perform each manipulative skill and movement correctly <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> • Teacher observation • Identify pictures of manipulative skills • Skill rubric *Cues located under “Content Information” <p style="text-align: center;">Sample Rubric</p> <p>4 – Consistently demonstrates all critical elements without reminders.</p> <p>3 – Usually demonstrates the critical elements with occasional reminders.</p>	<ul style="list-style-type: none"> • Throwing underhand with dominant hand: <ul style="list-style-type: none"> ○ Face target ○ Pendulum swing ○ Step with the opposite foot ○ Throws with appropriate force ○ Follows through toward the target • Catching: <ul style="list-style-type: none"> ○ Watch the ball ○ Use open hands to grab the ball ○ Pinkies together if ball is below the waist ○ Thumbs together if ball is above the waist ○ Pulls the object into the body • Kicking/Passing: <ul style="list-style-type: none"> ○ Identify target ○ Eye on the ball ○ Contact middle of ball ○ Contact ball with the inside or outside of the foot ○ Follow through toward your target for accuracy ○ Land on kicking foot when kicking the ball ○ Passes should be performed with the right amount of force • Foot Dribble: <ul style="list-style-type: none"> ○ Keep the ball close to feet ○ Use both the inside and outside of foot 	<ul style="list-style-type: none"> • Low organized/small games involving throwing underhand and/or catching, kicking, striking, volleying using a variety of objects • Stations involving throwing and/or catching, kicking, striking, volleying • Catching: <ul style="list-style-type: none"> ○ Catching an object at different levels ○ Moving to catch varying distances ○ Catching while traveling ○ Catching to throw quickly to a stationary target ○ Catching to throw quickly to a moving target ○ http://www.pecentral.org/lessonideas/ViewLesson.asp?ID=10385#.V6jFzrf6vcs ○ http://www.pecentral.org/lessonideas/ViewLesson.asp?ID=3797#.V6jHY7f6vcs • Underhand throwing such as: throwing at a variety of targets varying force, level, direction, distance and accuracy. <ul style="list-style-type: none"> ○ http://www.pecentral.org/lessonideas/ViewLesson.asp?ID=132742#.V35oiziYbtU ○ http://www.pecentral.org/lessonideas/ViewLesson.asp?ID=132690#.V6jFbf6vcs ○ http://www.pecentral.org/lessonideas/ViewLesson.asp?ID=8684#.V6jGdLf6vcs • Suggestions for passing a ball with the feet:

<p>I can show striking a (specific activity e.g.; balloon, beach ball, different types of balls) using the correct cues for (specific type of striking e.g.; underhand, overhand, etc.).</p> <p>I can show striking an object with a (specific implement e.g.; paddle, bat, etc.) using the correct cues.</p> <p>I can show dribbling a ball with my hand using the correct cues while stationary.</p>	<p>2— Sometimes demonstrates some of the critical elements with several reminders.</p> <p>1— Seldom demonstrates the critical elements with repeated reminders.</p>	<ul style="list-style-type: none"> ○ Use small taps to control the ball ○ Look forward ● Striking (bat/paddle) <ul style="list-style-type: none"> ○ Watch the ball ○ Keep side to the target ○ Use a handshake grip ○ Keep a stiff wrist ○ Watch the ball ○ Bring arm back ○ Step with the opposite foot ○ Make contact with the ball with a flat surface ○ Follow through with the paddle/bat/stick to the target ● Striking/volleying with hands to self. <ul style="list-style-type: none"> ○ Keep eyes on object ○ Stay under the object ○ Keep it up/no catch ● Hand Dribble <ul style="list-style-type: none"> ○ Keep hand on top of the ball ○ Use finger pads ○ Push the ball to floor ○ Keep the ball at waist level ○ Keep eyes looking forward ○ Ball is under control while moving 	<ul style="list-style-type: none"> ○ Using the preferred foot ○ Using the non-preferred foot ○ To stationary receivers positioned in front of and to the side of the sender ○ To a stationary receiver using varied amounts of force ● Foot dribble: <ul style="list-style-type: none"> ○ Tap or push balls with different parts of the foot while traveling ○ Dribble balls while changing direction and force ○ Dribble a ball to a stationary target ○ Dribble balls while traveling around scattered obstacles ○ http://www.pecentral.org/lessonideas/ViewLesson.asp?ID=7927#.V6jgLbf6vcs ● Teaching sequence for striking/volleying with hands: <ul style="list-style-type: none"> ○ Striking with an underhand pattern. ○ Striking a ball to the wall. ○ Striking a ball upward continuously. ○ Volleying to a partner. ○ Volleying overhand to the wall. ○ Volleying underhand to the wall. ○ Striking a ball over a line. ○ Striking over a low barrier. ○ Playing one-bounce volleyball. ○ Volleying over a net. ○ Volleying continuously to a partner. ○ Volleying three on three. ○ Serving underhand over the net. ○ Playing small group modified volleyball. ○ http://www.pecentral.org/lessonideas/ViewLesson.asp?ID=8393#.V6jTFbf6vct
<p>Resources: SHAPE America National Standards and Grade Level Outcomes; http://www.pecentral.org/lessonideas/cues/CueSearchresults.asp; VDOE Physical Education Instructional Resources http://www.doe.virginia.gov/instruction/physed/index.shtml;</p>			

VA SOL Standard: 2.1 The student will demonstrate approaching (at least two critical elements) and mature form (all correct critical elements) of locomotor, non-locomotor and manipulative skills.

ESSENTIAL UNDERSTANDINGS

- Gymnastics skills use the entire body.
- Stability increases in balancing when lowering the center of the body or creating a larger base of support.
- Flight can be demonstrated with jumps and leaps.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>
<p>2.1 b) Demonstrate a simple educational gymnastic sequence, including balance, roll, transfer of weight from feet to hands and flight.</p> <p>Suggested Learning Targets:</p> <p>I can show how to balance and demonstrate this by performing balances at different levels.</p> <p>I can show how to roll and demonstrate this by performing different rolls in a tumbling sequence.</p> <p>I can transfer weight from my hands to feet by doing a mule kick/donkey kick.</p> <p>I can show flight doing leaps and jumps.</p> <p>I can do four skills in a row: balance, roll, turn and leap/kick/jump and demonstrate this by performing them in a tumbling sequence.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • Teacher observation with instructional feedback • Skill checklist <hr/> <ul style="list-style-type: none"> • Oral: Teacher/Peer discussion <ul style="list-style-type: none"> ○ How could you/your partner improve their (skill)? ○ What do you think is the most important part of the (skill) we learned today? ○ What is your favorite type of flight and why? ○ What is your favorite (balance, roll, turn, leap, transfer of weight, jump)? ○ How do you correctly perform a (skill)? <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> • Skill checklist • Create and perform a tumbling sequence with 5 different components that travels in at least two directions. ○ Gymnastics Sequence Components: 	<ul style="list-style-type: none"> • Educational gymnastics foundational skills include <ul style="list-style-type: none"> ○ Rolling: Weight transfer over adjacent body parts as in a forward roll or log roll. ○ Step like actions: Weight transfer using nonadjacent body parts as in a cartwheel. ○ Flight: Weight transfer involving loss of contact with a supporting surface as in a jump or leap. ○ Balance: Maintaining stillness over the smallest base possible as in a handstand. • Vocabulary: <ul style="list-style-type: none"> ○ Tuck: A jump with knees to chest. ○ Pike: A position where the body is bent only in the hips. ○ Straddle: A sitting position with the legs wide. It can also be performed at height. ○ Layout: A position in which the body is completely stretched, toes pointed and legs straight. ○ Extend: To make larger or wider. ○ Sequence: Two or more skills which are performed together creating a different combination skill. ○ Transitions: Movement from one position to another. 	<ul style="list-style-type: none"> • Displaying assessment rubrics/checklists when skills are introduced. • Rotation/Rolling <ul style="list-style-type: none"> Examples include log roll, egg roll, forward roll, shoulder roll, tuck roll, straddle roll. ○ Forward Roll: Balance on feet in tuck position, chin to chest, tip forward, keep body rounded and tight. ○ Log Roll: Lie on back with legs straight and toes pointed. Arms are extended over head with hands together. Knees are together. Keep body stiff like a log and roll with the hips. Maintain a straight pathway. http://www.pecentral.org/lessonideas/cues/ViewCues.asp?ID=30 ○ Egg Roll: Bring your knees up to your chest and hold them with your hands. Lower your chin toward your knees as much as possible; Roll down the mat. ○ Rocking Horse: http://www.pecentral.org/lessonideas/cues/ViewCues.asp?ID=29 • Transfer of weight: <ul style="list-style-type: none"> Examples include mule kick/donkey kick, cartwheels/round-offs.

	<ul style="list-style-type: none"> • Clear beginning • 2 different rolls (narrow or curled) • 3 balances at two different levels • 2 transfers of weight • 1 or more elements of flight • Clear and smooth transitions throughout with a clear ending <p style="text-align: center;">Sample Rubric</p> <p>4—Consistently demonstrates all critical elements without reminders.</p> <p>3—Usually demonstrates the critical elements with occasional reminders.</p> <p>2—Sometimes demonstrates some of the critical elements with several reminders.</p> <p>1—Seldom demonstrates the critical elements with repeated reminders.</p>	<ul style="list-style-type: none"> • Balancing: An even distribution of weight that allows a person or object to remain upright and steady. Balance is maintained by keeping the center of gravity over the base of support; <ul style="list-style-type: none"> ○ Center of gravity: The weight center of the body; the point around which the body weight is equally distributed. Example—Holding the arms out for better balance when walking a line or low beam. When the base is narrow or small it is necessary to compensate by holding a pole (like a tightrope walker) or our arms out to lower our center of balance. This makes the center of balance closer to the base. Normally our center of balance is just below the ribcage. ○ Static balance: The ability to maintain one's balance when not moving or to hold a certain position without moving. ○ Dynamic balance: The ability of an object to balance while in motion or switching between positions. Examples include: stork stand, scale, tip up, tripod, headstand. Cues are tight core. Core strength (lower back and abdominals). 	<ul style="list-style-type: none"> • Flight Examples include leaps, jumps and springboards. http://www.pecentral.org/lessonideas/ViewLesson.asp?ID=340#.V5zvQstdH • Balances (1, 2, 3 and 4 point supports)—Examples include using different body parts, using different body shapes, at different levels (from low to the ground to standing); gaining balance when stopping movements; and line or low beam. • Center of gravity—Examples: <ul style="list-style-type: none"> ○ Students balance on their index or pointer finger a ruler/pencil/straw/etc. Students are asked how they had to place the object on their finger to balance it. The middle of the object is the center of gravity. ○ Students walk on a low beam and then asked why they hold their arms out to the side. Teacher explains the narrow base and the arms compensating to lower center of balance. This makes the center of balance closer to the base. Normally the center of balance is just below the ribcage. Teacher/students use building blocks on a small base to see what happens.
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Resources:

SHAPE America National Standards and Grade Level Outcomes;
VDOE Physical Education Instructional Resources <http://www.doe.virginia.gov/instruction/physed/index.shtml>;
http://www.nicurriculum.org.uk/docs/foundation_stage/areas_of_learning/physical_development/FMS_Balance.pdf (Copyright allows for noncommercial use of curriculum products)

VA SOL Standard: 2.1 The student will demonstrate approaching (at least two critical elements) and mature form (all correct critical elements) of locomotor, non-locomotor and manipulative skills.

ESSENTIAL UNDERSTANDINGS

- There are basic critical elements associated with the performance of rhythmic skills.
- Skills need to be practiced and learned in isolation before applying or adapting to rhythmic/dance activities.
- Movements can be matched to different music and sounds.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>
<p>2.1 c) Demonstrate moving to a rhythm by performing basic dance sequences (teacher or student led/created dances).</p> <p>Suggested Learning Targets:</p> <p>I can do a dance alone or with my classmates/partners.</p> <p>I can match my movements to different music and sounds by using the correct rhythm</p> <p>I can do rhythmic patterns by mirroring and performing a teacher led dance.</p> <p>I can create a sequence of movements and demonstrate them to my partner.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • Teacher observation • Checklist Example: <ul style="list-style-type: none"> ○ Student follows along with teacher/classmate. ○ Student maintains general and personal space. ○ Student maintains correct beat or rhythmic pattern. ○ Student can demonstrate a sequence of movements. • Self/Peer assessment • Oral: Teacher/Peer discussion— <ul style="list-style-type: none"> ○ What is a sequence? ○ What are the individual movements in the sequence? ○ Does the sequence follow a rhythm or beat? ○ What is the rhythm or beat? <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> • Performance of a teacher led dance. Criteria: <ul style="list-style-type: none"> ○ Must show consistency in the repetition of the performance, ○ Rhythm and timing of the 	<ul style="list-style-type: none"> • Rhythm: Regular, repeated pattern of sounds or movements. • Beat: Steady pulse of a song. • Combinations: Putting two or more dance moves together. • Pattern: Repeating a sequence. • Mirroring/matching: Copying another individual's actions. • Sequence: A particular order in which related events, movements or things follow each other. 	<ul style="list-style-type: none"> • Rhythm progression: Example <ul style="list-style-type: none"> ○ Follow the rhythm of a (drum, tambourine, bell, rhythm sticks, etc.); walk forward with straight upper trunk. ○ Follow the rhythm of a (drum, tambourine, bell, rhythm sticks, etc.); walk backwards, keep the upper trunk straight, eyes looking sideways and avoid colliding. ○ Follow the beats of a selected music piece, walk forward then backwards. ○ Walk with music and change directions in response to signals. ○ Stand in pairs side by side, hold each other's hands; walk forward or backwards at the same pace as the music, change movements in response to the signals given by the teacher. ○ Stand in pairs face to face, one walk forward, the other backwards; change role in response to the signals given by the teacher. ○ Stand in pairs face to face, hands down; both walk four steps backwards with music, then four steps forward back to the original position. ○ Stepping and clapping on the spot to music. ○ Facing partner, one moves forward and the other backwards while stepping and clapping hands for 4 beats, then step four steps to turn 90° (8 beats in total); the pair standing side by side.

	<p>movements are correctly performed to the music.</p> <p style="text-align: center;">Sample rubric</p> <p>4—Consistently demonstrates all critical elements without reminders.</p> <p>3—Usually demonstrates the critical elements with occasional reminders.</p> <p>2—Sometimes demonstrates some of the critical elements with several reminders.</p> <p>1—Seldom demonstrates the critical elements with repeated reminders.</p>		<ul style="list-style-type: none"> ● Rhythmic and sequential movement activities with manipulatives (e.g., rhythm sticks, noodles, basketball, hula hoop, scarf/scarves, etc.). Examples: <ul style="list-style-type: none"> ○ http://www.pecentral.org/lessonideas/ViewLesson.asp?ID=132671#.V_kGI_3rupe ○ http://www.pecentral.org/mediacenter/video-core-dance-with-sticks.html ● Locomotor and non-locomotor movement combinations with/without partner. ● Use locomotor skills in a rhythmic sequence for self-expression. ● Students create an original sequence of movements to music/rhythms. ● Optional teacher lead dances such as line, partner, 4 wall, etc. Example: <ul style="list-style-type: none"> ○ http://www.pecentral.org/mediacenter/video-chachachallenge.html <hr/> <p>Note: Music without lyrics is recommended. Music with lyrics should be reviewed and pre-approved by the school administration prior to use.</p>
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Resources:

SHAPE America National Standards and Grade-Level Outcomes; <http://www.pecentral.org/mediacenter/videolessons.html>;
VDOE Physical Education Instructional Resources <http://www.doe.virginia.gov/instruction/physed/index.shtml>;
<https://www.pinterest.com/nmaedougall72/2nd-grade-movement-breaks-music/>;
<https://app.genoodle.com/channels/the-kidz-bop-kids/best-day-of-my-life?source=explore-newest&order=2>;
<http://sites.uci.edu/class/second-grade/dance-second-grade/grade-2-dance-lesson-1/>; <http://www.education.com/worksheets/the-arts-dance/>;

VA SOL Standard: 2.1 The student will demonstrate approaching (at least two critical elements) and mature form (all correct critical elements) of locomotor, non-locomotor and manipulative skills.

ESSENTIAL UNDERSTANDINGS

- There are basic critical elements associated with the performance of locomotor skills.
- Skills need to be practiced and learned in isolation before applying or adapting them to small games/activities.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>
<p>2.1 d) Demonstrate mature form for hop, jump, leap, skip, run, jog, gallop and slide.</p> <p>Suggested Learning Targets:</p> <p>I can leap by taking off on one foot and landing on the opposite foot.</p> <p>I can explain and show how to (include one or more specific movements: hop, jump, leap, skip, run, jog, gallop and side slide).</p> <p>I can perform locomotor skills (skipping, galloping, hopping, running, walking), using a variety of pathways and speeds while maintaining body control.</p> <p>2.1 e) Demonstrate and differentiate between jogging and running.</p> <p>Suggested Learning Targets:</p> <p>I can explain and show the difference between jogging and running.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • Oral: State skill cues • Self/Peer assessments <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> • Skill rubric *Cues located under "Content Information" <p style="text-align: center;">Sample Rubric</p> <p>4—Consistently demonstrates all critical elements without reminders.</p> <p>3—Usually demonstrates the critical elements with occasional reminders.</p> <p>2—Sometimes demonstrates some of the critical elements with several reminders.</p> <p>1—Seldom demonstrates the critical elements with repeated reminders.</p>	<ul style="list-style-type: none"> • Skip <ul style="list-style-type: none"> ○ Step one foot forward ○ Hop on that foot ○ Step forward on other foot. ○ Hop on that foot ○ Repeat the movements • Slide <ul style="list-style-type: none"> ○ Point side of the body to a target ○ Knees bent ○ Step sideways with the foot closest to the target ○ Quick hop off of both feet ○ Pull the other foot up next to the lead foot ○ Land on both feet ○ Repeat the movements • Jump <ul style="list-style-type: none"> ○ Begin on two feet ○ Bend knees ○ Take off in forward direction ○ Flight is greater distance; as far as student can go ○ Land on two feet ○ Repeat the movements • Gallop <ul style="list-style-type: none"> ○ Step one foot forward ○ Hop on that foot and at same time bring back foot to heel of front foot (back foot does not go ahead of front foot) ○ Repeat the movements • Hop <ul style="list-style-type: none"> ○ Begin on two feet ○ Bend knees 	<ul style="list-style-type: none"> • Movement activities (human or animal) to distinguish the similarities/differences in movements Example: Hop and jump <ul style="list-style-type: none"> ○ A jump should be done with all the feet, be it two or four (animal/human) and that the whole body is off the ground becoming airborne. Jumping is also a means of locomotion and some animals such as frog jumps to escape predators. ○ A hop is most often done with only one foot to spring the body into the air. It is a light and small jump, usually on the same place but not always. A hop is performed by leaping off the ground with the body totally in the air, defying gravity for a while, usually done with only one leg especially for humans. In animals such as rabbits or kangaroos, they can use both their feet to hop. • Activities for jumping, hopping and leaping: <ul style="list-style-type: none"> ○ Hoops, carpet squares or poly spots to spread students out and create 'stepping stone' paths for jumping, hopping and leaping on and off. ○ Mark out squares with chalk or masking tape for hopscotch. ○ Use folded mats for jumping on and off. ○ Hang streamers up high for jumping and reaching. ○ Hurdles, cones and rods can be used for jumping and leaping over. ○ Jump horizontally or vertically. Mark the distances with a tape measure, chalk or masking tape. • Obstacle courses Example: <ul style="list-style-type: none"> ○ Station 1: Frog Jump— five lily pads (hoops) in a

		<ul style="list-style-type: none"> ○ Take off in forward direction ○ Flight is a short distance ○ Land on two feet ○ Repeat the movements ● Leap <ul style="list-style-type: none"> ○ Begin on two feet ○ Bend knee of take-off leg ○ Take off on one foot ○ Flight is as far as student can leap ○ Land on the opposite foot ○ Repeat the movements ● Run <ul style="list-style-type: none"> ○ Leaning forward ○ Knees bent ○ Hands held near chest with arms pumping ○ Soft heel to toe landing ○ Balanced and continuous movement ● Jogging: <ul style="list-style-type: none"> ○ It is a slower, less intense form of running. ○ It can be used a warm up or cool down. ○ Heart rate and breathing will increase moderately. ● Running: <ul style="list-style-type: none"> ○ It is a faster, more intense form of jogging. ○ It is very good for cardiorespiratory endurance and muscular endurance. ○ Heart rate and breathing increase. ○ Warming up is recommended before starting any running activity. 	<p>row</p> <ul style="list-style-type: none"> ○ Station 2: Lion Leap—run and leap over three lines or skipping ropes set apart ○ Station 4: Monkey Jog— from cone to cone ○ Station 5: Bunny Hop—carpet squares or poly spots set close together ○ Station 5: Sliding Snails—side slide down a line on the gym floor ○ Station 6: Horse Gallop—gallop from one marker to the next. ○ Station 7: Crawling Bear—crawl through the tunnel back to Station 1. <ul style="list-style-type: none"> ● Action stories: Students move to the actions throughout a story. Can be a well-known story that incorporate movement e.g. 'The Three Little Pigs' or a story made up by the teacher that includes different actions Example—A day at the Beach: One day (add a child's name) was going to the beach with (another child or two). The sand was very hot so they had to run to the water's edge where little waves lapped at their feet. They jumped over the waves and suddenly a big wave came. They were all knocked over but when they stood up they galloped away from the waves. They came to ten jellyfish lying on the beach and they hopped over each one..... Teacher continues with the story incorporating ideas from children and utilizing movements inspired by the story. ● Pacing: A rate of movement, especially in running and jogging. http://www.pecentral.org/lessonideas/ViewLesson.asp?ID=12882#.V6NemMtdHIU ● Relays involving both running and jogging.
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Resources:

SHAPE America National Standards and Grade-Level Outcomes;
VDOE Physical Education Instructional Resources <http://www.doe.virginia.gov/instruction/physed/index.shtml>;
<http://www.pecentral.org/lessonideas/cues/CueSearchresults.asp>; http://cd1.edb.hkedcity.net/cd/pe/TC/rr/FM_e.pdf;
http://www.thephysicaleducator.com/resources/games/foundational_movement/

VA SOL Standard: 2.1 The student will demonstrate approaching (at least two critical elements) and mature form (all correct critical elements) of locomotor, non-locomotor and manipulative skills.

ESSENTIAL UNDERSTANDINGS

- Force can be adjusted to improve accuracy and control when throwing, kicking and striking equipment.

VDOE Standard(s) Student Friendly Language What will the student know and be able to do?	SUGGESTED / SAMPLE ASSESSMENTS	Terms (Vocabulary) and Content Information	SUGGESTED / SAMPLE ACTIVITIES
<p>2.1 f) Demonstrate manipulative skills using increased force (hard) and decreased force (soft) with control.</p> <p>Suggested Learning Targets:</p> <p>I can throw a ball with soft and hard force to a partner that is close to me and far away.</p> <p>I can hit a ball with soft and hard force, a short distance and a long distance.</p> <p>I can kick a ball with soft and hard force to a target close to me and to a target far from me.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> Teacher observation Oral: State skill cues. Written: http://www.pecentral.org/assessment/pdf/stronglightforceassess.pdf <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> Skill rubric for throwing, kicking and striking with varying force. *Skill cues located under "Content Information" in 2.1.a & 2.1.h <p style="text-align: center;">Sample Rubric</p> <ol style="list-style-type: none"> Consistently demonstrates all critical elements without reminders. Usually demonstrates the critical elements with occasional reminders. Sometimes demonstrates some of the critical elements with several reminders. Seldom demonstrates the critical elements with repeated reminders. 	<ul style="list-style-type: none"> Force <ul style="list-style-type: none"> Strength or energy used on an object. Pushing or pulling on something is applying a force to it. Force makes things move or makes things change their motion. Motion is the change in position of an object because of a force. Pushes and pulls can start motion, stop motion, speed it up, slow it down or change its direction. Effort movement concepts for force include: strong/light and hard/soft. Distance: An amount of space between two objects or people Manipulative skills such as throwing, kicking, batting, striking/volleying with less/more force for shorter/longer distance <p>Examples:</p> <ul style="list-style-type: none"> Throwing underhand/overhand: *(See 2.1.h for additional cues) <ul style="list-style-type: none"> Throw the ball with less/more force for shorter/greater distance Head up and eyes on target to help improve accuracy Batting off a Tee: *(See 2.1.h for additional cues) <ul style="list-style-type: none"> Use less/more force when striking the ball softer/harder 	<ul style="list-style-type: none"> Force examples such as: <ul style="list-style-type: none"> Using force to manipulate an object Generating and absorbing the force of an object Using force to increase speed or distance Using force to create spin Using force to alter the outcome. Using a variety of implements and objects, appropriate to student skill level, to kick, throw and hit for force and distances. <p>Examples:</p> <ul style="list-style-type: none"> Throwing underhand/overhand: For distance, at a variety of targets at varying distances and throwing/catching with a partner. Kicking: For distance, at targets of varying distance: http://www.pecentral.org/lessonideas/ViewLesson.asp?ID=12281#_V6npt7f6vcs Batting off a tee: Batting balls of different sizes (e.g. whiffle ball, tennis ball, rag ball and etc.) to a variety of target areas at varying distances. Paddles: For accuracy and control of force.

Resources:

SHAPE America National Standards and Grade Level Outcomes;
 VDOE Physical Education Instructional Resources <http://www.doe.virginia.gov/instruction/physed/index.shtml>

VA SOL Standard: 2.1 The student will demonstrate approaching (at least two critical elements) and mature form (all correct critical elements) of locomotor, non-locomotor and manipulative skills.

ESSENTIAL UNDERSTANDINGS

- Jumping rope can improve cardiorespiratory endurance and muscular endurance.
- Skills need to be practiced and learned in isolation before applying or adapting them to higher level skills.

VDOE Standard(s) Student Friendly Language What will the student know and be able to do?	SUGGESTED / SAMPLE ASSESSMENTS	Terms (Vocabulary) and Content Information	SUGGESTED / SAMPLE ACTIVITIES
<p>2.1 g) Demonstrate mature form for jumping forward with self turn rope and jumping with long rope (student turn).</p> <p>Suggested Learning Targets:</p> <p>I can show how to jump rope consecutively with two feet.</p> <p>I can show how to jump with two feet a long rope that is turned for me.</p> <p>I can jump over a self turn rope many different ways.</p> <p>I can jump over a long rope many different ways.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • Teacher observation • Checklist for observation of consecutive jumps: Examples: <ul style="list-style-type: none"> ○ Forward jumping ○ Backward jumping ○ Jog step jumping ○ One foot jumping ○ "Skier" jumping ○ Crisscross jumping <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> • Perform a jump rope routine. Criteria: <ul style="list-style-type: none"> ○ Student selection of jump rope moves that are each performed with four repetitions before moving on to the next move. ○ The moves should be jumped continuously. ○ Performance of the moves can be to music or with another student. <p style="text-align: center;">Sample Rubric</p> <ul style="list-style-type: none"> 4— Consistently demonstrates all critical elements without reminders. 3— Usually demonstrates the critical elements with occasional reminders. 	<ul style="list-style-type: none"> • Jumping stationary rope: <ul style="list-style-type: none"> ○ Face forward, eyes looking straight ahead (not down at rope) ○ Two feet take off, two feet land • Jumping self turn rope <ul style="list-style-type: none"> ○ Face forward, eyes looking straight ahead (not down at rope). ○ Two feet take off, two feet land. ○ Hands at sides, rope over the head and under feet (timed for jump to occur): <ul style="list-style-type: none"> ○ https://www.youtube.com/watch?v=E_ZnGbfMqsc (safe share link https://safeshare.tv/x/ss580f5b7c84b4a) • Teaching cues <ul style="list-style-type: none"> ○ Put the ends (handles) of the jump rope into each hand. Begin with the jump rope behind your body. ○ Swing the jump rope gently to the front of your body and then to the back. Practice this several times going front and back. ○ Swing the jump rope to the front and let it stay on the ground. Keep the rope still and jump over it. Practice this step several times. ○ Swing the jump rope to the front of your body and when it gets close to your feet, JUMP! It takes practice to get the timing just right. Once you get the timing, continue to jump. http://www.pecentral.org/lessonideas/cues/ViewCues.asp?ID=248 • Long Rope: 	<ul style="list-style-type: none"> • Basic jump rope skills using a line, stationary rope and a self turn rope: http://www.buyjumpropes.net/resources/jump-rope-tricks-and-tips/ • Introduce new jump skills as appropriate. http://extension.illinois.edu/hopping/onerope-slalom.html • Students may practice skills with partner or small group using short rope and/or long rope. • Short rope turn may be aided by a partner or teacher as appropriate for learning.

	<p>2— Sometimes demonstrates some of the critical elements with several reminders.</p> <p>1— Seldom demonstrates the critical elements with repeated reminders.</p>	<p>○ Jumper: middle of rope, face turned, knees bent, head up, jump 1-2 inches off ground</p> <p>○ Turner: big circles, constant pace and distance from partner, rope hits ground</p> <p>● Jump Rope Terms: http://www.buyjumropes.net/resources/jump-rope-tricks-and-tips/</p>	
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Resources:
 SHAPE America National Standards and Grade-Level Outcomes; <http://learntojumprope.com/wp-content/uploads/2013/10/RJFF-Notes-by-Rene-Bibaud1.pdf>
 VDOE Physical Education Instructional Resources <http://www.doe.virginia.gov/instruction/physed/index.shtml>;
 American Heart Association http://www.heart.org/HEARTORG/Educator/FortheGym2/JumpRopeSkills/Jump-Rope-Skills_UCM_001270_Article.jsp;
<http://www.shapeamerica.org/jump/peresources/adaptedjumprope1.cfm>;
<http://www.brighthubeducation.com/pre-k-and-k-lesson-plans/64118-kindergarten-jump-rope-lesson-plan/>
https://heartfoundation.org.au/images/uploads/jump-rope/Teachers_Resources/JRFH_5_Skillsposters.pdf

VA SOL Standard: 2.1 The student will demonstrate approaching (at least two critical elements) and mature form (all correct critical elements) of locomotor, non-locomotor and manipulative skills.

ESSENTIAL UNDERSTANDINGS

- Object choice and size can determine/promote success in throwing.
- A controlled dribble allows movement in a variety of directions, levels and pathways.
- Dribbling with the preferred hand will increase control of the ball.
- Force, trajectory and accuracy can determine/promote success in striking and volleying.
- Striking can be performed using your hands or implements.
- Striking is contacting an object by hitting or tapping.
- A flat surface improves control of the object volleyed.
- Body position determines direction of volley.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>
<p>2.1 h) Demonstrate approaching mature form (at least two critical elements) for throwing overhand; dribbling with dominant/preferred hand while walking; kicking moving ball; striking ball/object with short handled implement upward and forward; striking/batting ball off tee; and jumping backward with self turn rope.</p> <p>Suggested Learning Targets:</p> <p>I can show throwing a ball overhand using the correct cues.</p> <p>I can show dribbling a ball with my hand using the correct cues while walking.</p> <p>I can dribble waist level with dominant/preferred hand while walking.</p> <p>I can kick a moving ball using the correct area of my foot,</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • Teacher observation • Skill checklist • Skill rubric • State skill cues • Self/Peer assessment <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> • Skill Rubric *Cues located under "Content Information" <p style="text-align: center;">Sample Rubric</p> <p>4 Consistently demonstrates all critical elements without reminders.</p>	<ul style="list-style-type: none"> • Throwing overhand with one hand: <ul style="list-style-type: none"> ○ Side to target ○ Arm back with throwing hand near ear ○ Steps with the opposite foot ○ Follows through toward the target • Hand Dribble: <ul style="list-style-type: none"> ○ Keep hand on top of the ball ○ Use finger pads ○ Push the ball to floor ○ Keep the ball at waist level ○ Keep eyes looking forward ○ Ball is under control while moving • Kicking: <p>http://www.pecentral.org/lessonideas/cues/ViewCues.asp?ID=86</p> • Cues for striking/volleying with hands to self: <ul style="list-style-type: none"> ○ Keep eyes on object ○ Stay under the object ○ Keep it up/no catch • Batting off a tee: <ul style="list-style-type: none"> ○ Grip ○ Stance ○ Eye on ball 	<ul style="list-style-type: none"> • Teaching sequence for throwing: <ul style="list-style-type: none"> ○ Throwing an object against the wall ○ Throwing at a large target ○ Throwing overhand ○ Throwing at a stationary target ○ Throwing to high targets ○ Throwing to low targets ○ Throwing for distance ○ Throwing and catching with a partner ○ Throwing and catching over a net with a partner ○ Throwing and catching while traveling ○ Throwing on the move ○ Throwing to a moving target ○ Throwing for distance and accuracy ○ http://www.pecentral.org/lessonideas/ViewLesson.asp?ID=463#.V6jHv7f6vcs • Dribbling with dominant/preferred hand: <ul style="list-style-type: none"> ○ Changing directions and pathways ○ Varying force ○ While positioning the body at different levels ○ Dribbling around stationary objects ○ Dribbling against an opponent ○ http://www.pecentral.org/lessonideas/ViewLesson.asp?ID=12173#.V_lkN_3rupp • Instep kick:

<p>I can strike a ball/object with a (paddle) upward and forward using the correct cues.</p> <p>I can follow through and finish with the bat over my shoulder when hitting a ball off a tee.</p> <p>I can consecutively jump forward with a short rope by myself.</p>	<p>3— Usually demonstrates the critical elements with occasional reminders.</p> <p>2— Sometimes demonstrates some of the critical elements with several reminders.</p> <p>1— Seldom demonstrates the critical elements with repeated reminders.</p>	<ul style="list-style-type: none"> ○ Level swing through the ball ○ Follow through ○ Bat finishes over opposite shoulder <p>● Rope jumping: See 2.1.g for cues and resources</p>	<ul style="list-style-type: none"> ○ Through a variety of wide targets ○ Using strong/light force ○ Using a running approach ○ To a stationary partner ○ A rolling ball from a stationary position ○ http://www.pecentral.org/lessonideas/ViewLesson.asp?ID=360#.V6jgZrf6vcs <p>● Teaching sequence for striking with short handled implements:</p> <ul style="list-style-type: none"> ○ Balancing objects on paddles ○ Striking a self-tossed object ○ Striking an object straight upward ○ Striking upward continuously ○ Striking downward continuously ○ Striking an object upward with both sides of the paddle ○ Striking with a forehand motion ○ Striking with a backhand motion ○ Striking an object in desired direction ○ Varying the force of the hit ○ Striking through a target ○ Striking an object to send it over a net ○ Striking a ball rebounding from a wall ○ Striking cooperatively and continuously with a partner <p>● Volleying suggestions such as: one/two hand, varying direction and force and with different implements.</p> <ul style="list-style-type: none"> ○ http://www.pecentral.org/lessonideas/ViewLesson.asp?ID=8393#.V6jTFbf6vct ○ http://www.pecentral.org/lessonideas/ViewLesson.asp?ID=7579#.V6jTT7f6vct ○ http://www.pecentral.org/lessonideas/ViewLesson.asp?ID=4359#.V6jUOLf6vcs
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Resources:

SHAPE America National Standards and Grade-Level Outcomes;
VDOE Physical Education Instructional Resources <http://www.doe.virginia.gov/instruction/physed/index.shtml>;
<http://www.pecentral.org/lessonideas/cues/CueSearchresults.asp>; <http://www.wikihow.com/Kick-a-Soccer-Ball>;
<http://www.pccchallenge.org/challenges/partthrowcatch.html>; <http://teachers.net/lessons/posts/3757.html>

VDOE Standard(s) Student Friendly Language What will the student know and be able to do?	SUGGESTED / SAMPLE ASSESSMENTS	Terms (Vocabulary) and Content Information	SUGGESTED / SAMPLE ACTIVITIES
<p>VA SOL Standard: 2.2 The student will identify major musculoskeletal structures and the cardiorespiratory system and explain the importance of spatial awareness while moving.</p> <p>ESSENTIAL UNDERSTANDINGS</p> <ul style="list-style-type: none"> Body awareness and spatial awareness promote safety. Movement can occur in general and personal space. <p>2.2 a) Describe the concept of relationships (e.g., over, under, around, in front of, behind, through) in dynamic movement situations.</p> <p>Suggested Learning Targets:</p> <p>I can show how to move over, under, around, in front of, behind and through objects while moving.</p> <p>I can use a piece of equipment to show my understanding of over, under, around, in front of, behind and through.</p> <p>2.2 b) Explain the importance of spatial awareness (personal and general space) in static and dynamic movement situations.</p> <p>Suggested Learning Targets:</p> <p>I can move and not touch anyone or anything in my personal space.</p> <p>I can show the teacher how I can be safe by moving and</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> Teacher observation Identify pictures that are examples of over, under, around, in front of, behind and through movements General space assessment: http://www.pecentral.org/assessments/carspaces-mriggs.pdf Oral: Peer discussion <ul style="list-style-type: none"> How does staying in personal space while moving keep you safe? Describe the difference between personal and general space? <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> Written: Identify pictures that are examples of over, under, around, in front of, behind and through movements Written: Identify (name, circle, draw a picture of) examples of personal and general space 	<ul style="list-style-type: none"> Space <ul style="list-style-type: none"> Territories: personal/general Extensions: large/small, far/near Directions: up/down, left/right, clockwise/anticlockwise, forward/backward Levels: low/middle/high Pathways: straight/curved/zigzag Personal/Self-Space: A place all by myself where I cannot touch anyone or anything. http://www.pecentral.org/lessonideas/cues/ViewCues.asp?ID=12 Cues for using proper Self-Space: <ul style="list-style-type: none"> Eyes forward Speed check Move to open spaces Balanced stops Avoid contact with people or objects Cues for using proper General-Space: <ul style="list-style-type: none"> Eyes checking surroundings to maintain personal space Moves in personal/general space without touching anyone or anything General Space: All of the space in the whole room. http://www.pecentral.org/lessonideas/cues/ViewCues.asp?ID=10 Defined boundaries: The lines, marked or 	<ul style="list-style-type: none"> Movements in relation to self and various obstacles and equipment that may include moving under/over, on/off, in front/behind, near/away, around and alongside. Examples: <ul style="list-style-type: none"> http://www.pecentral.org/lessonideas/ViewLesson.asp?ID=10893#.V6JTstdHIU http://www.pecentral.org/lessonideas/ViewLesson.asp?ID=11920#.V6JVCstdHIU http://www.pecentral.org/lessonideas/ViewLesson.asp?ID=308#.V_6dDLfrvct Movement activities in personal/general space such as: <ul style="list-style-type: none"> Traveling at different speeds in confined spaces. http://www.pecentral.org/lessonideas/ViewLesson.asp?ID=313#.V_6dj7frvct Combining a variety of locomotor skills into a short sequence of movements. Traveling through a variety of stationary objects. http://www.pecentral.org/Lessonideas/ViewLesson.asp?ID=11920#.V_6cNLfrvcu Dodging people moving in confined spaces. Fleeing from a pursuer using speed and direction changes. Traveling at different speeds and in different directions to chase another person. http://www.pecentral.org/lessonideas/ViewLesson.asp?ID=11920#.V_6cNLfrvcu

<p>not touching anyone or anything in a physical activity/game.</p>		<p>unmarked, that tell students where a game or activity should be played.</p> <ul style="list-style-type: none"> ● Relationship Actions <ul style="list-style-type: none"> ○ leading/following/mirroring/matching/synchronizing/contrasting ○ through/pass, beneath/along ○ over/under ○ near/far ○ in front of/behind ○ meeting/parting ○ nearby/around/alongside 	<p>wLesson.asp?ID=291#.V6j2l7f6vct</p> <ul style="list-style-type: none"> ○ Using personal space and general space in games and with music using a variety of objects such as ropes and hoops. ○ Using various objects to demonstrate spatial awareness.
<p>Resources: VDOE Physical Education Instructional Resources http://www.doe.virginia.gov/instruction/physed/index.shtm; http://www.heart.org/HEARTORG/Educator/Educator_UCM_001113_SubHomePage.jsp; http://cd1.edb.hkedcity.net/cd/pe/TC/rr/FM_e.pdf; http://www.thephysicaleducator.com/resources/games/foundational_movement/on_off_lines/</p>			

<p>VA SOL Standard: 2.2 The student will identify major musculoskeletal structures and the cardiorespiratory system and explain the importance of spatial awareness while moving.</p> <p>ESSENTIAL UNDERSTANDINGS</p> <ul style="list-style-type: none"> • The body works and moves because of the brain, bones, muscles and body systems. • The brain sends messages to various body parts telling them to move. • The brain is the control center of the body. • The body is made up of different muscles that work together to help us move. 			
<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>
<p>2.2 c) Explain that the brain sends a message to the body to move.</p> <p>Suggested Learning Targets:</p> <p>I can explain that my brain sends a message to my body parts to help me move.</p> <p>2.2 d) Identify major muscles, to include quadriceps, biceps, abdominals and heart.</p> <p>Suggested Learning Targets:</p> <p>I can identify where the quadriceps are located.</p> <p>I can identify where the biceps are located.</p> <p>I can identify where the abdominals are located.</p> <p>I can identify where the heart is located.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • Explain how the brain helps the body move. • Identify the quadriceps, biceps, abdominals, skull, ribs and spine. <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> • Written: Identify one activity and the muscle(s) and bones that control the movement. • Identify (name, circle, draw a picture of) the heart, lungs, brain, quadriceps, biceps, abdominals, skull, ribs and spine. 	<ul style="list-style-type: none"> • Brain: The control center for your body. It enables us to think, speak and feel. <ul style="list-style-type: none"> ◦ Controls the muscles that move the bones ◦ Controls the heart and lungs to provide energy for the working muscles ◦ https://kidshealth.org/en/kids/brain.html ◦ http://www.cyh.com/HealthTopics/HealthTopicDetailsKids.aspx?p=335&np=152&id=1528 • Quadriceps: Muscles on the top of your thighs. • Biceps: Muscles on the top of your arm when you make a muscle. • Abdominals: Your core muscles, located in your stomach area. • Heart: Muscle that pumps blood throughout your body, located in your chest, • Three types of muscles: skeletal, smooth and cardiac. <ul style="list-style-type: none"> ◦ Skeletal muscles function to move your body during any activity such as walking. In most cases, a skeletal muscle is attached to one end of a bone. It stretches all the way across a joint (the place where two bones meet) and then attaches again to another bone. ◦ Smooth muscle is found in your blood vessels and can regulate blood flow. 	<ul style="list-style-type: none"> • Use visuals to depict the brain and major muscles. • Incorporate knowledge concepts into movement activities. • http://www.e-learningforkids.org/health/lesson/brain/ • http://kidshealth.org/en/kids/ns-movie.html?ref=search <p>Videos:</p> <ul style="list-style-type: none"> • Brain http://kidshealth.org/en/kids/nsmovie.html?WT.ac=ctg#catmovies • Muscles: http://kidshealth.org/en/kids/muscles.html

		⊖ Cardiac muscle is what your heart is made of and is necessary to pump blood to all of your body.	
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Resources:

SHAPE America National Standards and Grade-Level Outcomes; <http://kidshealth.org>;

VDOE Physical Education Instructional Resources <http://www.doe.virginia.gov/instruction/physed/index.shtml>

<p>VA SOL Standard: 2.2 The student will identify major musculoskeletal structures and the cardiorespiratory system and explain the importance of spatial awareness while moving.</p> <p>ESSENTIAL UNDERSTANDINGS</p> <ul style="list-style-type: none"> • A strong core is responsible for the sense of balance. • If a sudden pull or stretch occurs, the body responds by automatically increasing the muscle's tension, a reflex which helps guard against danger as well as helping to maintain balance. • The body is made up of different bones that give it structure. • The body is made up of is made up of many parts that all work together to help it function. 			
<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>
<p>2.2 e) Explain that muscles tense to keep the body in a balanced position.</p> <p>Suggested Learning Targets:</p> <p>I can explain and perform a balance and static position.</p> <p>I can explain how muscles help me balance.</p> <p>2.2 f) Identify major bones, to include skull, ribs and spine.</p> <p>Suggested Learning Targets:</p> <p>I can identify the skull and why it is important.</p> <p>I can identify the ribs and why they are important.</p> <p>I can identify the spine and why it is important.</p> <p>2.2 g) Identify the major structures of the</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • Explain how the muscles work to keep balanced and controlled movements. • Oral: Peer discussion <ul style="list-style-type: none"> ◦ Where is your skull? What does it protect? ◦ Where are your ribs? What do they protect? ◦ Where is your spine? What does it protect? How does it help your brain send messages to your body? ◦ What structures work together to make up your cardiorespiratory system? • Identify the heart and lungs. • http://www.help-teaching.com/questions/Skin-Skeleton-and-Muscles/Grade-2 <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> • Written: Identify one activity and the muscle(s), bones that control the movement. 	<ul style="list-style-type: none"> • Skeletal muscles come in many different sizes and shapes to allow them to do many types of jobs. Some of the biggest and most powerful muscles are in the back, near your spine. These muscles help keep you upright and standing tall. • Core muscles: Muscles that surround your trunk, It includes pelvis, lower back, hips, gluteal muscles and abdomen. • Skull: The head or cranium, protects the brain. • Ribs: They make up the ribcage in your chest and protect the heart and lungs. • Spine: It's made up of several little bones called vertebrae and provides the main support for the body. It helps you to stand upright and protects the spinal cord which sends the messages from your brain to the rest of the body. • Bones: <ul style="list-style-type: none"> ◦ http://kidshealth.org/en/kids/bones.html 	<ul style="list-style-type: none"> • Incorporate knowledge concepts into various movement activities. • Various Yoga activities including videos and yoga position cards. Examples: <ul style="list-style-type: none"> ◦ https://www.youtube.com/user/CosmicKidsYoga/videos ◦ http://kidshealth.org/en/kids/yoga-home.html?WT.ac=ctg#catemotion • Students perform balancing moves and tell a partner where they believe the muscles tense to create balance while doing the move. Examples: Stand with both feet flat on the floor and keep your body straight and still. Focus the eyes ahead on a point that is not moving and spread the arms out to keep balance. Do the following: <ul style="list-style-type: none"> ◦ Balance on both feet with eyes shut ◦ Stand on one foot with eyes shut ◦ Stand on tiptoes without moving ◦ Stand on tiptoes without moving and reach out to each side • Videos:

<p>cardiorespiratory system (heart and lungs).</p> <p>Suggested Learning Targets:</p> <p>I can identify the heart and lungs.</p> <p>I can tell what structures make up the cardiorespiratory system.</p>	<ul style="list-style-type: none"> ● Identify (name, circle, draw a picture of) the heart, lungs, skull, ribs and spine. 	<ul style="list-style-type: none"> ● Heart and Lungs: Together, the heart and lungs fuel your body with the oxygen needed by your muscles, ensuring that they have the oxygen needed for the work they are doing. <ul style="list-style-type: none"> ○ Heart: https://kidshealth.org/en/kids/heart.html ○ Lungs: https://kidshealth.org/en/kids/lungs.html ● Cardiorespiratory system: Composed of the heart, blood vessels and respiratory system. <ul style="list-style-type: none"> ○ The heart is a muscle and gets stronger with exercise so a strong heart doesn't have to work as hard to pump blood to the rest of the body. ○ Exercise also allows your lungs to hold more air. ○ With a strong heart and lungs, your cells get oxygen faster and your body works more efficiently, ● Cardiorespiratory Endurance: A measurement of how well your heart, lungs and muscles work together to keep your body active over an extended period of time. 	<ul style="list-style-type: none"> ○ Bones: http://kidshealth.org/en/kids/ssmovie.html ○ Muscles: http://kidshealth.org/en/kids/msmovie.html?WT.ac=en-k-htbw-main-page-g ○ Heart and Lungs: http://kidshealth.org/en/kids/csmovie.html?WT.ac=ctg#catmovies ● Incorporate knowledge concepts into movement activities. <ul style="list-style-type: none"> ○ http://www.heart.org/ide/groups/heart-public/@wcm/@global/documents/downloadable/ucm_313195.pdf ○ http://www.pecentral.org/lessonideas/ViewLesson.asp?ID=132892#.Y0jbPcv2bIU ○ https://educators.brainpop.com/lesson-plan/5-major-body-systems-with-brainpop-jr/ (use of some BrainPop materials requires a subscription) ● Students trace a classmate on bulletin paper. Students label various muscles and bones using a word bank. Students locate heart, brain, lungs by cutting and pasting them into the correct spot on a traced body.
<p>Resources: SHAPE America National Standards and Grade-Level Outcomes; VDOE Physical Education Instructional Resources http://www.doe.virginia.gov/instruction/physed/index.shtml; www.Kidshealth.org; http://www.cyh.com/HealthTopics/HealthTopicDetailsKids.aspx?p=335&np=152&id=1446; http://www.heart.org/ide/groups/heart-public/@wcm/@global/documents/downloadable/ucm_305580.pdf;</p>			

VA SOL Standard: 2.3 The student will describe the components of fitness and identify physical activities that promote aerobic capacity, muscular strength, endurance, flexibility and body composition.

ESSENTIAL UNDERSTANDINGS

- Physical activities are needed for physical fitness,
- Strength is the greatest force a muscle can exert in one effort.
- Muscular strength is important for lifting and moving heavy objects.
- Muscular endurance allows the muscles to work for a long period of time.
- Flexibility is important for moving in many directions.
- Cardiorespiratory endurance is important for maintaining a healthy heart.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>
<p>2.3 a) Describe muscular strength as important in lifting/moving heavy objects.</p> <p>Suggested Learning Targets:</p> <p>I can tell how muscular strength affects my ability to lift heavy objects.</p> <p>I can describe the importance of muscular endurance.</p> <p>2.3 b) Describe muscular endurance as important in moving throughout the day.</p> <p>Suggested Learning Targets:</p> <p>I can explain why the ability of muscles to work for a long period of time helps me move throughout the day.</p> <p>2.3 c) Describe flexibility as important in moving in many directions.</p> <p>Suggested Learning Targets:</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> ● Teacher observation <ul style="list-style-type: none"> ○ Students feeling heartbeat ○ Students use fingers 1-5 to identify which level of intensity they worked in a physical activity ● Oral: Teacher/Peer discussion <ul style="list-style-type: none"> ○ Activities for muscular strength/endurance, ○ Activities that help maintain a healthy heart. ○ Each component of fitness. <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> ● Oral: Student can identify and describe each component of fitness. ● Written: Matches the fitness component to its description. 	<ul style="list-style-type: none"> ● Muscular strength: The ability of the muscle to exert force during an activity. ● Importance of muscular strength <ul style="list-style-type: none"> ○ It affects everyday chores, such as helping to clean the house and yard work. ○ It affects how easily one can carry a bag of groceries or lift a younger brother or sister. ○ It affects physical skill and sports performance, such as how hard one can swing a softball bat, or how long one can play on the tennis court. ● Muscular Endurance: The ability of the muscle to continue to perform without fatigue. ● Importance of muscular endurance: <ul style="list-style-type: none"> ○ Gives one the ability to perform repetitious physical activity such as gardening, raking leaves and washing the car. ○ Muscular endurance will also limit injuries that can happen from physical exertion and from the overuse of active muscles throughout the day. ○ With good muscular endurance you will be able to continue working for longer and your muscles will be able to recover more quickly so that the next day you can get on with what you usually do. <p>○ If your muscular endurance is poor then you may have to take frequent rests and not be</p>	<ul style="list-style-type: none"> ● Small group/station work to complete several muscular strength activities: <ul style="list-style-type: none"> Examples: <ul style="list-style-type: none"> ○ Pull up bar/peg board—Complete pull ups or move across/up the peg board. ○ Push-ups—Complete a given number of push-ups. ○ Heavy bag lift—Lift the heavy bag from floor and carry it across the gym and back. (Teach how to safely lift heavy objects from the floor.) ○ Groceries Station—Carry the gallon of milk (use a milk container but fill it with water or some sand) to the next group member. ● Participate in a variety of muscular endurance activities such as: wall sits, planks, shoulder taps, lunges, jumping rope, step ups, etc. ● Participate in a variety of flexibility activities such as yoga. <ul style="list-style-type: none"> https://www.youtube.com/user/CosmicKid5Yoga ● Activities that begin at a low intensity, build to a high intensity and return back to a low intensity. <p>Examples:</p> <ul style="list-style-type: none"> ○ Walk around the perimeter of the gym,

<p>I can describe how flexibility is important throughout the day.</p> <p>2.3 d) Describe cardiorespiratory endurance as important for maintaining a healthy heart.</p> <p>Suggested Learning Targets:</p> <p>I can identify which component of fitness focuses on maintaining a healthy heart.</p>		<p>able to finish the job.</p> <ul style="list-style-type: none"> ● Flexibility: The range of motion around a joint. ● Why is flexibility important in moving in many directions: <ul style="list-style-type: none"> ○ Improves performance in physical activities ○ Decreases risk of injuries ○ Helps muscles work most effectively ○ Improves posture and creates a healthier back ○ Maintains health joints ○ Improves balance during movement ● Cardiorespiratory endurance as important for maintaining a healthy heart: <ul style="list-style-type: none"> ○ The heart is a muscle and gets stronger with exercise so a strong heart doesn't have to work as hard to pump blood to the rest of the body. ○ With a strong heart your cells get oxygen faster and your body works more efficiently, ● Intensity: In fitness it is the degree of determination or the amount of effort expended during an activity. How hard you work. <ul style="list-style-type: none"> — Example Intensity Levels: <ul style="list-style-type: none"> ○ Intensity Level 1—Media Seat ○ Intensity Level 2—Slow—such as walking ○ Intensity Level 3—Medium—such as skipping, galloping ○ Intensity Level 4—Fast—such as jogging/running ○ Intensity Level 5—Sprinting 	<p>then jog, then return to a walk.</p> <ul style="list-style-type: none"> ○ Complete a variety of low intensity level activities such as: walking, minimal amounts of curl ups or step ups. Then complete a variety of high intensity activities such as: sprinting, wall sit, followed by a sprint to next wall, speed jump roping, etc. Then return to a variety of different low intensity activities, ● Teacher calls out activities that strengthen or weakens the heart. If the activity strengthens the heart, students will respond by jumping 10 times and then run in place while the teacher calls out the next activity. If the activity weakens the heart, students will respond by squatting 10 times and then run in place while the teacher calls out the next activity. <ul style="list-style-type: none"> Examples (can also be used as a formative assessment): <ul style="list-style-type: none"> ○ Riding a bike—(jump) ○ Walking your dog—(jump) ○ Taking the elevator—(squat) ○ Never going outside to play and watching TV all the time—(squat)
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Resources:
SHAPE America National Standards and Grade Level Outcomes;
VDOE Physical Education Instructional Resources <http://www.doe.virginia.gov/instruction/physed/index.shtml>;
http://www.heart.org/HEARTORG/Educator/Educator_UCM_001113_SubHomePage.jsp;
<http://www.teachpe.com/fitness/health.php>

VA SOL Standard: 2.3 The student will describe the components of fitness and identify physical activities that promote aerobic capacity, muscular strength, endurance, flexibility and body composition.

ESSENTIAL UNDERSTANDINGS

- Improving muscular strength and endurance, flexibility and cardiorespiratory endurance will also improve body composition.
- Physical activities can be performed at home, as well as at school.
- Cardiorespiratory endurance, muscular strength and endurance, flexibility and body composition are the components of physical fitness needed for health.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>
<p>2.3 e) Describe body composition as the component that makes up a person's body weight (percentages of fat, bone, water and muscle in the human body).</p> <p>Suggested Learning Targets:</p> <p>I can match the term body composition with its meaning.</p> <p>2.3 f) Identify one activity to promote each component of fitness (cardiorespiratory endurance, muscular strength, muscular endurance, flexibility and body composition).</p> <p>Suggested Learning Targets:</p> <p>I can describe muscular strength and an activity that connects to it.</p> <p>I can describe muscular endurance and an activity that connects to it.</p> <p>I can describe flexibility and an activity that connects to it.</p> <p>I can describe cardiorespiratory endurance and an activity that connects to it.</p> <p>I can describe body composition.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> ● Peer discussion: <ul style="list-style-type: none"> ○ What is body composition? ○ What are the ways to measure body composition? ○ Why is good body composition important? ○ Discuss activities that can be performed at home or at school. ● List or draw activities the student can participate in for each component of fitness. <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> ● Circle the pictures that show activities that help keep maintain a healthy heart. ● Circle the pictures that would lead to good body composition. ● Draw a line from an activity to the component of fitness. ● Draw a picture of or list an activity that you can participate in outside of school for each component of fitness. 	<ul style="list-style-type: none"> ● Cardiorespiratory endurance: The ability of the heart and lungs to supply oxygen to the muscles during long periods of physical activity. ● Muscular endurance: The ability of the muscles to repeat a movement many times or hold a position without stopping to rest. ● Muscular strength: The ability of the muscle or muscles to push or pull with its total force. ● Flexibility: The muscles ability to move a joint through a full range of motion. ● Body composition: The relationship between fat free mass and fat mass. <ul style="list-style-type: none"> ○ Fat Mass: fat ○ Fat Free Mass: muscles, bones organs ● Activity Opportunity: A situation in which something can be done towards physical activity throughout the day. <p>Examples –</p> <ul style="list-style-type: none"> ○ Guardian comes home early so now we have time to go for a walk. ○ A friend(s) come over after school to play outside. ○ Perform <i>Just Dance</i> (Wii U). 	<ul style="list-style-type: none"> ● Activities that involve the fitness components and nutrition with an added connection to body composition. ● Stations for the components of fitness: <p>Examples:</p> <ul style="list-style-type: none"> ○ Cardiorespiratory endurance: Running, walking, skipping, jumping rope, etc. ○ Flexibility: Yoga, stretching, gymnastics, dance, etc. ○ Muscular endurance: Shoulder taps, calf raises, crunches, etc. ○ Muscular strength: Push ups, pull ups, lifting heavy objects such as weights, etc. ○ Body composition: Any activities that promote any of the other four components of fitness and pictures of different foods for students to pick healthy examples that help towards good body composition. ● Introduce activity opportunities outside of school: <ul style="list-style-type: none"> ○ Through class discussions or basic introductions to outdoor pursuits such as: cycling, skating, fishing, canoeing, hiking, kayaking, rock climbing, sailing, skiing, surfing, swimming, etc. and lifetime recreational sports such as: soccer, T-ball, beach volleyball, badminton,

<p>2.3 g) Identify opportunities to participate in regular physical activity outside of school.</p> <p>Suggested Learning Targets:</p> <p>I can list and perform physical activities that I can do both in school and out of school.</p> <p>I can identify situations after school where I can perform physical activities.</p> <p>I can list activities I can perform at home, which will improve each component of fitness.</p>			<p>table tennis, bowling, handball, disc golf, duckpin bowling, etc.</p> <ul style="list-style-type: none"> ○ Through short videos on physical activities for outside of school ○ By bringing in local instructors to introduce lessons on activities available outside of school such as: martial arts, dance, etc. ○ Introducing where local physical activity opportunities exist such as: bike trails, parks, playgrounds and community centers
<p>Resources: SHAPE America National Standards and Grade Level Outcomes; VDOE Physical Education Instructional Resources http://www.doe.virginia.gov/instruction/physed/index.shtml; http://www.heart.org/HEARTORG/Educator/Educator_UCM_001113_SubHomePage.jsp; http://www.teachpe.com/fitness/health.php</p>			

VA SOL Standard: 2.4 The student will identify and apply cooperative, respectful and safe behaviors in physical activity settings.

ESSENTIAL UNDERSTANDINGS

- Daily physical activity is important for health.
- Learning new activities can be difficult and require practice.
- Practice will make challenging activities easier.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>
<p>2.4 a) Identify one activity that is enjoyed and done outside of physical education class.</p> <p>Suggested Learning Targets:</p> <p>I can name/identify one physical activity that I like doing at home.</p> <p>2.4 b) Identify one activity that is challenging and one way to improve the activity.</p> <p>Suggested Learning Targets:</p> <p>I can name/identify one physical activity that I like doing but is hard for me.</p> <p>I can name/identify one way to help me get better at an activity that I like to do.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • Oral: Peer discussion on— <ul style="list-style-type: none"> ○ Physical activities enjoyed outside of school. ○ Physical activities that are hard to do. ○ Ways to practice an activity/component of an activity to get better. <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> • Draw: <ul style="list-style-type: none"> ○ A picture of a physical activity done at home. ○ A picture of a physical activity that is hard. • Written Assessment http://www.pecentral.org/lessonideas/ViewLesson.asp?ID=1155#.V26VHxL2ZD8 	<ul style="list-style-type: none"> • Recreation: Activity done for enjoyment when one is not in school or doing homework. Games and activities such as tennis, golf, bowling, fishing, Frisbee, badminton, hopscotch, jump rope, bocce, croquet, etc. • Challenge: To invite (someone) to do something that one thinks will be difficult or impossible. Examples— <ul style="list-style-type: none"> ○ "I challenged them to make up their own minds" ○ Test their abilities: "He needed something both to challenge his skills and to regain his crown as the king of the thriller." • Improvement: Is the process of getting better. 	<ul style="list-style-type: none"> • Participate in a variety of lifelong physical recreational activities they can do alone or with a family member or friend at home. Examples: <ul style="list-style-type: none"> ○ http://www.pecentral.org/Lessonideas/ViewLesson.asp?ID=132742#.V26W9xL2ZD8 ○ http://www.pecentral.org/lessonideas/ViewLesson.asp?ID=8710#.V26XTBL2ZD8 ○ http://www.pecentral.org/lessonideas/ViewLesson.asp?ID=9289#.V26XvRL2ZD8 • When new activities are introduced, after activity discussions on how challenging the new activity was and ways they could improve on the activity,
<p>Resources:</p> <p>SHAPE America National Standards and Grade Level Outcomes; http://www.pecchallenge.org/default.asp;</p> <p>VDOE Physical Education Instructional Resources http://www.doe.virginia.gov/instruction/physed/index.shtml</p>			

VA SOL Standard: 2.4 The student will identify and apply cooperative, respectful and safe behaviors in physical activity settings.			
ESSENTIAL UNDERSTANDINGS			
<ul style="list-style-type: none"> • Students demonstrate cooperative skills by not only being responsible for learning the material for the day, but also for helping their group-mates learn. • Behaving well is as important as playing well. • Safe participation is needed in all physical activity settings when participating alone or with others. • Safe participation includes cooperative, respectful and safe behavior. • Safe participation includes good listening skills, including the student's ability to follow rules and directions for all activities and equipment use. • Rules help keep games and activities safe and fair. 			
VDOE Standard(s) Student Friendly Language What will the student know and be able to do?	SUGGESTED / SAMPLE ASSESSMENTS	Terms (Vocabulary) and Content Information	SUGGESTED / SAMPLE ACTIVITIES
<p>2.4 c) Demonstrate cooperative skills, to include taking turns and sharing equipment.</p> <p>Suggested Learning Targets:</p> <p>I can share equipment and space with my class.</p> <p>I can participate safely in class.</p> <p>I can be a good listener.</p> <p>2.4 d) Demonstrate safe participation individually and with others.</p> <p>Suggested Learning Targets:</p> <p>I can follow directions.</p> <p>I can follow rules.</p> <p>I can stay on task.</p> <p>I can move safely and in control.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • Teacher observation • Drawing a picture of a safety rule • Questioning to check for understanding Examples of teacher/peer discussion: <ul style="list-style-type: none"> ◦ What are different ways we show cooperation when doing an activity? ◦ What does it mean to be respectful? ◦ What does it mean to move safely? ◦ Name two classroom rules that help keep you safe. • Oral: <i>Quiz-Quiz Trade</i> — Using flash cards of different cooperative skills. (Skill written out on one side for the person holding the card to see. A picture on the other side to help a partner guess what cooperative skill is written out on the other side.) Students show their picture to another peer for them to guess the cooperative skill. Then they trade cards and move to another person. Examples such as: Taking turns, sharing equipment, raising a hand before speaking, working together as a team, helping others improve their skills, using encouraging words, etc. 	<ul style="list-style-type: none"> • Cooperation: Working together to achieve a goal in which success depends on a combined effort. Skills include: <ul style="list-style-type: none"> ◦ listening ◦ sharing decision making ◦ taking responsibility ◦ learning to give and receive appropriate feedback ◦ learning to encourage each other ◦ solving problems • Teaching good feedback to others: <ul style="list-style-type: none"> ◦ It sounds like — good job, nice pass, you really tried hard, etc. ◦ It looks like — a thumbs up, a high five, a pat on the shoulder • Cooperative tasks that encourage students to rely on each other to complete the tasks. Where the success of one student should be positively related to the success of the other students. Examples include: mutual goals, shared resources, communication and assigned roles. 	<ul style="list-style-type: none"> • Different cooperative skills such as: <ul style="list-style-type: none"> ◦ Listen carefully to others and be sure you understand what they are saying. ◦ Share when you have something that others would like to have. ◦ Take turns when there is something that nobody wants to do or when more than one person wants to do the same thing. ◦ Compromise when you have a serious conflict. ◦ Do your part the very best that you possibly can. This will inspire others to do the same. ◦ Show appreciation to people for what they contribute. ◦ Encourage people to do their best. ◦ Make people feel needed. Working together is a lot more fun that way. ◦ Don't isolate or exclude anyone. Everybody has something valuable to offer and nobody likes being left out. • Students and teachers create safety rules. Examples: <ul style="list-style-type: none"> ◦ Stop on signal ◦ Do not touch or use equipment until teacher directs or until it is safe ◦ Share equipment ◦ Follow safety directions for each activity ◦ Check safety of equipment prior to use

<p>2.4 e) Identify two class safety rules.</p> <p>Suggested Learning Targets:</p> <p>I can name two rules to be safe in physical education.</p>	<p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> ● Teacher observation (checklist) <ul style="list-style-type: none"> ✓ Active listening skills by executing procedures and instructions ✓ Demonstration of safety rules for classroom safety and activity-specific safety ✓ Ability to work productively and cooperatively with peers during practice of skills and/or during physical activity ✓ Ability to work independently and on-task during physical education activities ✓ Moving in a safe and controlled manner in personal and general space ● Written: Draw (or select from several pictures) physical education safety rules. 	<ul style="list-style-type: none"> ● Safety: Keeping yourself and others free from harm and danger. ● Respect: Relation to something; considered of deserving high regard. ● How to be respectful: <ul style="list-style-type: none"> ○ Treat others the way you want to be treated. ○ Accept people who are different from you. ○ Be polite and use good manners. ○ Think about the feelings of others. ○ Stay calm when angry. ● Appropriate interactions with peers. <ul style="list-style-type: none"> ○ Sharing, taking turns, following rules (with teacher guidance and reinforcement). ○ Staying on task (for short periods with teacher supervision). ○ Listen quietly without interruption (for short periods with teacher reinforcement). ○ Exhibit self-control. ○ Willingness to play with any child in the class; and recognize similarities and appreciate differences in people, 	<ul style="list-style-type: none"> ● Practicing routines and expectations for safe behaviors <ul style="list-style-type: none"> ○ http://www.pecentral.org/lessonideas/ViewLesson.asp?ID=12760#.V26YjBL2ZD8 ○ http://www.pecentral.org/lessonideas/ViewLesson.asp?ID=12760#.WADf5Lfrvct ● Activities that allow students to use both personal and general space ● Cooperative games and activities: <ul style="list-style-type: none"> ○ http://elementaryhealthphysicalactivity.wiki.westga.edu/file/view/Cooperative+Games.pdf ○ http://www.pecentral.org/lessonideas/ViewLesson.asp?ID=8755#.V-kbe7frvcs ○ http://www.pecentral.org/lessonideas/ViewLesson.asp?ID=3893#.V-kcCLfrvcs ● Encouraging others in activities: <ul style="list-style-type: none"> ○ http://www.pecentral.org/lessonideas/ViewLesson.asp?ID=3596#.V02lictdHIU ● Respecting others: <ul style="list-style-type: none"> ○ https://www.youtube.com/watch?v=FY4qNs4onYQ&index=25&list=PL7f4GshrpmEMWSg7FTN3-RKbZvDWWg0Kf (safe share link https://safeshare.tv/x/ss580f5e504bf8f) ● Sportsmanship: What it looks like in your class with a continued emphasis throughout the school year. <ul style="list-style-type: none"> ○ http://www.pecentral.org/bp/indivBPDisplay.asp?ID=2491&votes=47#.V02m5MtdHIU ○ http://www.pecentral.org/bp/indivBPDisplay.asp?ID=1043&votes=74#.V02nDstdHIU
<p>Resources: SHAPE America National Standards and Grade-Level Outcomes; VDOE Physical Education Instructional Resources http://www.doe.virginia.gov/instruction/physed/index.shtml</p>			

VA SOL Standard: 2.5 The student will describe the energy intake components of energy balance and physical health and development.

ESSENTIAL UNDERSTANDINGS

- Dairy is important for bone growth.
- Snacks choices between meals are important to good nutrition.
- Water and other healthy drinks keep the body hydrated and are important for body functions.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>
<p>2.5 a) Explain that dairy is important for bone growth.</p> <p>Suggested Learning Targets:</p> <p>I can explain that dairy helps my bones grow.</p> <p>2.5 b) Identify examples of healthy snacks.</p> <p>Suggested Learning Targets:</p> <p>I can identify healthy foods to eat between meals.</p> <p>2.5 c) Identify different hydration choices.</p> <p>Suggested Learning Targets:</p> <p>I can identify healthy drinks.</p> <p>I can explain why water is the best drink choice for my body.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> ● Oral: Teacher/Peer discussions— <ul style="list-style-type: none"> ○ Why does the body need dairy? ○ What foods and beverages are in the dairy food group? ○ Name some healthy snacks. ○ Name some healthy hydration choices. ● Select/identify pictures of healthy drinks and snacks <p>Assessment of Learning (Summative)</p> <p>Oral: Student can explain that dairy helps bones grow.</p> <p>Student can explain what snacks and drinks are healthy.</p> <p>Written: Draw (or select from several pictures) healthy snacks and drinks.</p>	<ul style="list-style-type: none"> ● Dairy: Fluid milk products or products made from milk such as: milk, cheese, string cheese, yogurts, pudding, ice cream, frozen yogurt, etc. ● Calcium: Found in dairy products. It helps us build strong teeth and bones. ● Snacks: Help you refuel your body in between meals. <ul style="list-style-type: none"> ○ Examples of healthy snacks: yogurt, fruit, veggies, whole grain granola, string cheese, etc. ○ http://kidshealth.org/en/kids/snack-attack.html?ref=search ● Hydration Choices <ul style="list-style-type: none"> ○ Water: A clear liquid that has zero calories and contains no sugar. ○ Milk: A dairy drink that helps build strong teeth and bones. ○ Unhealthy drink choices that contain too much sugar and calories. Examples include: sports drinks, sodas, juice drinks and energy drinks. 	<ul style="list-style-type: none"> ● Use names of food groups and nutritious hydration choices for small-group activities. ● Use visuals to depict a variety of food group and hydration examples. ● Incorporate nutrition concepts into movement activities. ● Incorporate poems or songs about the food groups and water/nutritious hydration into rhythmic activities. ● Healthy drinks: <ul style="list-style-type: none"> ○ http://www.pbslearningmedia.org/resource/225f51a8-05ee-4219-803c-6358fca924c2/225f51a8-05ee-4219-803c-6358fca924c2/

Resources:

- <http://www.choosemyplate.gov/healthy-eating-tips/sample-menus-recipes/sample-meal-snack-patterns.html>;
- VDOE Physical Education Instructional Resources <http://www.doe.virginia.gov/instruction/physed/index.shtml>;
- http://www.heart.org/HEARTORG/Educator/Educator_UCM_001113_SubHomePage.jsp; <https://www.choosemyplate.gov/MyPlate>;
- <http://www.education.com/magazine/article/tips-kid-hydrated/>

VA SOL Standard: 2.5 The student will describe the energy intake components of energy balance and physical health and development.

ESSENTIAL UNDERSTANDING

- The body functions best with a balance of good nutrition choices and physical activity (balancing what you eat and drink with physical activity).
- A healthy lifestyle requires daily physical activity and proper nutrition.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>
<p>2.5 d) Explain that choosing nutritious foods and being physically active are components of being healthy.</p> <p>Suggested Learning Targets:</p> <p>I can explain that my body needs healthy foods, healthy drinks and physical activity to grow and be healthy.</p> <p>I can explain what energy in and energy out means.</p> <p>I can name two ways I use energy.</p> <p>I can explain that my body uses energy from food when I move.</p> <p>I can name two foods that give me energy.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • Oral: Teacher/Peer discussions— <ul style="list-style-type: none"> ◦ Name two activities that use a lot of energy and two activities that use less energy. ◦ What does energy in and energy out mean? ◦ Sarah is always tired when she gets home from school. What can she do to give herself some energy? • Select/identify pictures healthy foods, drinks and activities. <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> • Oral: Student can explain that the body needs healthy foods, healthy drinks and physical activity to grow and be healthy. • Written: Draw (or select from several pictures) healthy foods, healthy drinks and physical activities. 	<ul style="list-style-type: none"> • Nutrition: Eating food to help your body grow and stay healthy. • Energy: Fuels our bodies to move, breathe, digest food, think, pump blood, etc. • Energy In: The energy we get from eating food from the five food groups and drinking water. <ul style="list-style-type: none"> ◦ Examples: Fruits, vegetables, protein, whole grains and dairy. • Energy Out: The energy we burn by doing physical activity. <ul style="list-style-type: none"> ◦ Examples: Riding bikes, swimming, running, playing tag, playing sports, jumping rope. • Energy Balance: The energy you burn equals the energy you consume with food and drinks. • Calorie: Energy in food and drinks that helps fuel our bodies. • Balanced Diet: Contains the proper proportions of foods to maintain good health. • Fruits: Provides vitamins, minerals and fiber to help the body stay healthy. <ul style="list-style-type: none"> ◦ Examples: Oranges, strawberries, peaches, cantaloupe, watermelon, grapes, bananas, blueberries and raspberries. 	<ul style="list-style-type: none"> • Use names of food groups, nutritious hydration choices and healthy activities for small group activities • Use visuals to depict a variety of food groups, hydration and physical activity examples • Incorporate concepts into movement activities • Incorporate poems or songs about nutrition and physical activity into rhythmic activities • Lesson Examples <ul style="list-style-type: none"> ◦ http://www.pecentral.org/lessonideas/ViewLesson.asp?ID=10080#.WAFf47frvc ◦ http://www.pecentral.org/lessonideas/ViewLesson.asp?ID=9433#.WAFgLbfrvc ◦ http://www.togethercounts.com/sites/togethercounts.com/files/downloads/K_Thru_5/K-2_2-3_Food_For_Thought.pdf

		<ul style="list-style-type: none"> ●Vegetables: Provide vitamins, minerals and fiber to help the body stay healthy <ul style="list-style-type: none"> ○Examples: Broccoli, peppers, carrots, peas, corn, spinach, lima beans, potatoes, kale and tomatoes. ●Grains: Provide a source of fiber and gives us energy. <ul style="list-style-type: none"> ○Examples: Whole grain bread, rice, pasta, oatmeal, cereals and tortillas. ●Protein: Helps build muscle, skin and bones, It is also gives us energy. <ul style="list-style-type: none"> ○Examples: Chicken, turkey, beef, lunch meat, nuts, fish, pork and eggs. ●Dairy: Helps us build strong, healthy bones <ul style="list-style-type: none"> ○Examples: Milk, cheese, yogurt. 	
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Resources:
<http://www.choosemyplate.gov/>; See education resources and curriculum ideas; VDOE Physical Education Instructional Resources
<http://www.doe.virginia.gov/instruction/physed/index.shtml>; http://www.heart.org/HEARTORG/Educator/Educator_UCM_001113_SubHomePage.jsp;
<https://jr.brainpop.com/health/>; <https://www.gonoodle.com/>; <https://kids.usa.gov/exercise-and-eating-healthy/index.shtml>;
http://www.fns.usda.gov/multimedia/tn/sump_level1.pdf; <http://www.choosemyplate.gov/games>; http://www.pbhfoundation.org/pub_sec/edu/cur/rainbow/;
http://www.togethercounts.com/sites/togethercounts.com/files/downloads/K_Thru_5/K-2_2.3_Food_For_Thought.pdf;
<https://lesson-plans.theteacherscorner.net/health/food-plate-game.php>; <http://www.learningtogive.org/units/helping-others-feed-themselves/what-my-plate>

VA SOL Standard: 3.1 The student will demonstrate mature form (all critical elements) for a variety of skills and apply skills in increasingly complex movement activities.

ESSENTIAL UNDERSTANDINGS

- A controlled dribble hand/foot allows movement in a variety of directions, levels and pathways in activities/small sided games.
- Kicking and passing requires accuracy, body control, point of contact, force and direction.
- Striking can be performed using different parts of the body (hand(s), foot or head) and/or different implements.
- Force, trajectory and accuracy can determine/promote success in throwing.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>
<p>3.1 a) Demonstrate the critical elements for overhand throw and catch using a variety of objects; control, stop and kick ball to stationary and moving partners/objects; dribble with dominant/preferred hand/foot; pass a ball to a moving partner; strike ball/object with short handled implement upward and forward; strike/bat ball off tee (correct grip, side to target, hip rotation); and jump/land horizontally (distance) and vertically (height).</p> <p>Suggested Learning Targets:</p> <p>I can throw overhand and catch a ball thrown overhand to me.</p> <p>I can control, stop and kick/pass a ball to partners who are moving.</p> <p>I can dribble with my dominant/preferred hand and pass a ball to a moving partner.</p> <p>I can hit a ball with correct form and aim it in different directions.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • Teacher observation with instructional feedback *(See 3.4.d for additional information on teacher feedback.) • Skill rubric: Perform each locomotor skill and movement correctly • Oral: Teacher/Peer discussion— Examples <ul style="list-style-type: none"> ○ What should you do with an object after you catch it? ○ Why is safety important when striking with implements? • Identify/list skill cues • Peer assessment skill checklist with feedback *(See 3.4.e for information on teaching peer assessment with feedback.) Example: Passing to a stationary/moving partner <ul style="list-style-type: none"> ✓ Identify stationary/moving target/partner ✓ Eye on the ball ✓ Contact middle of ball. ✓ Contact ball with the inside or outside of the foot. ✓ Follow through toward your target/partner for accuracy ✓ Land on kicking foot ✓ Performed with the right amount of force 	<ul style="list-style-type: none"> • Overhand throw <ul style="list-style-type: none"> ○ Faces non-dominant/non-preferred throwing side to target ○ Arm back with hand near ear ○ Step with the opposite foot to throwing arm ○ Hip rotation ○ Release ball at target height (slightly above for distance) ○ Throwing hand follows through toward the target • Catching <ul style="list-style-type: none"> ○ Head up ○ Eyes on the ball until fully controlled ○ Use open hands to grab the ball ○ Pinkies together if ball is below the waist ○ Thumbs together if ball is above the waist ○ Pulls the ball into the body. • Foot Dribble <ul style="list-style-type: none"> ○ Ball close to feet ○ Use both the inside and outside of foot ○ Small taps to control the ball ○ Look forward • Force: Strength or energy exerted on an object. 	<ul style="list-style-type: none"> • Student skill level and appropriate for student safety • Use stations for skills practice • Display cues with visuals • Display vocabulary terms • Display assessment rubrics when skills are introduced • Low-organized/small games involving throwing overhand and/or catching, kicking and striking using a variety of objects • Activities for jump/land horizontally (distance) and vertically (height): <ul style="list-style-type: none"> ○ Hoops, carpet squares or poly spots to create paths for jumping for distance and landing ○ Use folded mats for jumping on and off ○ Hang streamers up high for jumping and reaching vertically ○ Hurdles, cones and rods for jumping over. ○ Jump horizontally or vertically. Mark the distances with a tape measure, chalk or masking tape.

<p>I can jump forward for distance and jump up for height and land safely.</p>	<p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> ● Skill rubric <p style="text-align: center;">Sample</p> <p>4 (Beyond what was taught) — Displays consistent and correct performance of all elements during unpredictable game situations; includes smooth transitions between skills/movements</p> <p>3 (What was explicitly taught) — Performs all critical elements appropriately and consistently</p> <p>2 (Identify basic elements) — Performs critical elements in isolation</p> <p>1 (With help/prompts/cues) — With teacher cues, student can demonstrate some/most of the critical elements in isolation</p>	<ul style="list-style-type: none"> ● Trajectory: The curved path along which something moves through the air. ● Striking (bat/paddle) <ul style="list-style-type: none"> ○ Non-dominant/non-preferred side to the target ○ Handshake grip ○ Keep a stiff wrist ○ Watch the ball ○ Bring arm(s) back ○ Step with the opposite foot ○ Hip rotation ○ Make contact with the ball (with a flat surface) ○ Follow through with the paddle/bat/stick to the target (desired direction) ● Hand Dribble <ul style="list-style-type: none"> ○ Hand on top of the ball ○ Use finger pads ○ Push the ball to floor ○ Ball at waist level on side of body ○ Eyes looking forward ○ Ball under control while moving 	<ul style="list-style-type: none"> ● Explore concepts of coordination of the body to generate force in skills such as: an overhand throw, striking and kicking. ● Conduct peer teaching of skills with partners or in small groups of students. *(See 3.4.e for additional information on peer teaching.)
<p>Resources: SHAPE America National Standards and Grade-Level Outcomes; http://www.pecentral.org/lessonideas/cues/CueSearchresults.asp; VDOE Physical Education Instructional Resources http://www.doe.virginia.gov/instruction/physed/index.shtml; http://portal.shapeamerica.org/publications/resources/teachingtools/teachertoolbox/Teachers_Toolbox_Elementary_PE.aspx#lead; http://www.heart.org/HEARTORG/Educator/FortheGym2/BasketballSkills/Basketball-Skills_UCM_001271_Article.jsp#.V6ojZLf6vcs</p>			

VA SOL Standard: 3.1 The student will demonstrate mature form (all critical elements) for a variety of skills and apply skills in increasingly complex movement activities.			
ESSENTIAL UNDERSTANDINGS			
<ul style="list-style-type: none"> Jumping rope improves coordination and promotes cardiorespiratory endurance. 			
VDOE Standard(s) Student Friendly Language What will the student know and be able to do?	SUGGESTED / SAMPLE ASSESSMENTS	Terms (Vocabulary) and Content Information	SUGGESTED / SAMPLE ACTIVITIES
<p>3.1 b) Demonstrate a self-turn rope sequence of four different jumps.</p> <p>Suggested Learning Targets:</p> <p>I can show four different jumping skills in a row.</p> <p>I can jump over a self turn rope many different ways.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> Teacher observation of consecutive jumps using checklist Example: <ul style="list-style-type: none"> ✓ Forward jumping ✓ Backward jumping ✓ Jog step jumping ✓ One foot jumping ✓ "Skier" jumping ✓ Criss-cross jumping Oral: Teacher/Peer discussion – <ul style="list-style-type: none"> ○ What is your favorite way to jump over the rope? ○ How many times were you able to consecutively jump over the rope? ○ Where should your hands be when jumping rope? ○ How do you "time" your jump? Peer assessment skill checklist with feedback *(See 3.4.e for information on teaching peer assessment with feedback.) Example: <ul style="list-style-type: none"> ✓ Head up, eyes forward ✓ Elbows in ✓ Hands at waist level ✓ Turn with wrist and hands ✓ Knees bent ✓ Jump 1-2 inches off ground ✓ Soft landing on balls of feet 	<ul style="list-style-type: none"> Jump rope skills and tricks: http://www.buyjumpropes.net/resources/jump-rope-tricks-and-tips/ To include: Hop, skip, side-to-side (skier), forward and back (bell), forward straddle (scissors), straddle cross, front cross, side swing cross, backward 180, 360, wounded duck, toe-to-toe, heel-to-toe, jogging step (speed) and rocker. http://www.heart.org/HEARTORG/Educator/FortheGym2/JumpRopeSkills/Jump-Rope-Skills_UCM_001270_Article.jsp#.WlJT4reizet Jump Rope Tips http://www.builtlean.com/2010/08/06/learn-how-to-jump-rope-like-a-pro-7-tips/ 	<ul style="list-style-type: none"> Introduce new jump skills as appropriate. http://extension.illinois.edu/hopping/onerope_slalom.html Display cues and visuals. Use music to develop a sense of rhythm for jumping rope. Conduct peer teaching where students take on a teaching role providing constant feedback to the students practicing the skills. Student feedback can be guided through displayed cues, rubrics, teacher verbal "look for", etc. Example rubric: http://www.mauikinesiology.com/rubrics/rope-jumping.pdf Skill progression challenges http://pecentral.com/lessonideas/ViewLesson.asp?ID=12110#.WGsNhE2FPIU

**Assessment of Learning
(Summative)**

- Perform a jump rope routine.
Criteria:
 - Student selection of four jump rope moves that are each performed with four repetitions before moving on to the next move.
 - Moves are continuous.
 - Performance can be to music or with another student.

Rubric Sample

- 4 (Beyond what was taught)
 - Displays consistent and correct performance of all elements with flow and smooth transitions between movements
- 3 (What was explicitly taught)
 - Performs all critical elements appropriately and consistently, performing each skill four times without stopping
- 2 (Identify basic elements)
 - Performs critical elements with stops between movements
- 1 (With help/prompts/cues)
 - With teacher cues, student can demonstrate some/most of the critical elements in isolation

Resources:

SHAPE America National Standards and Grade-Level Outcomes;
VDOE Physical Education Instructional Resources <http://www.doe.virginia.gov/instruction/physed/index.shtml> ;
American Heart Association resources http://www.heart.org/HEARTORG/Educator/FortheGym2/JumpRopeSkills/Jump-Rope-Skills_UCM_001270_Article.jsp;
<http://www.shapeamerica.org/jump/peresources/adaptedjumprope1.cfm>; <https://www.buyjumpropes.net/resources/jump-rope-tricks-and-tips/>;
<http://www.brighthubeducation.com/pre-k-and-k-lesson-plans/64118-kindergarten-jump-rope-lesson-plan/>; <https://eric.ed.gov/?id=EJ707306>

VA SOL Standard: 3.1 The student will demonstrate mature form (all critical elements) for a variety of skills and apply skills in increasingly complex movement activities.

ESSENTIAL UNDERSTANDINGS

- Dance is a type of movement that includes rhythms, patterns and sequences.
- Dance promotes social skills and creativity.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>
<p>3.1 c) Demonstrate simple dances in various formations.</p> <p>Suggested Learning Targets:</p> <p>I can do a (square/folk/International/line) dance with my classmates/partners.</p> <p>3.1 e) Create and perform a dance sequence with different locomotor patterns, levels, shapes, pathways and flow.</p> <p>Suggested Learning Targets:</p> <p>I can create and perform a dance to music with a (partner/group/by myself) that has different movements, levels, pathways, shapes and flow using counts of 8 that match the music.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • Teacher observation • Checklist Example: Folk Dance <ul style="list-style-type: none"> ✓ Formation: Gets into position for the dance with little assistance. ✓ Sequence of steps: Can follow dance sequence without help from others. ✓ Beat: Maintains the beat throughout the dance. • Peer assessment checklist with feedback for creation of a dance sequence. *(See 3.4.e for information on teaching peer assessment with feedback.) Example: <ul style="list-style-type: none"> ✓ Rhythm and timing of the movements are performed to the music. ✓ Movements are performed as a sequence. ✓ There is a variety of pathways and well-defined patterns. ✓ There is several levels and various body shapes. 	<ul style="list-style-type: none"> • Rhythm: Regular, repeated pattern of sounds or movements. In general, movements should be in counts of 4/8. • Beat: Steady pulse of a song. • Combinations: Putting two or more dance moves together. • Pattern: Repeating a sequence. • Sequence: A particular order in which related events, movements or things follow each other. • Transitions: Moves are connected with smooth changes. • Flow: To move in a steady and continuous way. • Dance genre <ul style="list-style-type: none"> ○ Folk ○ Square ○ Social ○ International ○ Aerobic 	<ul style="list-style-type: none"> • Provide a variety of dance genre experiences • Use each dance experience to demonstrate/instruct each concept such as: counts, flow, pathways. • Do rhythmic activities with manipulatives — rhythm sticks, scarves, ribbons. • Students create movements to music/rhythms. • Invite music teacher and their classes to learn dances together. (See VDOE Music Standards of Learning for Grade 3—3.6.) • Use a variety of music styles and genres. • Optional teacher/video lead dances Example: <ul style="list-style-type: none"> ○ http://www.pecentral.org/mediacenter/video_chachachallenge.html ○ https://www.youtube.com/watch?v=VevE4v0G5sA Safe Share Link https://safeshare.tv/x/ss589cd419a12cc

	<p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> ● Performance of a dance sequence that incorporates at least two formations. <p>Criteria:</p> <ul style="list-style-type: none"> ○ Show consistency in the repetition of the movement. ○ Show correct rhythm and timing of the movements to the music. ○ Show sequence in the performance of the movements. ○ Show a variety of pathways and incorporate well-defined patterns. ○ Show exploration of all levels and include various body shapes. <p style="text-align: center;">Sample Rubric</p> <p>4 <i>(Beyond what was taught)</i> — Displays consistent and correct performance of all elements with flow and smooth transitions between movements</p> <p>3 <i>(What was explicitly taught)</i> — Performs all critical elements appropriately and consistently to counts of 4/8</p> <p>2 <i>(Identify basic elements)</i> — Performs critical elements with stops between movements</p> <p>1 <i>(With help/prompts/cues)</i> — With teacher cues, student can demonstrate some/most of the critical elements in isolation</p>		<ul style="list-style-type: none"> ○ https://www.youtube.com/watch?v=uMuJxd2Gpxe Safe Share Link https://safeshare.tv/x/ss589cd46f6659f <p>Note: Music without lyrics is recommended. Music with lyrics should be reviewed and pre-approved by the school administration prior to use.</p>
<p>Resources: SHAPE America National Standards and Grade Level Outcomes; http://www.pecentral.org/mediacenter/videolessons.html; VDOE Physical Education Instructional Resources http://www.doe.virginia.gov/instruction/physed/index.shtml; PE Central (key term — Dance) http://www.pecentral.org/</p>			

VA SOL Standard: 3.1 The student will demonstrate mature form (all critical elements) for a variety of skills and apply skills in increasingly complex movement activities.

ESSENTIAL UNDERSTANDINGS

- Gymnastics teaches body management through the use of functional movement in a controlled manner.
- Gymnastics plays a role in sports and everyday life by helping individuals learn to manage their bodies efficiently and safely.
- Stability increases in balancing when lowering the center of the body or creating a larger base of support.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>
<p>3.1 d) Perform an educational gymnastic sequence with balance, transfer of weight, travel and change of direction.</p> <p>Suggested Learning Targets:</p> <p>I can show four skills in a row — balance, roll, weight transfer and leap/kick/jump.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • Peer assessment skill checklist with feedback *(See 3.4.e for information on teaching peer assessment with feedback.) Example: Cartwheel <ul style="list-style-type: none"> ✓ Start in a wide stretch, (Arms and legs stretched like spokes in a wheel) ✓ Place hand, then hand, then foot, then foot on the floor ✓ Start and finish facing the same direction ✓ Arms and legs are straight ✓ Shoulders are over your hands and hips over your shoulders when upside down ✓ Push hard with the hands and arms to return to the feet ✓ Keep the body tight ✓ Land softly on the feet • Oral: Teacher/Peer discussion— <ul style="list-style-type: none"> ○ How does the body's center of gravity affect balance? ○ How do you gain and maintain stillness in a balance? ○ How do you land safely from a flight movement? ○ How can learning a correct roll help prevent serious injury when you fall during other physical activity? ○ How do you increase height and distance in flight movements using the element of force? • Written: Check correct answer <ul style="list-style-type: none"> Which base of support is more stable? — A wide base of support — A narrow base of support Which center of gravity is more stable? 	<ul style="list-style-type: none"> • Educational gymnastics: An approach to teaching gymnastics in which students are challenged to discover ways to solve teacher-generated tasks according to their own abilities with assessment based on task accomplishments demonstrating creativity, effort and skill development. <ul style="list-style-type: none"> ○ Foundational skills include: rolling (weight transfer over adjacent body parts — ex. a forward roll); step-like actions (weight transfer using nonadjacent body parts — ex. a cartwheel); flight (weight transfer involving loss of contact with a supporting surface as in a jump); and balance (maintaining stillness over the smallest base possible as in a handstand). • Balancing: An even distribution of weight that allows a person or object to remain upright and steady. Balance is maintained by keeping the center of gravity over the base of support. • Balances: <ul style="list-style-type: none"> ○ Upright: Head higher than hips ○ Inverted: Head lower than hips ○ Symmetrical: Balance where both sides of the body are the same (e.g., a headstand) ○ Asymmetrical: Balance requires 	<ul style="list-style-type: none"> • Displaying assessment rubrics/checklists when skills are introduced. • Balances to include: <ul style="list-style-type: none"> ○ Upright and inverted balances ○ Using different body shapes, straight, twisted, curled, symmetrical and asymmetrical balances ○ Using different body parts as a base of support ○ Using counter-tension and counterbalance shapes and movements ○ Performing balance sequences ○ Loosing and recovery of balance ○ Maintaining dynamic balance while traveling on or off equipment ○ Acquiring balance when stopping a traveling movement • Rolls using different starting and ending shapes (e.g. straight, pike, tuck, straddle, squat). • Sequencing/blending movements Examples:

	<p>— A higher center of gravity — A lower center of gravity</p> <p>● Performance Tasks Examples:</p> <ul style="list-style-type: none"> ○ Combine one locomotor movement with a transfer of weight skill to show a continual flow of movement sequence. ○ Combine two movements/skills that will show acceleration to deceleration of a movement sequence. ○ Combine two movements/skills that will show two different levels within a movement sequence <p>Assessment of Learning (Summative)</p> <p>● Create and perform a tumbling sequence using the following criteria:</p> <ul style="list-style-type: none"> ○ 2 changes of direction ○ 2 different rolls (narrow or curled) ○ 4 balances (1 upright, 1 inverted, 1 symmetrical, 1 asymmetrical) ○ 3 transfers of weight ○ 1 or more elements of flight ○ Clear and smooth transitions throughout with a clear beginning and ending <p style="text-align: center;">Sample Rubric</p> <p>4—(Beyond what was taught) Consistently demonstrates all critical elements without reminders 3—(What was explicitly taught) Usually demonstrates the critical elements with occasional reminders 2—(Identify basic elements) Sometimes demonstrates some of the critical elements with several reminders 1—(With help/prompts/cues) Seldom demonstrates the critical elements with repeated reminders</p>	<p>one side of the body to be different</p> <ul style="list-style-type: none"> ○ Counterbalance: When the student's center of gravity remains outside the base of support such as leaning in and pushing against a partner or leaning into or away from a piece of apparatus. ○ Counter tension: Involves two (or more) student's pulling away from each other. <p>● Center of gravity: The weight center of the body; the point around which the body weight is equally distributed.</p> <ul style="list-style-type: none"> ○ The lower the center of gravity to the base of support, the greater the stability. For example—When walking a balance beam, one squats when they feel they are losing balance. ○ The nearer the center of gravity to the center of the base of support, the more stable the body. For example—Kneeling position for good stability and best positioning when canoe paddling. ○ Stability can be increased by widening the base of support. ○ An individual's limits of stability are the distance outside of his or her base of support he or she can go without losing control of the center of gravity. 	<ul style="list-style-type: none"> ○ A sliding movement, (side gallop), blending into a cartwheel—continual flow of movement ○ A forward roll to a headstand—acceleration to deceleration of movement. ○ Flight movements move the body into the air from the floor (i.e., two feet to two feet, one foot to two feet, two feet to one foot, leaping off the left to right foot and leaping with the right to left foot) to movement/skills that bring the body down to the floor—through levels. <p>● Weight transfer: From feet to hands at fast and slow speeds using large extensions (e.g., cartwheel, round off, handstand, mule kick).</p> <p>● Change of direction:</p> <ul style="list-style-type: none"> ○ Turns (e.g., using one/two feet, jumps, turning on body parts such as: seat, knee, back) ○ Full: Complete 360 degree rotation usually performed on one foot ○ Three quarter: 270 degree rotation ○ Half: 180 degree rotation ○ Quarter: 90 degree turn
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Resources:

SHAPE America National Standards and Grade-Level Outcomes; <https://www.youtube.com/watch?v=PO-htHAUzyk> Safe Share Link <https://safeshare.tv/x/PO-htHAUzyk> ;
VDOE Physical Education Instructional Resources <http://www.doe.virginia.gov/instruction/physed/index.shtml>;
<http://www.kgbanswers.co.uk/what-is-counter-tension-ad-what-is-counter-balance/16700875>; https://www.youtube.com/watch?v=MXcOyp_OjLe

VA SOL Standard: -3.2 The student will identify major structures of the body, to include body systems, muscles and bones and identify basic movement principles.

ESSENTIAL UNDERSTANDINGS

- The ability to evade/dodge/flee in an activity or game requires the ability to move to open spaces.
- Open spaces allow for passing to others and receiving passes from others.

VDOE Standard(s) Student Friendly Language What will the student know and be able to do?	SUGGESTED / SAMPLE ASSESSMENTS	Terms (Vocabulary) and Content Information	SUGGESTED / SAMPLE ACTIVITIES
<p>3.2 a) Apply the concept of open space while moving.</p> <p>Suggested Learning Targets:</p> <p>I can move to open spaces without bumping into others.</p> <p>I can move to open spaces creating passing lanes with teammate(s).</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • Teacher observation • Oral: Teacher/Peer discussion— <ul style="list-style-type: none"> ◦ Why is moving to open space important in movement activities? <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> • Skill rubric <p style="text-align: center;">Sample</p> <p>4 (Beyond what was taught) — Displays consistent and correct performance of open space concepts with and without manipulatives with smooth transitions between movements and movement patterns</p> <p>3 (What was explicitly taught) — Demonstrates ability to move to open spaces in groups with and without manipulatives</p> <p>2 (Identify basic elements) — Demonstrates ability to move to open spaces in groups without manipulatives</p> <p>1 (With help/prompts/cues) — With teacher cues, student can move to open spaces.</p>	<ul style="list-style-type: none"> • Open space: Space where no one else is around. Tactics include: <ul style="list-style-type: none"> ◦ Moving into open space Example: https://recgymnastics.com/2016/03/07/gymnastics-game-move-to-the-open-space/ <ul style="list-style-type: none"> ◦ Moving and creating open spaces by keeping away from others ◦ Sending the ball into open space instead of sending it to an opponent • Passing lanes: Spaces or open areas where passes can be made between offensive players with little risk of being stolen by the defensive team. 	<ul style="list-style-type: none"> • Practice and discuss movement to open space. Examples: <ul style="list-style-type: none"> ◦ Students can practice stopping and going on command while moving around the gym performing locomotor movements. Have them look around after each stop to see how much space is available and identify open spaces by pointing to them. Discuss how different pathways can be used to their advantage in activities. ◦ Play walking and running games, such as tag, in which the object is to avoid others. Discuss the importance of moving to open space within the game. • Provide a variety of partner activities and small sided games with opportunities for movement in groups with and without manipulatives for passing

Resources:

VDOE Physical Education Instructional Resources <http://www.doe.virginia.gov/instruction/physed/index.shtml>;
<http://ro.uow.edu.au/cgi/viewcontent.cgi?article=1631&context=edupapers>; http://www.ed.gov.nl.ca/edu/k12/curriculum/guides/physed/prim_elem/6.pdf

VA SOL Standard: 3.2 The student will identify major structures of the body, to include body systems, muscles and bones and identify basic movement principles.			
ESSENTIAL UNDERSTANDINGS <ul style="list-style-type: none"> • Bones and muscles allow the body to move in a variety of directions. • The health of bones and muscles depends on movement. • Bones support muscles and muscles move bones. 			
VDOE Standard(s) Student Friendly Language What will the student know and be able to do?	SUGGESTED / SAMPLE ASSESSMENTS	Terms (Vocabulary) and Content Information	SUGGESTED / SAMPLE ACTIVITIES
<p>3.2 b) Identify major muscles, to include hamstrings and triceps.</p> <p>Suggested Learning Targets:</p> <p>I can choose/select/identify pictures of hamstrings and triceps.</p> <p>3.2 d) Identify major bones, to include femur, tibia, fibula, humerus, radius and ulna.</p> <p>Suggested Learning Targets:</p> <p>I can identify pictures of the femur, tibia, fibula, humerus, radius and ulna.</p> <p>3.2 e) Name one activity where the muscles and bones help the body to perform the activity.</p> <p>Suggested Learning Targets:</p> <p>I can name the bones and muscles used in a specific</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • Teacher observation: Point to the muscle on your body that is called out. • Identify muscles in a picture. Example— https://kidshealth.org/en/kids/bfs-msactivity.html?WT.ac=k-ra <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> • Written/Oral: Identify one physical activity and the muscle(s), bones, which control the movement. Examples: Kicking <ul style="list-style-type: none"> ○ Bones include femur, tibia ○ Muscles include hamstrings, gluteal muscles, quadriceps Walking <ul style="list-style-type: none"> ○ Bones include femur, tibia ○ Muscles include quadriceps, hamstrings, gastrocnemius, gluteal and abdominal muscles ○ Bones include femur, fibula, tibia and patella 	<ul style="list-style-type: none"> • Major Muscles: <ul style="list-style-type: none"> ○ Triceps: Located in the back of the upper arm. Its function is to extend the arm away from the body. Push-ups use the triceps muscle to help lift you off the floor. ○ Biceps: Located in the front of the arms. Its function is to bend or curl the arm towards the body. ○ Hamstrings: Muscles on the upper rear leg that help you stand and jump. Any running activity will use these muscles. ○ Quadriceps: Large muscle located in the front part of the upper leg. Quad means four and there are four long muscles that start near the hip and extend down to the knee. The quadriceps help you straighten your leg. ○ Abdominals: Muscles located in the center of the body's midsection. Its function is to curl and extend the body; and support the spine. ○ Deltoid: Located on top of the shoulder and lifts the arm at the shoulder. It lifts objects and helps in throwing. ○ Gastrocnemius: Calf muscle that lifts the foot up and down, helps you stand on your toes and balance. ○ Gluteal muscles: (gluteus maximus, gluteus medius and gluteal minimus) Move the leg at the hip joint. • Core muscles: Muscles that surround your trunk. It includes pelvis, lower back, hips, gluteal muscles and abdomen. 	<ul style="list-style-type: none"> • Use visuals to depict bones and muscles http://www.pecentral.org/lessonideas/ViewLesson.asp?ID=218&#.WGVz-bcizcs • Incorporate knowledge concepts into movement activities such as: having students identify the muscles being used in warm-up activities and bones and muscles used in a variety of skills/exercises http://www.pecentral.org/lessonideas/MusclesandBonesworkout.pdf • Use manipulatives or task cards during activities to identify bones and muscles • Videos: <ul style="list-style-type: none"> ○ Muscles http://kidshealth.org/en/kids/msmovie.html?WT.ac=en-k-hbtw-main-page-g • Use visuals to depict bones and muscles http://www.pecentral.org/lessonideas/ViewLesson.asp?ID=218

<p>physical activity (examples: throw, kick, push-ups, etc.)</p>	<ul style="list-style-type: none"> ● Identify (name, circle, draw a picture of) hamstring, triceps, femur, tibia, fibula, humerus, radius and ulna ● Rubric: Name the muscles and bones that help you perform (name specific skill/activity). <p style="text-align: center;">Sample Rubric</p> <p>4 (Beyond what was taught) — Consistently identifies the correct muscles and bones that move them during the activity/skill, without cues or hints</p> <p>3 (What was explicitly taught) — Usually identifies the correct muscles and bones that move them during the activity/skill but needs an occasional cue or hint</p> <p>2 (Identify basic elements) — Sometimes identifies the correct muscles and bones but needs several cues and hints</p> <p>1 (With help/prompts/cues) — Seldom identifies the correct muscles and bones that move them during the activity/skill with hints not helping</p>	<ul style="list-style-type: none"> ● Major Bones: <ul style="list-style-type: none"> ○ Femur: Thighbone extending from hip to knee. ○ Tibia: Inside of the lower leg connecting the knee with the ankle bones. Also called the shinbone. ○ Fibula: The smaller bone on the outer side of the lower leg. ○ Humerus: The upper arm bone that runs from the shoulder to the elbow. ○ Radius: The outer of the two bones of the forearm when viewed with the palm facing forward, long bone in the forearm, thumb side. ○ Ulna: The inner of the two bones of the forearm when viewed with the palm facing forward, long bone in the forearm, pinkie side. ○ http://www.teachpe.com/anatomy/skeleton.php ● Review the previous years' bones that include: <ul style="list-style-type: none"> ○ Skull: The head or cranium, protects the brain. ○ Ribs: They make up the ribcage in your chest and protect the heart and lungs. ○ Spine: It's made up of several little bones called vertebrae and provides the main support for the body. It helps you to stand upright and protects the spinal cord which sends the messages from your brain to the rest of the body. 	<p>8#.WGVz-bcizes</p> <ul style="list-style-type: none"> ● Partner students for a variety of skills/exercises and have them observe one another noticing the bones and muscles working to allow the movement. ● Activity games to teach bones and muscles Example: Tag game When a person is tagged they freeze and place a hand over an area of the body. To become unfrozen, another student must identify the type of bone or muscle associated with that area.
<p>Resources: SHAPE America National Standards and Grade Level Outcomes; https://classroom.kidshealth.org/classroom/3to5/body/parts/bones.pdf VDOE Physical Education Instructional Resources http://www.doe.virginia.gov/instruction/physed/index.shtml; http://www.myschoolhouse.com/courses/O/1/82.asp; http://www.scholastic.com/teachers/lesson-plan/super-skeletons; http://www.teachpe.com/anatomy/skeleton.php</p>			

VA SOL Standard: 3.2 The student will identify major structures of the body, to include body systems, muscles and bones and identify basic movement principles.

ESSENTIAL UNDERSTANDINGS

- The body can perform physical activities because of the cardiorespiratory system, bones and muscles.
- A healthy cardiorespiratory system is needed for activities that require moderate to vigorous physical activity.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>
<p>3.2 c) Describe the components and function of the cardiorespiratory system, to include heart, lungs and blood vessels.</p> <p>Suggested Learning Targets:</p> <p>I can identify pictures of the heart, lungs and blood vessels and explain what the cardiorespiratory system does for the body.</p> <p>I can explain that my lungs bring air into my body.</p> <p>I can explain that my heart pumps oxygen-rich blood throughout my body.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • Oral: Teacher/Peer discussion— <ul style="list-style-type: none"> ○ List the components of the cardiorespiratory system. ○ Describe two activities that strengthen your cardiorespiratory system. ○ Describe how the heart, lungs and blood vessels work together to keep the body moving. • Identify picture of the heart, lungs and blood vessels. <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> • Written/Oral: Describe how the heart, lungs and blood vessels work together to keep the body moving. • Written: Identify (name, circle, draw a picture of) the heart, lungs and blood vessels. 	<ul style="list-style-type: none"> • Blood vessels: Hollow tubes that carry blood to all parts of the body. http://www.heart.org/idc/groups/heart-public/@wcm/@global/documents/downloadable/ucm_305579.pdf • Heart and Lungs: Together, the heart and lungs fuel your body with the oxygen needed by your muscles, ensuring that they have the oxygen needed for the work they are doing. <ul style="list-style-type: none"> ○ Heart: https://kidshealth.org/en/kids/heart.html ○ Lungs: https://kidshealth.org/en/kids/lungs.html • Cardiorespiratory system: Composed of the heart, blood vessels and respiratory system. These systems work to transport oxygen to the muscles and organs of the body http://www.pelinks4u.org/articles/TA1Health1009.pdf <ul style="list-style-type: none"> ○ The heart is a muscle that pumps blood throughout your body, located in your chest. http://kidshealth.org/en/kids/bfs-csactivity.html ○ Exercise allows your lungs to hold more air. http://kidshealth.org/en/kids/bfs-rsactivity.html ○ With a strong heart and lungs, your cells get oxygen faster and your body 	<ul style="list-style-type: none"> • Videos <ul style="list-style-type: none"> ○ Lungs: http://kidshealth.org/en/kids/rsmovie.html?WT.ac=en-k-htbw-main-page-c ○ Heart: http://kidshealth.org/en/kids/csmovie.html?WT.ac=en-k-htbw-main-page-c • Students act out the cardiorespiratory system. Begin slowly and progress to a run. Example: Assign students into “heart”, “lungs”, “blood”, and “body parts” groups. Have “blood” students’ start at the heart and move to the “lungs”. Lung” students will hand “blood” students a card that says oxygen. “Blood” students return to the “heart”, which pumps the “blood” to “body parts”. “Blood” students will move to “body parts”. “Body part” students can be a certain body part, like leg, muscle or brain, and act out a motion (like kick) when they receive oxygen. Then the “body part” students give the “blood” students carbon dioxide cards. Then “blood” students move back to the “heart”, which then pumps the “blood” to the “lungs”. At the “lungs”, “blood” students swap carbon dioxide cards for oxygen and then return to the “heart”, where the process repeats. • Engage in physical activities that build a

works more efficiently.
◉ <http://kidshealth.org/en/kids/csmovie.html?WT.ac=ctg#catmovies>

strong heart and lungs then discuss the benefits.
http://www.heart.org/idc/groups/heart-public/@wcm/@global/documents/downloadable/ucm_313195.pdf

Example discussions:

- ◉ Physical activities work both the heart and lungs. The heart is a muscle and gets stronger with exercise so a strong heart doesn't have to work as hard to pump blood to the rest of the body.
- ◉ Exercise also allows your lungs to hold more air. With a strong heart and lungs, your cells get oxygen faster and your body works more efficiently.

Resources:

SHAPE America National Standards and Grade Level Outcomes; <http://cario-resp.wikispaces.com/>;
VDOE Physical Education Instructional Resources <http://www.doe.virginia.gov/instruction/physed/index.shtml>;
http://www.henry.k12.ga.us/cur/mybody/circ_lessons.htm; <http://www.pelinks4u.org/articles/TA1Health1009.pdf>;
http://www.heart.org/idc/groups/heart-public/@wcm/@global/documents/downloadable/ucm_313195.pdf;
<http://www.cyh.com/HealthTopics/HealthTopicDetailsKids.aspx?p=335&np=152&id=1446>;
<http://www.cyh.com/HealthTopics/HealthTopicDetailsKids.aspx?p=335&np=152&id=2406>

VA SOL Standard: 3.3 The student will describe the components and measures of health-related fitness.

ESSENTIAL UNDERSTANDINGS

- Physical fitness can be evaluated by measuring each component (cardiorespiratory endurance, muscular strength and endurance, flexibility and body composition).
- Each health-related component of fitness can be maintained or improved by a variety of physical activities.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>
<p>3.3 a) Explain the health-related components of fitness (cardiorespiratory endurance, muscular strength, muscular endurance, flexibility and body composition).</p> <p>Suggested Learning Targets:</p> <p>I can explain each health-related component of fitness (cardiorespiratory endurance, muscular strength, muscular endurance, flexibility and body composition).</p> <p>3.3 b) Identify one measure for each component of health-related fitness.</p> <p>Suggested Learning Targets:</p> <p>I can identify an activity for each health-related component of fitness (cardiorespiratory endurance, muscular strength, muscular endurance, flexibility and body composition).</p> <p>I can explain how the PACER test measures the health</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> Oral: Teacher/Peer discussion: <ul style="list-style-type: none"> Name and describe each component of fitness, name one measure for each, and name one activity for each component. Teacher observation: Teacher names each health related component of fitness and students demonstrate a measure/activity as each is named. <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> Teacher/Peer assessment: (Verbal/Written) Write the beginning letter(s) of the health-related fitness components (or) give the health-related component of fitness for the activity described. Answer abbreviations: <ul style="list-style-type: none"> cardiorespiratory endurance (CE) muscular strength (MS) muscular endurance (ME) Flexibility (F) Jogging for 3 minutes 	<ul style="list-style-type: none"> Fitness: The ability to handle the physical work and play of everyday life without becoming tired. Health-related fitness: The ability to become and stay physically healthy. Muscular strength The ability of a muscle or muscles to push or pull with its total force. <ul style="list-style-type: none"> Pushups: Assessing upper body strength and endurance. Trunk lift: Assessing trunk extender strength and flexibility. Muscular endurance The ability of the muscles to repeat a movement many times or hold a position without stopping to rest <ul style="list-style-type: none"> Curl-ups: Assessing abdominal muscular strength and endurance. Characteristics of muscular strength and endurance exercises: <ul style="list-style-type: none"> Physically demanding. Muscular strength: Can only do for a short time Muscular endurance: Can continue to do for a higher repetition Uses certain muscle groups, not whole body Examples include: sit-ups, pull-ups, mountain climbers, push-ups and weight lifting. 	<ul style="list-style-type: none"> A variety of physical activities that demonstrate muscular strength, muscular endurance, flexibility, cardiorespiratory endurance and body composition Discuss physical activities that can be done at home as well as in the community that relate to the health-related components of fitness. Examples— <ul style="list-style-type: none"> Endurance: walking, cycling, skating, swimming, dancing, yard and garden work Flexibility: vacuuming, stretching exercises, yoga Strength: lifting and carrying groceries, climbing stairs, exercises like abdominal curl-ups and push-ups Stations where students identify which component of fitness is being improved based on the activity. Introduce and perform FitnessGram tests such as: <ul style="list-style-type: none"> Aerobic capacity/Cardiorespiratory endurance: PACER test— A 20 meter progressive, multi-stage shuttle run set to cadence. Body composition: Body Mass Index— (calculated from height and weight) Muscular strength and endurance:

<p>component of fitness, cardiorespiratory endurance.</p> <p>I can explain how the push-up and curl-up tests measure the health component of fitness, muscular strength and endurance.</p> <p>I can explain how the back saver sit and reach and the trunk lift measures the health component of fitness, flexibility.</p> <p>3.3 c) Demonstrate one activity for each component of health-related fitness.</p> <p>Suggested Learning Targets:</p> <p>I can demonstrate one activity for each health-related component of fitness (cardiorespiratory endurance, muscular strength, muscular endurance, flexibility and body composition)</p>	<p>(answer: CE) –Climbing a rock wall (answer: ME) –Jumping rope 2 minutes (answer: CE) –Ten push-ups (answer: ME) –A high kick (answer: F) –A ball thrown far (answer: MS) –A 20 second held plank (answer: ME) –A back bend in gymnastics (answer: F) –Lifting a weight one time (answer: MS)</p> <p>•Written: Matches the fitness component to its description; matches the fitness component to its measure; names one activity for each component.</p>	<ul style="list-style-type: none"> •Flexibility: The muscles' ability to move a joint through a full range of motion <ul style="list-style-type: none"> ○Backsaver sit and reach: Assessing flexibility of the hamstring muscles. ○Trunk lift: Assessing trunk extender strength and flexibility. ○Stretches, flexibility activities (yoga) •Characteristics of flexibility exercises: <ul style="list-style-type: none"> ○Slow, deliberate and controlled movements. ○Body part is moved until tension is felt in the muscle. ○Hold for 5 to 15 seconds. ○Examples include stretching activities and gymnastics skills. •Cardiorespiratory endurance The ability of the heart and lungs to supply oxygen to the muscles during long periods of physical activity <ul style="list-style-type: none"> ○PACER: Assessing aerobic capacity. ○Aerobic capacity activities at moderate to vigorous levels •Characteristics of cardiorespiratory activities: <ul style="list-style-type: none"> ○Continuous, not stop and start. ○Increases breathing. ○Can do for 10 to 15 minutes or longer. ○Examples include jogging and bicycling. •Body composition The relationship between fat-free mass and fat mass <ul style="list-style-type: none"> ○Body mass index (BMI): Indication of the appropriateness of a child's weight relative to height. ○Activities that involve strength, endurance and aerobic capacity (such as burpees). 	<p>Curl Up—Abdominal strength and endurance test set to cadence. Push Up—Upper body strength and endurance set to cadence.</p> <ul style="list-style-type: none"> ○Flexibility: Back-Saver Sit and Reach—Measures flexibility of the hamstring muscles Trunk Lift—Trunk extensor strength, flexibility and endurance. ○FitnessGram performance standards: http://www.cde.ca.gov/ta/tg/pf/documents/pft15hfzstd.pdf ○FitnessGram goal setting: http://www.pecentral.org/assessment/goalsetting/fitnessgramgoalsetting3rd.pdf ○Cooper Institute FitnessGram Science: Reference Guide (explains each test and gives the science for the tests) http://www.cooperinstitute.org/youth/fitnessgram/fitnessgram10/science <p>•Videos (bottom of page) on the purpose of fitness testing: https://www.cooperinstitute.org/youth/fitnessgram</p> <p>*Note: While students should experience fitness tests by the end of third grade, emphasis should be placed on form and tests should be used to understand the importance of health-related fitness components. Test results/scores should not be a focus. (It is an inappropriate practice to grade students on fitness test results).</p>
<p>Resources: SHAPE America National Standards and Grade-Level Outcomes; http://www.healthline.com/health/fitness-exercise/muscular-endurance-exercises#2 VDOE Physical Education Instructional Resources http://www.doe.virginia.gov/instruction/physed/index.shtml ; http://www.heart.org/HEARTORG/Educator/Educator_UCM_001113_SubHomePage.jsp; https://neisd.net/athletics/PE/documents/4FC78102.pdf http://rtips.cancer.gov/rtips/viewProduct.do?viewMode=product&productId=539715; https://wikis.engage.com/physicalfitnessstest</p>			

<p>VA SOL Standard: 3.3 The student will describe the components and measures of health-related fitness.</p> <p>ESSENTIAL UNDERSTANDINGS</p> <ul style="list-style-type: none"> Moderate to vigorous physical activity is needed for energy balance and physical health. Intensity levels help a person understand how hard their body is working during physical activity. 			
<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>
<p>3.3 d) Identify levels of intensity in moderate to vigorous physical activity (MPVA).</p> <p>Suggested Learning Targets:</p> <p>I can name/identify levels of intensity for physical activity.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> Oral: Teacher/Peer discussion— <ul style="list-style-type: none"> Name the levels of intensity. Describe activities for each level of intensity. Describe the connection between heart rate and levels of intensity. <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> Written: Draw (or select from several pictures) one activity for each level of intensity. Oral: <ul style="list-style-type: none"> Group members discuss their heart rate while doing the following: <ul style="list-style-type: none"> Sitting/relaxed Standing Running in place one minute: <ul style="list-style-type: none"> Group members discuss how their heart rate changed in each situation and develop a statement about the differences in heart rate and what that indicates in connection to levels of intensity in moderate to vigorous physical activity. Each group presents their statement. 	<ul style="list-style-type: none"> Intensity: How hard a person is working Intensity Levels: <ul style="list-style-type: none"> Intensity Level 1 Not moving—seated Intensity Level 2 Slow—walking Intensity Level 3 Medium—skipping and galloping Intensity Level 4 Fast—jogging and running Intensity Level 5 Very Fast—no talk zone—sprinting Physiological changes as intensity of activity increases: <ul style="list-style-type: none"> Heart rate increases Breathing becomes faster and deeper Body temperature is warm Body begins to sweat Face is flushed Muscles feel worked Talk Test: Reciting something familiar as a tool for determining workout level during physical activity. <ul style="list-style-type: none"> Low intensity level: Should be able to sing while doing the activity. Moderate intensity level: Should be able to talk comfortably while doing the activity. High intensity level: Should be out of breath cannot carry on a conversation. Benefits of warming up: The most important 	<ul style="list-style-type: none"> Physical activities at different intensity levels. Demonstration of activities that can be performed at two different intensity levels. Display cues and visuals. Use heart rate to distinguish between moderate and vigorous activities Example: Students are stopped throughout a moderate to vigorous activity and asked to place their hand on their chest to feel the changes in their heartbeat. Identify physiological changes as intensity increases such as sweating, increased heart rate and increased respiration. Introduce the purpose and benefits of warming up and cooling down and its relationship to intensity when moving from moderate to major physical exertion.

reason to warm up is to prevent injuries.
 Additional benefits include:

- Reduction of muscle stiffness.
- Better flexibility of the muscles.
- Higher temperature in the muscles promotes higher blood circulation.
- Increases heart rate, which supports heavier exercises.
- Better movement during physical activity since the stiffness of the muscles has been eliminated.

● Benefits of cooling down: The most important reason to cool down is to lower the heart rate. Additional benefits include:

- Tapering down the muscle movement before completely stopping the heavy workout helps the body to cope better with the changes that take place in the metabolism and muscles used during the workout.
- The cooling down phase is believed to reduce the risk of muscular soreness which may occur the day after an exercise session and reduce the risk of fainting or collapse after such a session.
- Tapers the heart beat to the standard rate in a systematic manner preventing hyperventilation.

Resources: SHAPE America National Standards and Grade-Level Outcomes;
 VDOE Physical Education Instructional Resources <http://www.doe.virginia.gov/instruction/physed/index.shtml>;
http://www.heart.org/HEARTORG/Educator/Educator_UCM_001113_SubHomePage.jsp

<p>VA SOL Standard: 3.4 The student will demonstrate an understanding of the purposes for rules, procedures and respectful behaviors, while in various physical activity settings.</p> <p>ESSENTIAL UNDERSTANDINGS</p> <ul style="list-style-type: none"> Rules help keep games and activities safe and fair. Achieving goals with others requires cooperation. 			
<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>
<p>3.4 a) Explain the importance of rules for activities.</p> <p>Suggested Learning Targets:</p> <p>I can explain why rules are important for activity name.</p> <p>3.4 b) Provide input into establishing and demonstrating implementation of rules and guidelines for appropriate behavior in physical activity settings.</p> <p>Suggested Learning Targets:</p> <p>I can create rules for an activity in physical education.</p> <p>I can demonstrate how to follow the rule for an activity in physical education.</p> <p>3.4 c) Describe the importance of cooperating and work cooperatively with peers to achieve a goal.</p> <p>Suggested Learning Targets:</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> Oral: Teacher/Peer discussion— <ul style="list-style-type: none"> Explain why rules are important for (name of activity). What does it mean to move safely? List the rules of the activity. Why is cooperation important to meet a goal? Checklist: Self/Peer/Teacher <ul style="list-style-type: none"> Can quickly shed anxiety, anger, sadness or feelings of failure during activities. Can cooperate, share, take turns and interact smoothly and positively with all others during activities. Can put away equipment safely and properly. Can hold self and others responsible for following rules/procedures. Student reflection on the importance of cooperating with classmates and the importance of supportive behaviors. <p>Examples:</p> <ul style="list-style-type: none"> If a classmate says or does something I agree with, I... When I want to make a point to the group, I... If a group member ignores my suggestions, I... If a group member says or does something I disagree with, I... If I don't understand the group leaders ideas, I... Peer/Group: Create rules for an activity. 	<ul style="list-style-type: none"> Rules: A prescribed guide for conduct or action and have penalties and rewards. Procedures: Guide how things are done and have no penalties and rewards, only retraining when not met. Guidelines for establishing classroom rules: <ul style="list-style-type: none"> Rules should be in the form of a positive statement and explain what students should be doing. <p>Examples:</p> <ul style="list-style-type: none"> Respect your classmates in your words and actions. Listen when someone else is talking. Rules need to be stated clearly. Students should be able to understand the behavioral expectation. <p>Examples:</p> <ul style="list-style-type: none"> Come to class prepared with proper shoes or a coat if needed. Follow the teacher's directions. Rules should be few. Rules appear more important when there are fewer of them and they are easier to remember. 	<ul style="list-style-type: none"> Provide a variety of activities that include cooperation towards a common goal and modified games/activities for students to create rules Teach appropriate interactions with peers that show cooperation. <p>Examples:</p> <ul style="list-style-type: none"> Sharing, taking turns, following rules Staying on task Listening quietly without interruption Exhibiting self-control Willingness to play with any child in the class; and recognize similarities and appreciate differences in people Students can create a game and rules <p>Examples:</p> <ul style="list-style-type: none"> Groups work together to develop a recreational activity/game using the equipment provided and the skill techniques associated with the equipment. Create rules and guidelines for proper behavior during activity. Stations that have different pieces of equipment. When groups rotate to a new station, they discuss safety concerns

<p>I can explain why it is important to cooperate with classmates to meet a goal.</p> <p>I can cooperate with classmates.</p>	<ul style="list-style-type: none"> ● Written: Identify (name, circle, draw a picture of) how to encourage others when working together. Example: http://www.pecentral.org/assessment/pdf/waystoen_couragesomeoneassess.pdf <p>Assessment of Learning (Summative)</p> <p style="text-align: center;">Sample Rubric</p> <p>4 <i>(Beyond what was taught)</i> — Displays ability to follow rules and cooperate with classmates and is able to lessen instances of conflict and/or resolve conflict</p> <p>3 <i>(What was explicitly taught)</i> — Demonstrates ability to follow rules and cooperate with classmates to meet a goal</p> <p>2 <i>(Identify basic elements)</i> — Demonstrates ability to follow rules</p> <p>1 <i>(With help/prompts/cues)</i> — With teacher cues, student can follow rules</p> <ul style="list-style-type: none"> ● Written: List rules for an activity and explain why the rules are needed; explain why cooperation is important to meet a goal. 	<ul style="list-style-type: none"> ● Cooperation: Working together to achieve a goal in which success depends on a combined effort. ● Cooperative described as: <ul style="list-style-type: none"> ○ following rules ○ encouraging others ○ complimenting others ○ controlling temper ○ wanting everyone to play well and succeed ○ working together toward a common goal ○ helping classmates ○ playing under control ○ sharing ○ showing concern for classmates' feelings ● Goal: An outcome, something that will make a difference, as a result of achieving it. 	<p>and then decide what rules/guidelines the group must follow before beginning the physical activity.</p> <ul style="list-style-type: none"> ● Students come up with consequences for refusing and failing to follow classroom/physical activity rules. ● Cooperative games and activities: <ul style="list-style-type: none"> ○ http://www.pecentral.org/lessonideas/ViewLesson.asp?ID=11125#.V492mRJTFD8 ○ http://www.pecentral.org/lessonideas/ViewLesson.asp?ID=132864#.V494ZBJTFD8 ○ http://lessonplanspage.com/cooperative-game/
<p>Resources: SHAPE America National Standards and Grade-Level Outcomes; http://www.pecentral.org/lessonideas/ViewLesson.asp?ID=859#.Wlj0Krcizct; VDOE Physical Education Instructional Resources http://www.doe.virginia.gov/instruction/physed/index.shtml; http://mrgym.com/Teams.htm; http://kidshealth.org/en/kids/good-sport.html?WT.ac=ctg#catemotion</p>			

VA SOL Standard: 3.4 The student will demonstrate an understanding of the purposes for rules, procedures and respectful behaviors, while in various physical activity settings.

ESSENTIAL UNDERSTANDINGS

- Appropriate feedback is important to improve performance.
- Effort and practice are important to improve skill performance.

<p>3.4 d) Implement teacher feedback to improve performance.</p> <p>Suggested Learning Targets:</p> <p>I can use feedback from the teacher to perform a skill better.</p> <p>3.4 e) Provide appropriate feedback to a classmate.</p> <p>Suggested Learning Targets:</p> <p>I can help a partner by giving them feedback to perform a skill better.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> ● Oral or written: Identify skill or skill cue that needs improvement; document teacher feedback/suggestion; self-assess improvement; conduct a peer assessment ● Video: Partners video then watch each other perform a skill/activity and provide one positive comment and one improvement suggestion. ● Peer/Teacher checklist to assess skill performance: Example — Handstand <ul style="list-style-type: none"> ✓ Step forward to a lunge position ✓ Place hands flat on the mat with palms down and shoulder width apart ✓ Keeping your arms straight, mule kick your legs off the ground ✓ Balance with your feet together and legs straight ● Peer assessing the peer assessor: A student completes a peer assessment with feedback and the student being assessed does an assessment on the feedback given to them. Example of comment considerations to assessor — <ul style="list-style-type: none"> ○ Was the assessment positive? Give an example. ○ Was the assessment specific, clear 	<ul style="list-style-type: none"> ● Teacher feedback: Supports the development of self-regulated learning, critical thinking and reciprocal learning. <ul style="list-style-type: none"> ○ Two corrections at the most should be identified for feedback. ○ Should be specific and meaningful. ● When feedback is specific to motor skills: <ul style="list-style-type: none"> ○ It causes improvement by providing error detection, reinforcement of correct skill performance and motivation. ○ Is based on the critical elements for each skill. ● Characteristics of good feedback: Given with the goal of improvement, timely, honest, respectful, clear, issue-specific, objective, supportive, motivating, action-oriented and solution-oriented ● Peer assessment benefits: <ul style="list-style-type: none"> ○ Empowers students to take responsibility for and manage, their own learning. ○ Enables students to learn to assess and to develop life-long assessment skills. ○ Enhances students' learning through knowledge diffusion and exchange of ideas. ○ Motivates students to engage with course material more deeply. 	<ul style="list-style-type: none"> ● Teacher modeling of effective feedback with multiple opportunities for practice in skill and/or activity settings. Modeling examples: <ul style="list-style-type: none"> ○ Be positive: Remember that if there is a mix of positive and negative comments, most people will screen out the positive, so it may need re-emphasizing. ○ Be specific: Avoid general comments and clarify pronouns such as “it,” “that,” etc. ○ Own the feedback — Use ‘I’ statements. (e.g., “I noticed”; “I saw”; “I heard”) ○ Use positive language that suggests that any problems are time limited, situation specific and capable of solution. (e.g., Just at the moment you don’t...; in this instance you seemed; you haven’t yet worked out a way of...; next time you might want to.....) ○ Be very careful with advice: People rarely struggle with an issue because of the lack of some specific piece of information; often, the best help is helping the person to come to a better understanding of exactly what they need to improve. ● Activities that allow students to be assessed by teacher or peer. ● Conduct peer teaching of skills with partners or in small groups of students. ● Students using rubrics or checklists to guide their peer feedback. ● Peer assessment teaching points:
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	<p>and provide a description of where specifically improvement is needed.</p> <ul style="list-style-type: none"> ○ Was a skill rubric or checklist used by the assessor? <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> ● Written: Identify skill or skill cue that needs improvement; document teacher feedback/suggestion; reflect on improvement. ● Peer assessment (assessed for accuracy of positive feedback narrative —what can student observed do to improve the skill/skill cue). 	<ul style="list-style-type: none"> ● Considerations when incorporating self/peer assessments: <ul style="list-style-type: none"> ○ Explain the expectations and benefits of engaging in a peer review process such as: it helps them evaluate their own work and become more self-directed learners. ○ Be prepared to give feedback on students' feedback to each other. Display some examples of feedback of varying quality and discuss which kind of feedback is useful and why. ○ Set time limits and guidelines for the feedback process. ○ Listen to group feedback discussions and provide guidance and input when necessary. ○ Create an environment that feels safe for interpersonal risk-taking so that students will feel more confident in evaluating. ○ Small feedback groups so that feedback can be explained and discussed with the receiver. ● Peer teaching: Students take on a teaching role and provide constant feedback to their peers when practicing skills. Benefits include: <ul style="list-style-type: none"> ○ Students are able to experiment and perform unfamiliar skills within the comfort of their own social groups. ○ Provision of constant feedback for students. ○ It will assist the teacher in ensuring optimal safety for each of the students. 	<ul style="list-style-type: none"> ○ Position yourself so you can really see what the person is doing. ○ Ask partner to perform the movement/skill/activity again so you are sure of what you saw. ○ Be sure to focus both on the person's movements and if any implements are being used, their movements as well. ○ Evaluate the overall effectiveness of the movement. ○ Be descriptive rather than evaluative (e.g., "Did you know you are not stepping with the opposite foot when you throw the ball?" rather than "It was really bad the way you throw that ball."): Also, words like, "Good job!" and "You did that wrong" are not feedback at all. Learners don't know what was "good" or "wrong" about what they did. ○ Use a performance checklist to guide your efforts.
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Resources:

SHAPE America National Standards and Grade-Level Outcomes: http://sydney.edu.au/education_social_work/groupwork/docs/SelfPeerAssessment.pdf;
VDOE Physical Education Instructional Resources <http://www.doe.virginia.gov/instruction/physed/index.shtml>

VA SOL Standard: 3.4 The student will demonstrate an understanding of the purposes for rules, procedures and respectful behaviors, while in various physical activity settings.

ESSENTIAL UNDERSTANDINGS

- Finding physical activities that are enjoyable is an important component of daily physical activity.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>
<p>3.4 f) Describe one group physical activity to participate in for enjoyment.</p> <p>Suggested Learning Targets:</p> <p>I can name/list/draw one activity that I enjoy doing with family/friends/others that encourages me be active.</p> <p>I can list and perform physical activities that I can do both in school and out of school.</p> <p>I can identify situations after school where I can perform physical activities with others.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> Oral: Teacher/Peer discussion: Discuss physical activities that can be done at home and in the community. List physical activities that are enjoyed. Evaluate the positive mental and emotional aspects of participating in each activity. Draw a picture of a physical activity being performed outside of school with others. <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> Written: List/draw an activity being performed outside of school with others for enjoyment. Example: http://www.pecentral.org/lessons/ideas/ViewLesson.asp?ID=1455#.V26VHxL2ZD8 	<ul style="list-style-type: none"> Opportunities for group physical activities in school and out of school: <ul style="list-style-type: none"> Physical activity with family members such as walks or playing active games together. Go places where you can be active with friends such as public parks, community baseball fields or basketball courts. Fun activities can be either structured or non-structured. Activities can range from team sports or individual activities that can be done with others such as walking, running, skating, bicycling, jumping rope, swimming, playground activities or free-time play. 	<ul style="list-style-type: none"> Introduce group activity opportunities for inside and outside of school: <ul style="list-style-type: none"> Through class discussions or basic introductions for group outdoor pursuits such as: cycling, skating, fishing, canoeing, hiking, kayaking, rock climbing, sailing, skiing, surfing, swimming, bicycling, etc. and recreational sports such as: soccer, T-ball, beach volleyball, badminton, table tennis, bowling, handball, disc golf, duckpin bowling, etc. Through short videos on physical activities for outside of school. By offering group activities in school for student to choice from such as dancing, walking, running, jumping rope, playground activities or free-time play. Introducing where local group physical activity opportunities exist such as: bike trails, parks, playgrounds and community centers. Stations that align group activities to the components of fitness: <p>Example: Stations will represent each component of fitness and a choice of activities that correlates with that component.</p> <ul style="list-style-type: none"> Cardiorespiratory Endurance: Jogging, Just Dance (Wii U), etc. Flexibility: Yoga, stretching, gymnastics, etc. Muscular Endurance: Wall volleying objects such as beach balls, tennis balls, jumping rope, etc. Muscular Strength: Hopscotch, Frisbee toss, bowling, golf putting, throw and catch, etc.

Resources:

SHAPE America National Standards and Grade Level Outcomes; <http://www.teachpe.com/fitness/health.php>
 VDOE Physical Education Instructional Resources <http://www.doe.virginia.gov/instruction/physed/index.shtml>

VA SOL Standard: 3.5 The student will describe energy balance.

ESSENTIAL UNDERSTANDINGS

- Energy balance is achieved by balancing what one eats and drinks with what they do.
- Everything we do, from sleeping to running, requires energy.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>																
<p>3.5 a) Explain that energy balance relates to good nutrition (energy in) and physical activity (energy out).</p> <p>Suggested Learning Targets:</p> <p>I can explain that energy balance includes good nutrition (energy in) and physical activity (energy out).</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • Oral: Teacher/Peer discussion <ul style="list-style-type: none"> ◦ What does the word “energy” mean to you? ◦ Explain energy balance as good nutrition (energy in) and physical activity (energy out). <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> • Written: Students are given a scenario of an individual’s snack consumption and possible activities for the day. (See possible list of activities under “Suggested/Sample Activities” column.) Students must add up the calorie intake in snacks for the day and use the activities list to determine how much activity must be done to maintain their weight for the day. Example: A nine year old snack intake for the day was: <ul style="list-style-type: none"> ◦ 1 Apple – 95 calories ◦ 1 Small bag of pretzels – 108 calories ◦ 1 Candy bar – 210 calories Based on the activity list with expended calories, show how many calories the nine year old ate and how much activity they must do to 	<ul style="list-style-type: none"> • Energy: Fuels our bodies to move, breathe, digest food, think, pump blood, etc. • Energy In: The energy we get from eating food from the five food groups and drinking water. <ul style="list-style-type: none"> ◦ Examples: Fruits, vegetables, protein, whole grains and dairy. • Energy Out: The energy we burn by doing physical activity. <ul style="list-style-type: none"> ◦ Examples: Riding bikes, swimming, running, playing tag, playing sports, jumping rope. • Energy Balance: The energy you burn equals the energy you consume with food and drinks. • Calorie: Is the energy we eat in food and drinks. We have to have a balance between the amount of calories we consume with the amount of energy we burn due to activity and exercise. If we consume more calories than we burn, we will gain weight. If we burn more calories than we consume, we will lose weight. If we find a balance we will maintain our weight. The number of calories that each person needs varies based on factors like age, height, weight and how much we exercise. http://kidshealth.org/en/kids/calorie.html • Calories and the relationship to weight http://kidshealth.org/en/kids/healthy-weight-movie.html?WT.ac=ctg#catmovies 	<ul style="list-style-type: none"> • Make connections to activity level and calorie intake. Example <ul style="list-style-type: none"> ◦ You gain weight when the calories you burn, including those burned during physical activity, are less than the calories you eat or drink. ◦ Give expended calories in different activities Example: Activities and the calories burned in 15 minutes— <table border="0" style="margin-left: 20px;"> <tr><td>Riding a bike</td><td>50 calories</td></tr> <tr><td>Walking</td><td>25 calories</td></tr> <tr><td>Shooting baskets</td><td>35 calories</td></tr> <tr><td>Karate</td><td>80 calories</td></tr> <tr><td>Playing a piano</td><td>15 calories</td></tr> <tr><td>Ice skating</td><td>60 calories</td></tr> <tr><td>Playing Soccer</td><td>60 calories</td></tr> <tr><td>Doing arts & crafts</td><td>10 calories</td></tr> </table> • Incorporate nutrition concepts into movement activities. • Use manipulatives or task cards during activities to demonstrate understanding of energy balance concepts. • Stations that make connections to nutrition (energy in) and physical activity (energy out): Example: <ul style="list-style-type: none"> ◦ Station 1 – Relays to collect 	Riding a bike	50 calories	Walking	25 calories	Shooting baskets	35 calories	Karate	80 calories	Playing a piano	15 calories	Ice skating	60 calories	Playing Soccer	60 calories	Doing arts & crafts	10 calories
Riding a bike	50 calories																		
Walking	25 calories																		
Shooting baskets	35 calories																		
Karate	80 calories																		
Playing a piano	15 calories																		
Ice skating	60 calories																		
Playing Soccer	60 calories																		
Doing arts & crafts	10 calories																		

burn the calories. Then explain how this relates to energy balance.

- Explain the components of energy balance

- Physical activity guidelines for ages 6 to 17 include doing 60 minutes (1 hour) or more of physical activity daily.

- Physical Activity Levels and Calorie Intake

Age	Sedentary	Moderately Active	Active
7	Girl—1,200 Boy—1,400	Girl—1,600 Boy—1,600	Girl—1,800 Boy—1,800
8	Girl—1,400 Boy—1,400	Girl—1,600 Boy—1,600	Girl—1,800 Boy—2,000
9	Girl—1,400 Boy—1,600	Girl—1,600 Boy—1,800	Girl—1,800 Boy—2,000

*USDA 2015-2020 Dietary Guidelines for Americans

food/drink cards to develop 3 meals with drinks that add up to the recommended calorie intake for one day.

- Station 2—Exercise/activities are posted for students to perform with the amount of calories that are burned. Examples include: 12 jumping jacks—151 calories; 18 push-up shoulder taps—225 calories; 6 squat jumps—75 calories; 10 curl ups—85 calories; etc.
- Station 3—Use of iPads to play a MyPlate game where students create healthy meals for one day and 60 minutes of physical activity. Evaluation and feedback are given.
https://www.fns.usda.gov/multimedia/Games/Blastoff/BlastOff_Game.html

Resources:

<http://www.choosemyplate.gov/food-groups/>; <https://kids.usa.gov/exercise-and-eating-healthy/index.shtml>; <https://www.supertracker.usda.gov/>
VDOE Physical Education Instructional Resources <http://www.doe.virginia.gov/instruction/physed/index.shtml>;
http://www.heart.org/HEARTORG/Educator/Educator_UCM_001113_SubHomePage.jsp; <http://kidshealth.org/en/kids/fit-kid.html>;
<http://kidshealth.org/en/kids/healthy-weight-movie.html?WT.ac=ctg#catmovies>; <http://www.choosemyplate.gov/physical-activity-calories-burn>;
<http://www.accessdata.fda.gov/videos/CFSAN/HWM/hwmsk01.cfm>;
<http://www.fda.gov/Food/IngredientsPackagingLabeling/LabelingNutrition/ucm281746.htm#kids>

VA SOL Standard: 3.5 The student will describe energy balance.			
ESSENTIAL UNDERSTANDINGS			
<ul style="list-style-type: none"> Energy balance is achieved by balancing what one eats and drinks with what they do. Meals should include one food from each food group with portion control. 			
VDOE Standard(s) Student Friendly Language What will the student know and be able to do?	SUGGESTED / SAMPLE ASSESSMENTS	Terms (Vocabulary) and Content Information	SUGGESTED / SAMPLE ACTIVITIES
<p>3.5 b) Identify one food per group to create a healthy meal that meets USDA guidelines.</p> <p>Suggested Learning Targets:</p> <p>I can create a healthy meal with one food from each food group (dairy, protein, fruit, vegetable and grain)</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> Oral: Peer discussion – Examples: <ul style="list-style-type: none"> What are two of your favorite healthy food choices? Two favorite unhealthy food choices? Why should we eat healthy food? Why should we avoid unhealthy food? Identify a nutritious meal with one food from each of the food groups <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> Draw (or select from several pictures) healthy food from each food group to make a healthy meal Written: Build a healthy plate http://www.bing.com/images/search?adlt=strict&q=myplate+image&qpv=MyPlate+image&qpv=MyPlate+image&qpv=MyPlate+image&FORM=IGRE 	<ul style="list-style-type: none"> MyPlate: A food plate symbol that serves as a reminder to build healthy eating patterns by making healthy choices across the food groups. http://kidshealth.org/en/kids/pyramid.html USDA Food Groups: A method of grouping similar foods. Food groups in the USDA Food Patterns are defined as vegetables, fruits, grains, and dairy and protein foods. https://www.youtube.com/watch?v=L9ymkJK2QCU <ul style="list-style-type: none"> Fruits: Provides vitamins, minerals and fiber to help the body stay healthy. Examples include: oranges, strawberries, peaches, cantaloupe, watermelon, grapes, bananas, blueberries and raspberries. Vegetables: Provide vitamins, minerals and fiber to help the body stay healthy. Examples include: broccoli, peppers, carrots, peas, corn, spinach, lima beans, potatoes and kale. Grains: Provide a source of fiber and gives us energy. Examples include: whole grain bread, rice, pasta, oatmeal, cereals and tortillas. Protein: Helps build muscle, skin and bone. It is also gives us energy. Examples include: chicken, turkey, beef, lunch meat, nuts, fish, pork and eggs. Dairy: Helps us build strong, healthy bones. Examples include: milk, cheese and yogurt. Portion Control: Understanding how much a 	<ul style="list-style-type: none"> Incorporate nutrition concepts into movement activities Discussions/videos on unhealthy food choices (sometime foods): Example – Foods that contain too much fat, sodium and sugar. These are foods we may eat on a special occasion or as a treat every once in a while. Examples include: candy, cakes, potato chips, fast food and sodas. https://www.youtube.com/watch?v=cZ6QzhvMIGk Use visuals to depict a variety of foods from each food group Example: http://www.heart.org/idc/groups/heart-public/@wcm/@global/documents/downloadable/ucm_305577.pdf Use names of food groups choices for small group activities Incorporate poems or songs about the food groups into rhythmic activities Discussions on portion size: Example: A portion is the amount of food you choose to eat. There is no standard portion size and no single right or wrong portion size. A portion is what you serve yourself or what might come in one food package or what a restaurant might give you. You might

		<p>serving is and how many calories or how much food energy a serving contains.</p> <ul style="list-style-type: none"> ● Breakfast: Eating breakfast helps fuel your body after sleeping the night before. Eating breakfast will help you do better in school and be more active. <ul style="list-style-type: none"> ○ Examples: yogurt, fresh fruit, whole grain muffins, oatmeal, whole grain cereal ○ Breakfast webpage http://kidshealth.org/en/kids/breakfast.html?ref=search ● Lunch: It's important to eat a balanced lunch even if you buy school lunch. Your lunch should have something from all five food groups. <ul style="list-style-type: none"> ○ Examples: milk, yogurt, sandwich on whole grain bread, salad, fruits, vegetables, string cheese ○ School lunch webpage http://kidshealth.org/en/kids/school-lunches.html?WT.ac=ctg ● Dinner: Important to eat a balanced dinner using foods from all the five food groups. Half of your plate should make up fruits and vegetables. The other half is divided into whole grains and protein. Protein is a little smaller because you don't need as much from this food group. You need at least one serving from dairy. <ul style="list-style-type: none"> ○ Examples: fish, chicken, vegetables, fruit, whole grain rolls or tortillas, milk 	<p>also think of a portion as a helping. A serving is a standard amount used to help give advice about how much to eat or to identify how many calories and nutrients are in a food. (Teacher holds up objects such as: a deck of cards, dice, computer mouse, tennis ball, to show healthy portion sizes for different foods. *See below.)</p> <ul style="list-style-type: none"> ○ A serving of nuts is a small handful ○ For meat, the size of a deck of cards ○ For cheese, four dice equals one serving ○ For fruits and vegetables, a computer mouse or a tennis ball is about the size of a half-cup of vegetables ○ For milk, a serving is equal to a school-size carton or a carton of yogurt
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Resources:
[http://www.choosemyplate.gov/food-groups/;](http://www.choosemyplate.gov/food-groups/) [https://health.gov/dietaryguidelines/2015/guidelines/;](https://health.gov/dietaryguidelines/2015/guidelines/)
VDOE Physical Education Instructional Resources <http://www.doe.virginia.gov/instruction/physed/index.shtml>;
http://www.heart.org/HEARTORG/Educator/Educator_UCM_001113_SubHomePage.jsp; [https://www.superttracker.usda.gov/;](https://www.superttracker.usda.gov/)
<https://health.gov/dietaryguidelines/2015/resources/2015-2020-Dietary-Guidelines.pdf>; <https://www.nal.usda.gov/fnic/dietary-guidance-0>
<https://www.nal.usda.gov/fnic/myplate-and-historical-food-pyramid-resources>; <http://kidshealth.org/en/kids/school-lunches.html?WT.ac=ctg>
http://www.heart.org/ldc/groups/heart-public/@wcm/@fdr/documents/downloadable/ucm_447449.pdf; <http://kidshealth.org/en/kids/fit-kid.html#>

VA SOL Standard: 3.5 The student will describe energy balance.			
ESSENTIAL UNDERSTANDINGS			
<ul style="list-style-type: none"> Water and other healthy drinks keep the body hydrated and are important for body functions. 			
VDOE Standard(s) Student Friendly Language What will the student know and be able to do?	SUGGESTED / SAMPLE ASSESSMENTS	Terms (Vocabulary) and Content Information	SUGGESTED / SAMPLE ACTIVITIES
<p>3.5 c) Identify healthy hydration choices and the amount of water needed for the body to function, using the formula one ounce of water per two pounds of body weight.</p> <p>Suggested Learning Targets:</p> <p>I can calculate the amount of water needed by the body for someone who weighs (80) pounds.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> Oral: Teacher/Peer discussion – <ul style="list-style-type: none"> Why does the body need dairy? Name some healthy hydration choices. What makes a drink unhealthy? What ways can I make sure I get enough water? What is dehydration? Select/identify pictures of healthy drinks. <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> Calculate hydration needed for a variety of weights. Written: Super Crew® Drink Tracker http://www.superkidsnutrition.com/kidsactivities/ 	<ul style="list-style-type: none"> Hydration: One ounce of water per two pounds of body weight (person who weighs 80 pounds should drink 40 ounces of water a day). Recommended number of ounces of water per day = half the number of pounds a person weighs Healthy Drink Choices: Help your body move, grow and be healthy. http://kidshealth.org/en/parents/drink-healthy.html <ul style="list-style-type: none"> Water: A clear liquid that has zero calories and contains no sugar. Water represents 50 to 75 percent of a person's body weight and regulates body temperature. The body primary loses water through urination and perspiration but replenishes needed water through eating and drinking. Daily water requirements are six to eight cups of water a day. http://kidshealth.org/en/kids/water.html?WT.ae=ctg#catfood Milk: A dairy drink that helps build strong teeth and bones. http://kidshealth.org/en/parents/calcium.html?WT.ae=p-ra Unhealthy Drink Choices: Contain too much sugar and calories. Examples include: sports drinks, sodas, juice drinks and energy drinks. <ul style="list-style-type: none"> Caffeine drinks http://kidshealth.org/en/parents/child-caffeine.html?WT.ae=p-ra Sports and Energy Drinks 	<ul style="list-style-type: none"> Use nutritious hydration choices for small group activities Use visuals to depict a variety of hydration examples Incorporate poems or songs about water/nutritious hydration into rhythmic activities Videos: Example: https://www.youtube.com/watch?v=gusOH0Nulok Safe Share Link https://safeshare.tv/x/ss589cdd1fc0878 Discussions on drinking water throughout the day to meet the daily requirements of six to eight cups of water a day. Examples: <ul style="list-style-type: none"> With every meal and throughout the day. When it's warm outside. When you're exercising or playing sports. When your mouth is dry and you're thirsty.

<http://kidshealth.org/en/parents/power-drinks.html?WT.ac=p-ra>

- Dehydration: When your body doesn't have enough water in it. Not having enough water can make you slow, tired, and sick and your brain might not work as well.
 - <http://kidshealth.org/en/parents/dehydration.html?WT.ac=p-ra>
 - Signs of dehydration
<http://kidshealth.org/en/kids/dehydration.html?WT.ac=k-ra>
- Importance of water:
 - To help your blood carry oxygen to all your body parts.
 - To help your body fight off illness.
 - To help your body digest food or break it down.
 - To help our body sweat so we can cool down.
 - To regulate body temperature.

Resources:

<http://www.choosemyplate.gov/food-groups/>; <http://www.education.com/magazine/article/tips-kid-hydrated/>;
VDOE Physical Education Instructional Resources <http://www.doe.virginia.gov/instruction/physed/index.shtml> ;
http://www.heart.org/HEARTORG/Educator/Educator_UCM_001113_SubHomePage.jsp
<http://www.pbslearningmedia.org/resource/225f51a8-05ee-4219-803c-6358fea924c2/225f51a8-05ee-4219-803c-6358fea924c2/>

<p>VA SOL Standard: 3.5 The student will describe energy balance.</p> <p>ESSENTIAL UNDERSTANDINGS</p> <ul style="list-style-type: none"> The body needs macronutrients to function. Macronutrients include fats, proteins and carbohydrates. 			
<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>
<p>3.5 d) Identify the macronutrients (fat, protein, carbohydrates).</p> <p>Suggested Learning Targets:</p> <p>I can name/list the macronutrients.</p> <p>3.5 e) Identify foods that are healthy sources of each macronutrient.</p> <p>Suggested Learning Targets:</p> <p>I can name/list/draw a healthy food for each macronutrient.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> Oral: Teacher/Peer discussion – <ul style="list-style-type: none"> What is a macronutrient? Name the macronutrients Why is it important to choose healthy foods for each of the macronutrients? Identify a nutritious food for each macronutrient. <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> Written: List/Select term for each macronutrient. Draw (or select from several pictures) healthy foods for each macronutrient. 	<ul style="list-style-type: none"> Macronutrients: Nutrients are substances needed for growth, energy provision and other body functions. Macronutrients are those nutrients required in large amounts that provide the energy needed to maintain body functions and carry out the activities of daily life. There are 3 macronutrients – carbohydrates, proteins and fats. Fats: The calories from fats help fuel our bodies. There are good fats and bad fats. <ul style="list-style-type: none"> Saturated and Trans fats: These are the bad fats. Consuming too many of them is bad for the heart. Examples include: butter, store-baked goods and oils Monounsaturated and Polyunsaturated fats: These are the good fats. They help your heart. Even though they are healthy, you still want to make sure you don't eat too many. Examples include avocados, olive oils, nuts, seeds, peanut butter and dark chocolate http://kidshealth.org/en/kids/fat.html?WT.ac=ctg Carbohydrates: A group of nutrients that supply the body with energy. The calories from carbohydrates are the main fuel we use in our bodies. Fiber and sugar make up part of the carbohydrate family. You should eat plenty of fiber, but limit how much sugar you eat. Healthy choices include fruits, whole grain bread, whole grain crackers, brown rice, whole grain tortillas http://kidshealth.org/en/kids/carb.html?WT.ac=ctg 	<ul style="list-style-type: none"> Use names of macronutrients and food sources for small group activities Use visuals to depict a variety of foods for each macronutrient Use manipulatives or task cards during activities to demonstrate understanding of macronutrients

[ac=ctg](#)

- Protein: Protein provides the building blocks to help us grow. They help us maintain and replace body tissue, such as bones, muscles, and blood and body organs.
 - Healthy choices – lean meats such as: chicken, turkey and fish, nuts, eggs, Greek yogurt, lean lunch meat, peanut butter, cheese
 - <http://kidshealth.org/en/kids/protein.html?WT.ac=ctg>

Resources:

See education resources and curriculum ideas; VDOE Physical Education Instructional Resources <http://www.doe.virginia.gov/instruction/physed/index.shtml>;
http://www.heart.org/HEARTORG/Educator/Educator_UCM_001113_SubHomePage.jsp; www.choosemyplate.gov;
https://healthyforgood.heart.org/eat-smart/articles/how-to-eat-healthy-without-dieting#.V6d_h_36upe;
http://www.heart.org/HEARTORG/HealthyLiving/HealthyEating/Nutrition/Nutrition-Basics_UCM_461228_Article.jsp#.Wljmsbcizct;

<p>VA SOL Standard: 4.1 The student will refine movement skills and demonstrate the ability to combine them in increasingly complex movement environments/activities.</p> <p>ESSENTIAL UNDERSTANDINGS</p> <ul style="list-style-type: none"> • Development of mature movement patterns occurs during dynamic and unpredictable movement experiences. • Understanding key elements of fundamental movement skills and movement concepts allows for efficient and effective mature movement that can be applied to a variety of activities. • Performing a variety of movements in activities/games will lead to effective body management. 			
<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>Suggested/Sample Assessments</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>Suggested/Sample Activities</p>
<p>4.1 a) Demonstrate mature form for specialized locomotor, nonlocomotor, and manipulative skill combinations in game and modified sports activities, to include throwing and catching overhand with a partner while moving; throwing overhand to a target for distance; dribbling and passing soccer ball with varying speed while moving; dribbling with non-dominant/non-preferred hand; walking and dominant/preferred hand at various speeds; catching thrown objects; striking a ball with short-handled and long-handled implement; and underhand volley/strike.</p> <p>I can overhand throw and catch with a partner while moving.</p> <p>I can overhand throw to a target that is far away.</p> <p>I can dribble and pass a ball while moving at different speeds.</p> <p>I can dribble with my dominant/preferred hand at different speeds.</p> <p>I can dribble with my non-dominant/non-preferred hand while walking.</p>	<p>Assessment for Learning</p> <ul style="list-style-type: none"> • Skill rubric • Teacher observation <p>Sample rubric</p> <p>4 (<i>Beyond what was taught</i>) Displays consistent and correct performance of all elements during unpredictable game situations; includes smooth transitions between skills/movements</p> <p>3 (<i>What was explicitly taught</i>) Performs all critical elements appropriately and consistently-</p> <p>2 (<i>Identify basic elements</i>) Performs critical elements in isolation</p> <p>1 (<i>With help/prompts/cues</i>) With teacher cues, student can demonstrate some/most of the critical elements in isolation</p>	<p>Review previous years' vocabulary as appropriate</p> <ul style="list-style-type: none"> • Rotation • Stationary <p>Review previous years' critical elements as appropriate</p> <p><u>Overhand throw to moving partner</u></p> <ul style="list-style-type: none"> • Throws with one hand • Face non-dominant/non-preferred throwing side to target (path of travel) • Arm back with hand near ear • Step with the opposite foot to throwing arm • Hip rotation • Release ball at target height (slightly above for distance) • Throwing hand follows through toward the target (path of travel) • Aim slightly ahead of partner in his/her path of travel if he/she is moving slowly and farther ahead of partner in his/her path of travel if he/she is moving quickly <p><u>Striking (bat/paddle)</u></p>	<ul style="list-style-type: none"> • Modified games involving each of the skills and a variety of situations • Use a variety of implements and objects appropriate to student skill level and appropriate for student safety • Small-sided games throughout place space highlighting the same skill(s) in different activities • Display cues with visuals • Display assessment rubrics when skills are introduced

<p>I can hit a ball with both a bat/racquet and a paddle.</p> <p>I can keep a (ball) in the air with my hands/arms.</p>		<ul style="list-style-type: none"> • Keep non-dominant/non-preferred side to the target • Use a handshake grip • Keep a stiff wrist • Watch the ball • Bring arm(s) back • Step with the opposite foot • Hip rotation • Make contact with the ball (with a flat surface) • Follow through with the paddle/bat/stick to the target (desired direction) <p><u>Foot Dribble</u></p> <ul style="list-style-type: none"> • Keep the ball close to feet • Use both the inside and outside of foot • Use small taps to control the ball • Look forward <p><u>Hand Dribble</u></p> <ul style="list-style-type: none"> • Keep hand on top of the ball • Use finger pads • Push the ball to floor • Keep the ball at waist level on side of body • Keep eyes looking forward • Ball is under control while moving 	
<p>Resources: SHAPE America National Standards and Grade-Level Outcomes; VDOE Physical Education Instructional Resources http://www.doe.virginia.gov/instruction/physed/index.shtml</p>			

<p>VA SOL Standard: 4.1 The student will refine movement skills and demonstrate the ability to combine them in increasingly complex movement environments/activities.</p> <p>ESSENTIAL UNDERSTANDINGS</p> <ul style="list-style-type: none"> • Dance is movement in rhythms, patterns, and sequences. • Dance promotes social skills and creativity. • Dance sequences are made up of different movements. 			
<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>Suggested/Sample Assessments</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>Suggested/Sample Activities</p>
<p>4.1 b) Create and perform a partner dance sequence with an apparent beginning, middle, and end that integrates shapes, levels, pathways, and locomotor patterns.</p> <p>I can create and perform a dance to music with a partner/group/by myself with a beginning, middle, and end that have different movements, levels, pathways, shapes, and flow using counts of 8 that match the music.</p>	<p>Assessment of Learning</p> <ul style="list-style-type: none"> • Teacher observation • Skill check list • Skill rubric <p>Assessment for Learning</p> <ul style="list-style-type: none"> • Skill check list • Skill rubric <p>4 <i>(Beyond what was taught)</i> Creates and displays dance sequence with apparent beginning, middle, end and is consistent and correct when performing a variety of all elements with flow and smooth transitions between movements</p> <p>3 <i>(What was explicitly taught)</i> Creates and displays dance sequence with apparent beginning, middle, end and is consistent and correct when performing all elements with flow and smooth transitions between movements</p> <p>2 <i>(Identify basic elements)</i> Performs critical elements with stops between beginning, middle, and end of dance sequence.</p> <p>1 <i>(With help/prompts/cues)</i> With teacher cues, student can demonstrate some/most of the critical elements in isolation</p>	<p>Review previous years' critical elements</p> <ul style="list-style-type: none"> • Rhythm—regular, repeated pattern of sounds or movements • Beat—steady pulse of a song • Rhythm • In general, movements should be in counts of 4/8 • Transitions—moves are connected with smooth changes • Flow—move in a steady and continuous way • Choreography 	<ul style="list-style-type: none"> • Use each dance experience to demonstrate/instruct each concept such as counts, flow, pathways • Demonstrate or create with the class dance sequence with beginning, middle, and end • Students work in groups to create dance sequences—perform for other groups
<p>Resources: SHAPE America National Standards and Grade Level Outcomes; VDOE Physical Education Instructional Resources http://www.doe.virginia.gov/instruction/physed/index.shtml; PE Central (key term—Dance) http://www.pecentral.org/</p>			

VA SOL Standard: 4.1 The student will refine movement skills and demonstrate the ability to combine them in increasingly complex movement environments/activities.

ESSENTIAL UNDERSTANDINGS

- Gymnastics promotes body management skills through a variety of movement experiences.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>Suggested/Sample Assessments</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>Suggested/Sample Activities</p>
<p>4.1 c) Create and perform a continuous educational gymnastic sequence that combines four or more of the following movements: traveling, balancing, rolling, and other types of weight transfer.</p> <p>I can create and show a sequence with (four) skills in a row — balance, roll, (weight transfer), and (leap/kick/jump).</p>	<p>Assessment of Learning Teacher observation Skill check list Skill rubric</p> <p>Assessment for Learning Skill check list Skill rubric</p>	<p>Review previous years' vocabulary and critical elements as appropriate</p> <ul style="list-style-type: none"> •—Balance •—Rotation •—Traveling movements (Chassé, full turn, lunge) 	<p><u>Balance</u> Low balance beam</p> <p><u>Rotation/Rolling</u> <u>Vertical Axis</u> —Jump Turn (90°, 180°, 270°, 360°) —Seat Spin —Log Roll <u>Horizontal Axis</u> —Rolls using different starting and ending shapes (e.g. pike, straddle, squat) —Forward roll —Shoulder roll <u>Transverse Axis</u> —Cartwheel</p> <p><u>Traveling movements</u> Chassé, leap</p> <p>Students copy sequence created by teacher/other students.</p> <p>Warm-ups and cool-downs that develop flexibility</p>

Resources: SHAPE America National Standards and Grade Level Outcomes; VDOE Physical Education Instructional Resources
<http://www.doe.virginia.gov/instruction/physed/index.shtml>

<p>VA SOL Standard: 4.1 The student will refine movement skills and demonstrate the ability to combine them in increasingly complex movement environments/activities.</p> <p>ESSENTIAL UNDERSTANDINGS</p> <ul style="list-style-type: none"> The ability to participate in a variety of cardiorespiratory activities requires knowledge of pacing, speed and endurance. Participating in cardiorespiratory endurance activities will lead to a healthier body. Providing feedback to self and peers to improve performance reinforces deeper understanding of concept. 			
<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>Suggested/Sample Assessments</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>Suggested/Sample Activities</p>
<p>4.1 d) Demonstrate the use of pacing, speed, and endurance in a variety of activities.</p> <p>4.1 e) Demonstrate the ability to self-pace in a cardiovascular endurance activity.</p> <p>I know how fast to go so I can do activities for long amounts of time.</p> <p>4.1 f) Provide appropriate feedback to a peer to improve performance.</p> <p>I can watch my classmates and give them advice on how to get better.</p>	<p>Assessment of Learning</p> <ul style="list-style-type: none"> Teacher observation Skill/routine check list Skill/routine rubric (self and peer) <p>Assessment for Learning</p> <ul style="list-style-type: none"> Skill check list Skill rubric <p>Oral: Provide partner with feedback on how to improve performance during cardiorespiratory endurance activity.</p> <p>Written: Complete heart rate during various physical activities.</p>	<p>Vocabulary</p> <ul style="list-style-type: none"> Pacing Speed Endurance Feedback Heart rate 	<ul style="list-style-type: none"> Students check heart rate during activities to know if they are in the heart health intensity level Students experiment with cardiorespiratory activities and muscular strength activities to find out how heart rate changes as activity levels increase/decrease Students conduct self/peer assessments in fitness using various types of assessment equipment
<p>Resources: SHAPE America National Standards and Grade Level Outcomes; VDOE Physical Education Instructional Resources http://www.doe.virginia.gov/instruction/physed/index.shtml; American Heart Association www.americanheart.org</p>			

VA SOL Standard: 4.1 The student will refine movement skills and demonstrate the ability to combine them in increasingly complex movement environments/activities.

ESSENTIAL UNDERSTANDINGS

- Jumping rope improves coordination and promotes cardiorespiratory endurance.
- Performing a variety of movements will lead to effective body management.

VDOE Standard(s) Student Friendly Language What will the student know and be able to do?	Suggested/Sample Assessments	Terms (Vocabulary) and Content Information	Suggested/Sample Activities
<p>4.1 g) Create and perform a jump rope routine (self-turn or long rope).</p> <p>I can do a routine turning the rope by myself or on a long rope.</p>	<p>Assessment of Learning</p> <ul style="list-style-type: none"> • Teacher observation • Skill/routine check list • Skill/routine rubric (self and peer) <p>Assessment for Learning</p> <ul style="list-style-type: none"> • Skill check list • Skill/routine rubric <p>4 (Beyond what was taught) Creates and displays consistent and correct performance of all elements with flow and smooth transitions between movements with a variety of jumps</p> <p>3 (What was explicitly taught) Creates and displays consistent and correct performance of all elements with flow and smooth transitions between movements</p> <p>2 (Identify basic elements) Displays consistent and correct performance of most elements with flow and smooth transitions between movements (routine provided by teacher/other student)</p> <p>1 (With help/prompts/cues) With teacher cues, student can demonstrate some/most of a routine (created by teacher/other student)</p>	<p>Critical Elements</p> <p>Review previous years' critical elements</p> <p>Individual skills are at the discretion of the teacher such as</p> <ul style="list-style-type: none"> • Hop, skip, side-to-side (bell) • Forward straddle (scissors) • Straddle cross • Front cross • Side swing cross • Backward 180 • 360 • Wounded duck • Toe-to-toe • Heel-to-toe • Jogging step (speed) • Rocker 	<ul style="list-style-type: none"> • Intermediate jump rope skills using a self-turn rope and/or long jump as appropriate to develop skills • Short rope turn may be aided by a partner or teacher as appropriate for learning • Introduce routines. Play copycat with students have them mimic a routine that teacher/other student provides

Resources: SHAPE America National Standards and Grade Level Outcomes; VDOE Physical Education Instructional Resources <http://www.doe.virginia.gov/instruction/physed/index.shtml>; American Heart Association resources http://www.heart.org/HEARTORG/Educator/FortheGym2/JumpRopeSkills/Jump-Rope-Skills_UCM_001270_Article.jsp

VA SOL Standard: 4.2 The student will identify major structures and begin to apply knowledge of anatomy to explain movement patterns.

ESSENTIAL UNDERSTANDINGS

- The body can perform physical activities because of the cardiorespiratory system, bones, and muscles.
- The pulse can be found on different places of the body.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>Suggested/Sample Assessments</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>Suggested/Sample Activities</p>
<p>4.2 a) Identify and describe the major components of the cardiorespiratory system, to include heart, lungs, and blood vessels.</p> <p>I can identify pictures of the heart, lungs, and blood vessels and explain what the cardiorespiratory system does for the body.</p> <p>4.2 b) Identify major muscle groups, to include deltoid and gluteal.</p> <p>I can choose/select/identify pictures of deltoids and gluteal.</p> <p>4.2 c) Identify major components of the skeletal system, to include sternum, vertebrae, patella, and phalange.</p> <p>I can identify pictures of sternum, vertebrae, patella, and phalange.</p> <p>4.2 d) Locate radial and/or carotid pulse.</p> <p>I can find my pulse on my neck and/or wrist.</p> <p>4.2 e) Identify the bones and muscles needed to perform one fitness activity and one skilled movement.</p> <p>I can name the bones and muscles used to (kick a ball).</p>	<p>Assessment of Learning</p> <p>Identify picture of deltoid and gluteal; heart, lungs, and blood vessels; sternum, vertebrae, patella, phalange; radial pulse location, carotid pulse location</p> <p>Assessment for Learning</p> <p>Written: Identify one activity and the muscle(s), bones, that control the movement</p> <p>Identify (name, circle, draw a picture of) deltoid and gluteal; heart, lungs, and blood vessels; sternum, vertebrae, patella, phalange; radial pulse location, carotid pulse location</p> <p>Observation: Matching activity where students run to collect names/vocabulary corresponding to picture.</p>	<p>Review vocabulary from previous year</p> <ul style="list-style-type: none"> • Hamstrings • Triceps • Blood vessels • Femur • Tibia • Fibula • Radius • Ulna <p>New Vocabulary</p> <ul style="list-style-type: none"> • Deltoid • Gluteal • Sternum • Vertebrae • Patella • Phalange • Radial Pulse • Carotid Pulse 	<ul style="list-style-type: none"> • Use visuals to depict bones and muscles • Incorporate knowledge concepts into movement activities such as having students identify the muscles being used in warm-up activities and bones and muscles used in a variety of discrete skills • Periodically throughout activities, have students check their pulse (radial and/or carotid)
<p>Resources: SHAPE America National Standards and Grade-Level Outcomes; VDOE Physical Education Instructional Resources http://www.doe.virginia.gov/instruction/physed/index.shtml; Kids Health http://kidshealth.org/kid/htbw/</p>			

VA SOL Standard: 4.2 The student will identify major structures and begin to apply knowledge of anatomy to explain movement patterns.

ESSENTIAL UNDERSTANDINGS

- The ability to stop/confront/tag/play defense in an activity or game requires the ability to move and close spaces.
- Closing spaces prevents opponents from passing to others and receiving passes from others.

<p>VDOE Standard(s) <u>Student Friendly Language</u> What will the student know and be able to do?</p>	<p><u>Suggested/Sample Assessments</u></p>	<p>Terms (Vocabulary) and Content Information</p>	<p><u>Suggested/Sample Activities</u></p>
<p>4.2 f) Identify the concept of closing space during movement sequences.</p> <p>I can move into space eliminating open spaces for my opponents.</p>	<p>Assessment of Learning Teacher observation Skill check list Skill rubric</p> <p>Assessment for Learning Skill check list Skill rubric</p> <p><i>4 (Beyond what was taught)</i> Displays consistent and correct performance of closing space concepts with and without manipulatives with smooth transitions between movements and movement patterns</p> <p><i>3 (What was explicitly taught)</i> Demonstrates ability to move to close spaces in groups with and without manipulatives</p> <p><i>2 (Identify basic elements)</i> Demonstrates ability to move to close spaces in groups without manipulatives</p> <p><i>1 (With help/prompts/cues)</i> With teacher cues, student can move to close spaces</p>	<p>Review vocabulary from previous year</p> <ul style="list-style-type: none"> • Open space • Passing lanes <p>New vocabulary</p> <ul style="list-style-type: none"> • Closing space 	<p>Provide a variety of activities with opportunities for movement in groups with and without manipulatives</p>

Resources: VDOE Physical Education Instructional Resources <http://www.doe.virginia.gov/instruction/physed/index.shtml>

VA SOL Standard: 4.3 The student will apply knowledge of health-related fitness, gather and analyze data, and set measurable goals to improve fitness levels.

ESSENTIAL UNDERSTANDINGS

- Physical fitness can be evaluated by measuring each component (cardiorespiratory endurance, muscular strength and endurance, flexibility, and body composition).
- SMART goals can be used to target and improve one or multiple areas of health-related fitness.
- Baseline and post data can be analyzed and compared to determine areas of improvement/progress as well as design future programs.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do</p>	<p>Suggested/Sample Assessments</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>Suggested/Sample Activities</p>
<p>4.3 a) Describe the components of health-related fitness and list associated measurements (cardiorespiratory endurance/aerobic capacity, muscular strength and endurance, flexibility, body composition).</p> <p>I can describe each health-related component of fitness (cardiorespiratory endurance, muscular strength, muscular endurance, flexibility, and body composition) and how to measure them.</p> <p>4.3 b) Analyze baseline data from a standardized health-related criterion-referenced test (Virginia wellness-related criterion-referenced fitness standards, CDC guidelines).</p> <p>I can use guidelines (Virginia wellness-related criterion-referenced fitness standards, CDC guidelines) to understand my health-related fitness levels.</p> <p>4.3 c) Create a SMART (specific, measurable, attainable, realistic, timely) goal for at least one health-related component of fitness to improve or maintain fitness level.</p>	<p>Assessment of Learning Student describes each component of fitness and names measurements for each (tell a partner, exit tickets)</p> <p>Assessment for Learning Oral: Student names and describes each component of fitness and names measurement for each</p> <p>Written: Matches the fitness component to its description; matches the fitness component to its measurements</p> <p>Students write a SMART goal for at least one health-related component of fitness based on baseline data from standardized health-related criterion-referenced test.</p> <p>Students create Wellness Portfolios (see Suggested/Sample Activities for details).</p> <p>Activity: Students select stations/activities during PE targeting specific health-related component of fitness associated with their SMART goal(s).</p>	<p>Review vocabulary and critical elements from previous years.</p> <ul style="list-style-type: none"> • Muscular strength <ul style="list-style-type: none"> ○ Pushups ○ Pushup variations, stretch band activities • Muscular endurance <ul style="list-style-type: none"> ○ Curl-ups ○ Core fitness activities • Flexibility <ul style="list-style-type: none"> ○ Back saver sit and reach ○ Stretches, flexibility activities • Cardiorespiratory endurance <ul style="list-style-type: none"> ○ PACER ○ Aerobic capacity activities at moderate to vigorous levels • Body composition <ul style="list-style-type: none"> ○ Body mass index (BMI) ○ Burpees, activities that involve strength, endurance, and aerobic capacity <p>New vocabulary/content</p> <ul style="list-style-type: none"> • SMART (specific, measurable, attainable, realistic, timely) goal 	<ul style="list-style-type: none"> • Participate in standardized health-related criterion-referenced test measuring muscular strength, muscular endurance, flexibility, cardiorespiratory endurance, and body composition at the beginning and end of the year • Set up stations targeting specific health-related fitness components (optional: allow students to pick stations based on the SMART goals they design). • Students pick an “accountability buddy” for the duration of the year. Buddies check in (walk and talk, closure, etc.) to see how each other are progressing towards reaching SMART goal. • Students create ‘Wellness Portfolios’ with the following information: baseline data, SMART goal(s), activities targeting specific health-

<p>I can create a SMART goal to improve or maintain one area of health-related fitness.</p> <p>4.3 d) Identify activities that can be done at school and activities that can be done at home to meet fitness goals.</p> <p>I can name activities I can do at school or at home to help me reach my SMART goal(s).</p> <p>4.3 e) Analyze post-fitness testing results, and reflect on goal progress/attainment.</p> <p>I can use guidelines (Virginia wellness-related criterion-referenced fitness standards, CDC guidelines) to see and understand my progress in health-related fitness levels.</p>			<p>related components students are looking to improve; journals documenting thoughts/improvement; post-fitness testing results; and graphs/charts depicting progress.</p> <p>Note: It is an inappropriate practice to grade students on fitness test results</p>
<p>Resources: SHAPE America National Standards and Grade-Level Outcomes; VDOE Physical Education Instructional Resources http://www.doe.virginia.gov/instruction/physed/index.shtml; http://www.heart.org/HEARTORG/Educator/Educator_UCM_001113_SubHomePage.jsp</p>			

VA SOL Standard: 4.4 The student will demonstrate positive interactions with others in cooperative and competitive physical activities.

ESSENTIAL UNDERSTANDINGS

- Conflict resolution strategies are important for any group activity (PE or other).
- Achieving goals with others requires cooperation and teamwork.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>Suggested/Sample Assessments</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>Suggested/Sample Activities</p>
<p>4.4 a) Identify a group goal and the strategies needed for successful completion while working productively and respectfully with others.</p> <p>I can explain ways to show teamwork to reach a group goal.</p> <p>4.4 b) Identify and demonstrate conflict resolution strategies for positive solutions in resolving disagreements.</p> <p>I can show ways to positively resolve disagreements.</p>	<p>Assessment for Learning Student identifies group goal and explains strategies to reach goal (tell a partner, exit tickets)</p> <p>Student shows ways to positively resolve disagreements</p> <p>Demonstration of conflict resolution strategies (self/peer assessments)</p> <p>Assessment of Learning Written: List strategies needed for successful completion of a group goal</p> <p>List conflict resolution strategies</p> <p>Activity: Demonstrate strategies needed for successful goal completion as well as conflict resolution strategies.</p>	<p>Review vocabulary and content from previous year.</p> <ul style="list-style-type: none"> ● Rules ● Procedures ● Respectful behavior 	<ul style="list-style-type: none"> ● Provide a variety of activities that include cooperation towards a common goal and modified games/activities for students to create rules

Resources: SHAPE America National Standards and Grade Level Outcomes; VDOE Physical Education Instructional Resources <http://www.doe.virginia.gov/instruction/physed/index.shtml>

VA SOL Standard: 4.4 The student will demonstrate positive interactions with others in cooperative and competitive physical activities.

ESSENTIAL UNDERSTANDING

- An understanding of etiquette and integrity is needed to maintain a quality learning environment.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>Suggested/Sample Assessments</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>Suggested/Sample Activities</p>
<p>4.4 c) Define <i>etiquette</i> and demonstrate appropriate etiquette and application of rules and procedures.</p> <p>I can define etiquette and show acceptable behaviors in physical education.</p> <p>4.4 d) Define <i>integrity</i> and describe the importance of integrity in a physical activity setting.</p> <p>I can define integrity and describe why it is important in PE.</p>	<p>Assessment for Learning Oral or written: Student defines etiquette and integrity and explains its importance in PE</p> <p>Assessment of Learning Oral: Students define etiquette and integrity and explain its importance in PE</p> <p>Activity: Students peer assess one another using rubric depicting etiquette and integrity.</p>	<p>Vocabulary:</p> <ul style="list-style-type: none"> • Etiquette: customary code of polite behavior in society PE, specifically. Synonyms: protocol, acceptable behaviors, rules of conduct • Integrity: honesty and strong moral principles. Synonyms: honesty; ethical 	<ul style="list-style-type: none"> • Walk and Talk: students define etiquette and discuss 'etiquette' in a variety of settings (ex. cafeteria, hallways, PE, etc.) • Mission Impossible: students begin on edges of play space and use equipment provided (scooters, poly spots, etc.) to try to reach the mats in the middle without touching the floor. Students must go back to their starting space if they touch the floor. Discuss why integrity is for this game.

Resources: SHAPE America National Standards and Grade Level Outcomes; VDOE Physical Education Instructional Resources <http://www.doe.virginia.gov/instruction/physed/index.shtml>

VA SOL Standard: 4.5 The student will explain the nutrition and activity components of energy balance.

ESSENTIAL UNDERSTANDINGS

- Macronutrients provide the body with energy in the form of calories.
- The body needs macronutrients for a variety of functions.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>Suggested/Sample Assessments</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>Suggested/Sample Activities</p>
<p>4.5 a) Identify the number of calories per gram of fat (9), protein (4), and carbohydrates (4).</p> <p>I can match the calories per gram (4 or 9) to the correct macronutrient.</p> <p>4.5 c) Describe how the body uses each macronutrient (fat, protein, carbohydrates).</p> <p>I can describe how the body uses fat, protein, and carbohydrates.</p> <p>4.5 d) Calculate the calories per gram of macronutrients for a variety of foods.</p> <p>I can calculate the calories per gram of macronutrients for a variety of foods.</p>	<p>Assessment of Learning Oral or written (tell a partner/teacher, exit tickets):</p> <p>Student matches calories per gram for each macronutrient.</p> <p>Student can describe how the body uses each macronutrient</p> <p>Student calculates the calories per gram of macronutrients for a variety of foods.</p> <p>Assessment for Learning Written: Matching students match calories per gram to each macronutrient</p> <p>Draw (or select from pictures) exercises/activities burning calories from each macronutrient</p> <p>Calculate calories per gram of macronutrients for variety of foods</p>	<p>Review vocabulary and content from previous year.</p> <ul style="list-style-type: none"> • Macronutrient (fats, carbohydrates, protein) <p>New vocabulary and content</p> <ul style="list-style-type: none"> • Calorie: a unit to measure heat/energy • Macronutrients provide the body with energy • Fats 9 calories per gram; body burns fat calories during low intensity physical activity • Carbohydrates 4 calories per gram; body's main source of energy; body burns carbohydrates during high intensity activities. • Protein 4 calories per gram; body uses calories from protein to build and repair muscle cells. 	<ul style="list-style-type: none"> • Use names and calories per gram of macronutrients and food sources for small group activities • Use visuals to depict a variety of foods for each macronutrient • Use any activity where students (as individuals or a group) work to acquire food/nutrition cards specifying calories from each macronutrient. Set up additional activities around play space which will use calories from each macronutrient. Students may select activities to complete to burn macronutrients acquired from food/nutrition cards.

Resources: <http://www.choosemyplate.gov/food-groups/>; VDOE Physical Education Instructional Resources <http://www.doe.virginia.gov/instruction/physed/index.shtml>; http://www.heart.org/HEARTORG/Educator/Educator_UCM_001113_SubHomePage.jsp

<p>VA SOL Standard: 4.5 The student will explain the nutrition and activity components of energy balance.</p> <p>ESSENTIAL UNDERSTANDING</p> <p>• Moderate to vigorous physical activity (MVPA) represents half the scale needed for energy balance.</p>			
<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>Suggested/Sample Assessments</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>Suggested/Sample Activities</p>
<p>4.5-g) Explain the role of moderate to vigorous physical activity (MVPA) for energy balance.</p> <p>I can explain how MVPA is important for energy balance.</p>	<p>Assessment of Learning Oral or written (tell a partner/teacher, exit tickets):</p> <p>Assessment for Learning Written: Students complete exit ticket explaining importance of MVPA for energy balance.</p> <p>Oral: Students explain to teacher importance of MVPA for energy balance.</p> <p>Activity: Students demonstrate MVPA to burn the calories acquired by individual/group during game.</p>	<p>Review vocabulary and content from previous year.</p> <ul style="list-style-type: none"> • Energy Balance: balancing what one eats and drinks with what one does • MVPA: moderate to vigorous physical activity 	<ul style="list-style-type: none"> • Use any activity where students (as individuals or a group) work to acquire food/nutrition cards specifying a number of calories. Set up addition activities (requiring MVPA) around/in play space which will burn a certain amount of calories. Students may select activities to complete to burn enough calories to balance their energy.
<p>Resources: http://www.choosemyplate.gov/ See education resources and curriculum ideas; VDOE Physical Education Instructional Resources http://www.doe.virginia.gov/instruction/physed/index.shtml; http://www.heart.org/HEARTORG/Educator/Educator_UCM_001113_SubHomePage.jsp</p>			

VA SOL Standard: 5.1 The student will demonstrate mature movement forms, create movement patterns, and begin to describe movement principles.

ESSENTIAL UNDERSTANDINGS

- Development of mature movement patterns occurs during dynamic and unpredictable movement experiences.
- Understanding key elements of fundamental movement skills and movement concepts allows for efficient and effective mature movement that can be applied to a variety of activities.
- Performing a variety of movements in activities/games will lead to effective body management.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>Suggested/Sample Assessments</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>Suggested/Sample Activities</p>
<p>5.1 a) Demonstrate mature form in locomotor, nonlocomotor, and manipulative skill combinations in more complex and dynamic environments and modified sports activities, to include overhand and underhand throw and catch; execution to a target; hand dribble; foot dribble; consecutive striking with a partner over a net or against a wall; and striking a ball while stationary and moving.</p> <p>5.1 e) Demonstrate accuracy in a variety of activities.</p> <p>5.1 f) Demonstrate use of force in a variety of activities.</p> <p>5.1 g) Apply concepts of direction and force to strike an object with purpose and accuracy.</p> <p>I can overhand throw and catch with a partner while moving.</p> <p>I can overhand throw to a target that is far away.</p>	<p>Assessment for Learning</p> <ul style="list-style-type: none"> • Skill rubric • Teacher observation <p>Sample rubric</p> <p>4 (<i>Beyond what was taught</i>) Displays consistent and correct performance of all elements during unpredictable game situations; accurate with appropriate application of force</p> <p>3 (<i>What was explicitly taught</i>) Performs all critical elements appropriately and consistently</p> <p>2 (<i>Identify basic elements</i>) Performs critical elements in isolation</p> <p>1 (<i>With help/prompts/cues</i>) With teacher cues, student can demonstrate some/most of the critical elements in isolation</p>	<p>Review previous years' critical elements as appropriate</p> <p><u>Overhand throw to moving partner</u></p> <ul style="list-style-type: none"> • Aim slightly ahead of your partner in his/her path of travel if he/she is moving slowly and farther ahead of your partner in his/her path of travel if he/she is moving quickly <p><u>Striking (bat/paddle)</u></p> <ul style="list-style-type: none"> • Keep non-dominant/non-preferred side to the target • Use a handshake grip • Keep a stiff wrist • Watch the ball • Bring arm(s) back • Step with the opposite foot • Hip rotation • Make contact with the ball (with a flat surface) • Follow through with the paddle/bat/stick to the target (desired direction) <p><u>Hand/Foot Dribble while moving</u></p> <ul style="list-style-type: none"> • Keep ball close to body • Use body as shield/barrier to protect ball 	<ul style="list-style-type: none"> • Modified games involving each of the skills and a variety of situations • Use a variety of implements and objects appropriate to student's skill level and appropriate for student safety • Small-sided games throughout place space highlighting the same skill(s) in different activities • Display cues with visuals • Display assessment rubrics when skills are introduced

<p>I can dribble and pass a ball while moving at different speeds.</p> <p>I can dribble with my dominant/preferred hand/foot at different speeds.</p> <p>I can dribble with my non-dominant/non-preferred hand/foot while walking.</p> <p>I can hit a ball while still or moving.</p> <p>I can volley a (ball) with a partner or over a net.</p>		<p>New vocabulary and content</p> <ul style="list-style-type: none">• Force• Accuracy	
<p>Resources: SHAPE America National Standards and Grade-Level Outcomes; VDOE Physical Education Instructional Resources http://www.doe.virginia.gov/instruction/physed/index.shtml</p>			

VA SOL Standard: 5.1 The student will demonstrate mature movement forms, create movement patterns, and begin to describe movement principles.

ESSENTIAL UNDERSTANDING

- Gymnastics promotes body management skills through a variety of movement experiences.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>Suggested/Sample Assessments</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>Suggested/Sample Activities</p>
<p>5.1 b) Create and perform an educational gymnastic sequence including travel, roll, balance, and weight transfer, with smooth transitions and changes of direction, shape, speed, and flow.</p> <p>I can create and perform a gymnastics sequence including travel, roll, balance, and weight transfer, with smooth transitions and changes of direction, shape, speed, and flow.</p>	<p>Assessment of Learning Teacher observation Skill check list Skill rubric</p> <p>Assessment for Learning Skill check list Skill rubric</p>	<p>Review previous years' vocabulary and critical elements as appropriate</p> <ul style="list-style-type: none"> • Balance • Rotation • Weight transfer <p>New vocabulary and content</p> <ul style="list-style-type: none"> • Smooth transition showing flow between movements; not choppy 	<ul style="list-style-type: none"> • Students copy sequence created by teacher/other students • Students work in groups to create gymnastics routine (using all criteria) and showcase to classmates allow students enough time to create and practice routine before showcasing • Warm ups and cool downs that develop flexibility
<p>Resources: SHAPE America National Standards and Grade Level Outcomes; VDOE Physical Education Instructional Resources http://www.doe.virginia.gov/instruction/physed/index.shtml</p>			

VA SOL Standard: 5.1 The student will demonstrate mature movement forms, create movement patterns, and begin to describe movement principles.

ESSENTIAL UNDERSTANDINGS

- Dance is movement in rhythms, patterns, and sequences.
- Dance promotes social skills and creativity as well as an understanding for diverse cultures.
- Jumping rope improves coordination and promotes cardiorespiratory endurance.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>Suggested/Sample Assessments</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>Suggested/Sample Activities</p>
<p>5.1 c) Create and perform individual or group rhythm/dance sequences including American and international dances and a jump rope routine (self turn or long rope).</p> <p>I can create and perform an American and international dance to music with a partner/group/by myself.</p> <p>I can do a routine turning the rope by myself or on a long rope.</p>	<p>Assessment of Learning</p> <ul style="list-style-type: none"> • Teacher observation • Skill check list • Skill rubric <p>Assessment for Learning</p> <ul style="list-style-type: none"> • Skill check list • Skill rubric <p>4 <i>(Beyond what was taught)</i> Creates and displays American and international dance sequence and creates and displays jump rope routine with consistent and correct performance, flow and smooth transitions between movements, and a variety of jumps.</p> <p>3 <i>(What was explicitly taught)</i> Creates and displays American and international dance sequence and creates and displays jump rope routine with flow, smooth transitions between movements, and a variety of jumps.</p> <p>2 <i>(Identify basic elements)</i> Performs critical elements with stops between movements of American and international dance sequence and jump rope routine.</p> <p>1 <i>(With help/prompts/cues)</i> With teacher cues, student can demonstrate some/most of the critical elements in isolation</p>	<p>Review previous years' critical elements</p> <ul style="list-style-type: none"> • Dance sequence • Routine • Intermediate jump rope skills 	<ul style="list-style-type: none"> • Watch video clip of American and international dances • Demonstrate or create with the class dance/jump rope sequence • Students work in groups to create dance sequences—perform for other groups • Play copycat with students have them mimic a routine teacher/other student provides

Resources: SHAPE America National Standards and Grade Level Outcomes; VDOE Physical Education Instructional Resources <http://www.doe.virginia.gov/instruction/physed/index.shtml>; PE Central (key term Dance) <http://www.pecentral.org/>; http://www.heart.org/HEARTORG/Educator/FortheGym2/JumpRopeSkills/Jump-Rope-Skills_UCM_001270_Article.jsp <http://www.doe.virginia.gov/instruction/physed/index.shtml>; American Heart Association resources

VA SOL Standard: 5.1 The student will demonstrate mature movement forms, create movement patterns, and begin to describe movement principles.

ESSENTIAL UNDERSTANDING

- Effective space (open and closed) management is necessary for successful game play (offense and defense).

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>Suggested/Sample Assessments</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>Suggested/Sample Activities</p>
<p>5.1 d) Demonstrate use of space in a variety of activities.</p> <p>I can move into space eliminating open spaces for my opponents.</p> <p>I can move to open spaces creating passing lanes with teammate(s).</p>	<p>Assessment of Learning Teacher observation Skill check list Skill rubric</p> <p>Assessment for Learning Skill check list Skill rubric</p> <p><i>4 (Beyond what was taught)</i> Displays consistent and correct performance of open and closed space concepts with and without manipulatives, smooth transitions between movements, and movement patterns</p> <p><i>3 (What was explicitly taught)</i> Demonstrates ability to move to open and close spaces in groups with manipulatives</p> <p><i>2 (Identify basic elements)</i> Demonstrates ability to move to open and close spaces in groups without manipulatives</p> <p><i>1 (With help/prompts/cues)</i> With teacher cues, student can move to open and close spaces</p>	<p>Review vocabulary from previous year</p> <ul style="list-style-type: none"> Open space Passing lanes Closing space 	<ul style="list-style-type: none"> Provide a variety of activities with opportunities for movement in groups with and without manipulatives

Resources: VDOE Physical Education Instructional Resources <http://www.doe.virginia.gov/instruction/phyped/index.shtml>

VA SOL Standard: 5.2 The student will apply anatomical knowledge and movement strategies in complex movement activities.

ESSENTIAL UNDERSTANDINGS

- The cardiorespiratory, vascular, muscular, and skeletal system combine to allow a variety of body movements.
- A variation of force and direction will change the accuracy in movement situations.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>Suggested/Sample Assessments</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>Suggested/Sample Activities</p>
<p>5.2 a) Identify components of major body systems, to include cardiorespiratory, vascular, muscular, and skeletal.</p> <p>I can identify pictures of parts of major body systems including cardiorespiratory, vascular, muscular, and skeletal.</p> <p>5.2 b) Apply knowledge of body systems, bones, and muscles to accurately describe a variety of specific movements such as a ball strike, overhand throw, or volley.</p> <p>I can describe the way bones and muscles work together to do a variety of movements.</p> <p>5.2 c) Describe concepts of direction and force used to strike an object with purpose and accuracy.</p> <p>I can describe how direction and force are used to strike objects accurately.</p>	<p>Assessment of Learning Exit ticket Peer discussion Peer observation</p> <p>Assessment for Learning Written: Identify pictures of parts of major body systems</p> <p>Discuss with partner ways bones and muscles work together to do a variety of movements</p> <p>Observation: Watch peer strike object (or other manipulative skill) describe how direction and force are used to increase accuracy</p>	<p>Review vocabulary from previous year</p> <ul style="list-style-type: none"> • Force • Accuracy 	<ul style="list-style-type: none"> • Incorporate knowledge concepts into movement activities such as having students identify the muscles being used in warm-up activities and bones and muscles used for a variety of skills • Partner students up for a variety of skills and have them observe one another noticing the ways bones and muscles work together
<p>Resources: SHAPE America National Standards and Grade Level Outcomes; VDOE Physical Education Instructional Resources http://www.doe.virginia.gov/instruction/physed/index.shtml; Kids Health http://kidshealth.org/kid/htbw/</p>			

<p>VA SOL Standard: 5.3 The student will use personal fitness assessment data to enhance understanding of physical fitness.</p>			
<p>ESSENTIAL UNDERSTANDINGS</p> <ul style="list-style-type: none"> Physical fitness can be evaluated through a variety of methods including health-related criterion referenced tests, heart rate, body mass index (BMI), and pedometer data. SMART goals can be used to target and improve one or multiple areas of health-related fitness. The FITT principle can be used to design a personal fitness plan for achieving SMART goal. 			
<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>Suggested/Sample Assessments</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>Suggested/Sample Activities</p>
<p>5.3 a) Identify methods for evaluating and improving personal fitness such as health-related criterion referenced tests, heart rate, body mass index (BMI), and pedometer data.</p> <p>I can determine how to improve my personal fitness using health-related criterion referenced tests, heart rate, body mass index (BMI), and pedometer data.</p> <p>5.3 b) Compare and analyze fitness data to health-related criterion referenced standards (Virginia wellness-related fitness standards, Fitnessgram®, CDC guidelines) to assess levels of personal fitness and identify strengths and weaknesses.</p> <p>I can use guidelines (Virginia wellness-related criterion referenced fitness standards, Fitnessgram®, CDC guidelines) to understand my health-related fitness levels.</p> <p>5.3 c) Create a basic personal fitness plan for at least one health-related component of fitness, to include baseline fitness data, SMART goal, activities that will address the goal, log of activities inside and outside of</p>	<p>Assessment of Learning Matching Exit Ticket Peer hare</p> <p>Assessment for Learning Oral: Student names methods for evaluating personal fitness levels</p> <p>Written: Students apply FITT principle to personal fitness plan in order to achieve SMART goal.</p> <p>Students create Wellness Portfolios (see Suggested/Sample Activities for details).</p> <p>Activity: Students select stations/activities during PE and outside of PE compatible with their personal fitness plan to improve their SMART goal(s).</p>	<p>Review vocabulary and critical elements from previous years.</p> <ul style="list-style-type: none"> SMART (specific, measurable, attainable, realistic, timely) goal Heart rate <p>New vocabulary/content</p> <ul style="list-style-type: none"> Health-related criterion referenced tests Body mass index (BMI) FITT principle <ul style="list-style-type: none"> Frequency: how often; commonly measured in days per week Intensity: how hard; commonly measured in intensity levels Time: how long; commonly measured in minutes/hours Type: what kind; measured in specific health-related component of fitness 	<ul style="list-style-type: none"> Provide students with multiple opportunities to gather personal fitness data throughout the year using health-related criterion referenced tests, heart rate, body mass index (BMI), and/or pedometers Set up a variety of stations targeting specific health-related fitness components where students select stations based on their personal fitness plan Students pick an “accountability buddy” for the duration of the year. Buddies check in (walk and talk, closure, etc.) to see how each other are progressing with fitness plan and SMART goal. Students create ‘Wellness Portfolios’ with the following information: baseline data; SMART goal(s); activities targeting specific health-

<p>school, reassessment data (post data) and reflection of goal progress/attainment.</p> <p>I can create personal fitness plan (including baseline fitness data; SMART goal; activities that will address the goal; log of activities inside and outside of school; reassessment data (post data); and reflection of goal progress/attainment) to improve or maintain one area of health-related fitness.</p> <p>5.3 d) Explain the FITT (frequency, intensity, time, and type) principle.</p> <p>I can explain the FITT principle.</p>			<p>related components students are looking to improve; journals documenting thoughts/improvement; post-fitness testing results; and graphs/charts depicting progress</p> <p>Note: It is an inappropriate practice to grade students on fitness test results</p>
<p>Resources: SHAPE America National Standards and Grade Level Outcomes; VDOE Physical Education Instructional Resources http://www.doe.virginia.gov/instruction/physed/index.shtml; http://www.heart.org/HEARTORG/Educator/Educator_UCM_001113_SubHomePage.jsp</p>			

VA SOL Standard: 5.3 The student will use personal fitness assessment data to enhance understanding of physical fitness.

ESSENTIAL UNDERSTANDINGS

- Heart rate can be used to help determine personal fitness levels.
- As a person's cardiorespiratory fitness levels increase, his/her heart rate (and resting heart rate) will decrease.

<p>VDOE Standard(s) <u>Student Friendly Language</u> What will the student know and be able to do?</p>	<p><u>Suggested/Sample Assessments</u></p>	<p>Terms (Vocabulary) and Content Information</p>	<p><u>Suggested/Sample Activities</u></p>
<p>5.3 e) Calculate resting heart rate and calculate heart rate during a variety of activities.</p> <p>I can calculate my resting heart rate and heart rate during activities.</p> <p>5.3 f) Explain the relationship between heart rate and cardiorespiratory fitness.</p> <p>I can explain the connection between heart rate and cardiorespiratory fitness.</p>	<p>Assessment of Learning Exit ticket Peer share</p> <p>Assessment for Learning Written: Calculate resting heart rate and heart rate during variety of activities</p> <p>Oral: Students describe connection between heart rate and cardiorespiratory fitness</p>	<p>Review vocabulary from previous year</p> <ul style="list-style-type: none"> ● Radial pulse ● Carotid pulse <p>New vocabulary and content</p> <ul style="list-style-type: none"> ● Heart rate: measured in beats per minute; count pulse for 10 seconds, multiply by 6 to find your beats per minute ● Resting heart rate; when your body is pumping the lowest amount of blood you need because you are not exercising 	<ul style="list-style-type: none"> ● Students sit at the beginning of class and calculate resting heart rate ● Give students a chart with various activities listed and empty spaces. Have students predict which activities will yield higher(est) heart rates. Students complete various activities logging their own heart rate. Discuss if predictions were correct.
<p>Resources: SHAPE America National Standards and Grade Level Outcomes; VDOE Physical Education Instructional Resources http://www.doe.virginia.gov/instruction/physed/index.shtml; Kids Health http://kidshealth.org/kid/htbw/</p>			

VA SOL Standard: 5.4 The student will participate in establishing and maintaining a safe environment for physical activities.

ESSENTIAL UNDERSTANDINGS

- Rules and etiquette are important for the safety of all participants.
- All students, regardless of ability, when possible should be included in physical activity settings

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>Suggested/Sample Assessments</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>Suggested/Sample Activities</p>
<p>5.4 a) Create and implement rules and consequences for one or more activities. I can create and show rules and consequences for one or more activity.</p> <p>5.4 b) Create and implement safety rules for at least one activity. I can create and show safety rule(s) for one or more activities.</p> <p>5.4 c) Create and implement etiquette for one activity. I can create and show polite behavior for one activity.</p> <p>5.4 d) Explain the importance of inclusion in physical activity settings. I can explain why inclusion in PE is important.</p> <p>5.4 e) Describe and demonstrate respectful behavior in physical activity settings. I can describe and show respectful behavior in PE.</p>	<p>Assessment for Learning Tell a partner Exit ticket Self/peer assessments</p> <p>Assessment of Learning Oral: Create rules and consequences, safety rules, and polite behavior for one or more activities—discuss with partner</p> <p>Explain importance of inclusion in PE (and other physical activity settings)</p> <p>Observation: Demonstrate rules and etiquette needed in PE and other physical activity settings</p>	<p>Review vocabulary and content from previous year</p> <ul style="list-style-type: none"> • Etiquette <p>New vocabulary and content</p> <ul style="list-style-type: none"> • Inclusion 	<ul style="list-style-type: none"> • Students design a game or activity. In design, students must provide rules, safety guidelines, and etiquette. • Partner walk talk: discuss different levels of abilities for variety of activities. • Group talk: discuss importance of understanding and accepting differences.

Resources: SHAPE America National Standards and Grade Level Outcomes; VDOE Physical Education Instructional Resources
<http://www.doe.virginia.gov/instruction/physed/index.shtml>

<p>VA SOL Standard: 5.5 The student will identify and explain the nutrition component and activity guidelines for energy balance.</p> <p>ESSENTIAL UNDERSTANDING</p> <ul style="list-style-type: none"> Recommended dietary allowances and other guidelines can be used to form healthy eating and activity habits. 			
<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>Suggested/Sample Assessments</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>Suggested/Sample Activities</p>
<p>5.5 a) Explain RDA (Recommended Dietary Allowance).</p> <p>I can explain recommended dietary allowance (RDA).</p> <p>5.5 b) Explain that there are different RDA recommendations for children, teens, and adults.</p> <p>I can explain the different RDA for children, teens, and adults.</p> <p>5.5 c) Explain the effect of portion size on RDA.</p> <p>I can explain the effect of portion size of RDA.</p> <p>5.5 f) Explain that physical activity guidelines recommend 60 minutes of moderate to vigorous physical activity (MVPA) every day.</p> <p>I can explain the recommendations for daily moderate to vigorous physical activity (MVPA).</p>	<p>Assessment for Learning</p> <p>Oral</p> <p>Written/exit ticket</p> <p>Partner share</p> <p>Assessment of Learning</p> <p>Oral: Explain RDA, the variations for different age groups, as well as the recommendations for daily MVPA.</p> <p>Written: Students write down RDA, acknowledging the variations for different age groups and the recommendations for daily MVPA.</p>	<p>Review vocabulary from previous year.</p> <ul style="list-style-type: none"> Moderate to vigorous physical activity (MVPA) <p>New vocabulary and content.</p> <ul style="list-style-type: none"> Recommended dietary allowance (RDA) Portion size 	<ul style="list-style-type: none"> Use food/nutrition cards in activities where students attempt to collect meals to meet the RDA Students create informational brochure for other students (younger or older), public, or parents explaining the RDA and recommendations for MVPA
<p>Resources: SHAPE America National Standards and Grade-Level Outcomes; VDOE Physical Education Instructional Resources http://www.doe.virginia.gov/instruction/physed/index.shtml; http://www.heart.org/HEARTORG/GettingHealthy/DietaryRecommendationsforHealthyChildren_UCM_303886_Article.jsp</p>			

VA SOL Standard: 5.5 The student will identify and explain the nutrition component and activity guidelines for energy balance.

ESSENTIAL UNDERSTANDINGS

- Vitamins and minerals help the body grow and develop normally.
- Food labels provide important information such as macronutrients, RDA, and portion size.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>Suggested/Sample Assessments</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>Suggested/Sample Activities</p>
<p>5.5 d) Explain the purpose of vitamins and minerals.</p> <p>I can explain the purpose of vitamins and minerals.</p> <p>5.5 e) Evaluate components of food labels for a variety of foods, to include macronutrients, RDA, and portion size.</p> <p>I can read food labels to include macronutrients, RDA, and portion size.</p>	<p>Assessment of Learning Oral or written (tell a partner/teacher, exit tickets):</p> <p>Assessment for Learning Written/oral: Explain purpose of vitamins and minerals.</p> <p>Read food label and label the macronutrients, RDA, and portion size.</p> <p>Activity: Match food label with task card specifying macronutrients, RDA, and portion size.</p>	<p>Review vocabulary and content from previous year.</p> <ul style="list-style-type: none"> • Macronutrient (fats, carbohydrates, protein) <p>New vocabulary and content</p> <ul style="list-style-type: none"> • Portion size • Recommended dietary allowance (RDA) • Vitamins • Minerals 	<ul style="list-style-type: none"> • Use visuals to depict a food label specifying macronutrients, RDA, and portion size • Use any activity where students (as individuals or a group) work to acquire food/nutrition cards specifying macronutrients, RDA and portion size. Have students try to match the food labels with task cards listing the macronutrients, RDA, and portion size.

Resources: <http://www.choosemyplate.gov/food-groups/>; VDOE Physical Education Instructional Resources <http://www.doe.virginia.gov/instruction/physed/index.shtml>; <http://www.fda.gov/Food/IngredientsPackagingLabeling/LabelingNutrition/ucm274593.htm>

VA SOL Standard: 6.1 The student will demonstrate and apply mature movement forms in a variety of activities and identify the six components of skill-related fitness.			
ESSENTIAL UNDERSTANDINGS			
<ul style="list-style-type: none"> Understanding movement skills and concepts allows for efficient and effective mature movement that can be applied to a variety of activities. Manipulative skills are basic to the development of sport skills. Individuals who learn to move effectively and efficiently and who feel comfortable and confident in the performance of motor skills are more likely to participate in health-enhancing forms of physical activity throughout life. 			
VDOE Standard(s) Student Friendly Language What will the student know and be able to do?	SUGGESTED / SAMPLE ASSESSMENTS	Terms (Vocabulary) and Content Information	SUGGESTED / SAMPLE ACTIVITIES
<p>6.1 a) Combine and apply mature locomotor and manipulative skills into specialized sequences, to include overhand and underhand throwing and catching; execution to a target; hand and/or foot dribbling; volleying/striking and/or batting ball; and applying sequences, to include change of direction, speed, patterns, pathways, and spatial relationships in partner and small group modified game play that includes dynamic and unpredictable situations.</p> <p>Suggested Learning Targets:</p> <p>I can perform the skills needed to be successful in (specific activity: e.g.; golf, tennis, softball, etc.) and demonstrate my ability to be successful through a skill checklist.</p> <p>I can combine and locomotor and manipulative skills accurately in (specific activity:</p>	<p>Assessment of Learning (Formative)</p> <ul style="list-style-type: none"> Video: Analyze the critical skill elements of manipulative skill sequences and make suggestions for skill improvement. Self/peer assessment of manipulative skill sequences. Checklist to record/self-assess individual skill performance. <p>Assessment for Learning (Summative)</p> <ul style="list-style-type: none"> Skill Checklist Skill Rubric <p style="text-align: center;">Sample Rubric</p> <p>4 (Beyond what was taught) Displays consistent and correct performance of all elements during modified game play situations that include dynamic and unpredictable situations.</p>	<ul style="list-style-type: none"> Manipulative skill is one in which a person handles an object with the hands, feet, or other body parts. Manipulative skills require control of body and object. Locomotor skills are when the body moves from one place to another within vertical plane. Mature motor patterns are the conscious application of biomechanical principals to locomotor and manipulative skills. Skill: The ability to perform a particular movement well. Skill criteria— <ul style="list-style-type: none"> Goal directed with an end result. It is vital that the performer is aware of this and the reasons for trying to achieve it. Skills are learned. They require practice and experience to produce a permanent change to the performance. It is efficient in terms of the outlay in energy/time. It is internal processing as well as a physical action. The situation is analyzed, a decision is then computed within the brain, and then 	<ul style="list-style-type: none"> Diagnostic assessments to pre-test cognitive knowledge and skill performance of mature movement forms and skill combinations. Example: Cognitive knowledge of critical skill cues or skill combination performance of throwing. <ul style="list-style-type: none"> Mature Throwing Patterns to moving targets: <ul style="list-style-type: none"> Turn of the trunk away from intended direction of the throw. Long stride forward with opposite foot. Throwing arm swings backward and upward for overhead throw, sideward for side arm throw and downward for underhand throw. Hips, spine and shoulders rotate in direction of throw as arm is whipped forward. Reach toward target and follow through. Mature throwing patterns: <ul style="list-style-type: none"> Stationary and throwing to a stationary target. Stationary and throwing to a moving target. Moving and throwing to a stationary target. Moving and throwing to a moving target. Modified games and activities involving locomotor and manipulative skills in a variety of situations such as: overhand and underhand throwing and catching; execution to a target; hand and/or foot dribbling; volleying/striking and/or batting a ball. Example Lessons: <ul style="list-style-type: none"> http://www.pecentral.org/lessonideas/ViewLesson.asp?ID=5610#.V4zL57f6ves

<p>e.g., volleyball, soccer, hockey, etc.) and demonstrate them in unpredictable game play situations using a rubric.</p>	<p>3 (<i>What was explicitly taught</i>) Performs all critical elements appropriately and consistently.</p> <p>2 (<i>Identify basic elements</i>) Performs critical elements in isolation.</p> <p>1 (<i>With help/prompts/cues</i>) With teacher cues, student can demonstrate some/most of the critical elements in isolation.</p>	<p>an appropriate skill/technique is selected and performed.</p> <ul style="list-style-type: none"> • Unpredictable game play promotes discovery but also advances adaptability. 	<ul style="list-style-type: none"> ○ http://www.pecentral.org/lessonideas/ViewLesson.asp?ID=1810#.V4zSSLf6vcs ○ http://www.pecentral.org/lessonideas/ViewLesson.asp?ID=2100#.V4zStrf6vcs ○ http://www.sparkpe.org/wp-content/uploads/2011/05/06FlyingDiscDurangoBoo_t.pdf • Displaying assessment rubrics/checklists when skills are introduced. Examples: <ul style="list-style-type: none"> ○ Catching cues: <ul style="list-style-type: none"> – Body moves into position in line with trajectory of the object to be caught. – Eyes focus on object to be caught. – Arms outstretched and relaxed with elbows, slightly bent and facing downward. – Hands and fingers extended and relaxed. – Contact with objects is with hands only. – Arms, shoulders and elbows give to absorb the force of the object. ○ Basketball shooting cues: http://www.pecentral.org/lessonideas/cues/ViewCues.asp?ID=72 ○ Soccer dribbling cues: http://www.pecentral.org/lessonideas/cues/ViewCues.asp?ID=119 ○ Inside foot pass cues: http://www.pecentral.org/lessonideas/cues/ViewCues.asp?ID=84 • Physical activities that emphasize accomplishing a task, reaching a goal, or following a set sequence to be successful (skills circuits, bio-mechanically breaking down various movements or skills, practicing the individual parts, gradually putting the parts together to produce an improved performance).
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Resources:

SHAPE America National Standards and Grade-Level Outcomes; VDOE Physical Education Instructional Resources
<http://www.doe.virginia.gov/instruction/phyped/index.shtml>; — <http://www.pecentral.org/lessonideas/cues/cuesmenu.asp>
<http://www.thephysicaleducator.com/resources/games/invasion/>; — <http://www.thephysicaleducator.com/resources/games/net-wall/>
<http://www.thephysicaleducator.com/resources/games/striking-fielding/>; — <http://www.thephysicaleducator.com/resources/games/target/>

VA SOL Standard: 6.1 The student will demonstrate and apply mature movement forms in a variety of activities and identify the six components of skill-related fitness.

ESSENTIAL UNDERSTANDINGS

- Rhythmic movements can take on a variety of different looks, styles, and forms.
- The ability to dance can be an advantage in a variety of social situations.
- Creative dance can help develop critical thinking skills, body awareness and social interaction.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>
<p>6.1 b) Create and perform movement sequences in a rhythmic or dance activity.</p> <p>Suggested Learning Targets:</p> <p>I can demonstrate rhythmic patterns by mirroring and performing a teacher/student-led sequence of steps in movement combinations.</p> <p>I can create and perform a dance/rhythmic sequence and demonstrate this through a group presentation.</p>	<p>Assessment of Learning (Formative)</p> <ul style="list-style-type: none"> • Teacher observation: Performance of a simple dance step in keeping with a specific tempo. • Peer assessment: Evaluate teacher/peer/group taught dance for accuracy, revise, and refine. <p>Assessment for Learning (Summative)</p> <ul style="list-style-type: none"> • Create a dance sequence using basic dance elements (select length) and demonstrate it to the class. <p style="text-align: center;">Sample Rubric</p> <p>4 <i>(Beyond what was taught)</i> Creates and displays a rhythmic movement sequence with a variety of movements.</p> <p>3 <i>(What was explicitly taught)</i> Creates and displays a rhythmic movement sequence.</p> <p>2 <i>(Identify basic elements)</i> Performs critical elements of a rhythmic movement sequence.</p>	<ul style="list-style-type: none"> • Movement: Counts of 4/8. • Combinations: Putting two or dance moves together. • Pattern: Repeating a sequence. • Flow: The direction of movement. • Transitions: When a movement, phrase, or section of a dance progresses into the next. • Leading/following: Leading or following others actions. • Mirroring/matching: Copying another individual's actions. • Routine: A sequence of movements in a fixed program. • Sequence: A particular order in which related movements follow each other. • Beat: The basic unit of a rhythmic measure. 	<ul style="list-style-type: none"> • Travel to a variety of rhythms changing time, force, and flow. • Video clips of dances and rhythmic movements. • Groups create dance/rhythmic movement sequences and perform them for others. • Mimic a routine teacher or other student provides. • Teacher presented dances that have movement combinations with/without a partner. • Teacher presented dances that have movements with a partner such as leading/following and mirroring/matching. • Dance/rhythmic sequences done in small groups, partners, or by individuals. • Rhythmic movement activities: <ul style="list-style-type: none"> ○ http://www.pecentral.org/lessonideas/ViewLesson.asp?ID=132778#.V5d24Lf6vcs ○ http://www.pecentral.org/lessonideas/ViewLesson.asp?ID=11093#.V5d3lrf6vcs ○ http://www.pecentral.org/lessonideas/ViewLesson.asp?ID=132855#.V5d38bf6vcs ○ Jump rope routines to music.

	<p>1 (With help/prompts/cues) With teacher cues, student can demonstrate some/most of the critical elements in isolation.</p>	<ul style="list-style-type: none"> • Rhythm: Regular, repeated pattern of sounds or movements. • Tempo: The speed of music or a dance. 	<p>https://www.youtube.com/watch?v=g7V4I7262ne</p> <p>Note: Music for use with students should be pre-approved by the teacher for appropriate lyrics.</p>
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Resources:
 SHAPE America National Standards and Grade-Level Outcomes;
 VDOE Physical Education Instructional Resources <http://www.doe.virginia.gov/instruction/physed/index.shtml>;
 American Heart Association resources http://www.heart.org/HEARTORG/Educator/FortheGym2/JumpRopeSkills/Jump-Rope-Skills_UCM_001270_Article.jsp;
 PE Central (key term — Dance) <http://www.pecentral.org/>
<http://www.humankinetics.com/excerpts/excerpts/large-group-activities-for-teaching-rhythmic-activities-and-dance>; <http://sequencedancing.co.uk/dancelist.htm>

VA SOL Standard: 6.1 The student will demonstrate and apply mature movement forms in a variety of activities and identify the six components of skill-related fitness.			
ESSENTIAL UNDERSTANDING <ul style="list-style-type: none"> • Skill-related components of fitness are not skills, but the building blocks of exercise and physical activity. • Mastery of the six skill-related components of fitness will increase success in movement activities. 			
VDOE Standard(s) Student Friendly Language What will the student know and be able to do?	SUGGESTED / SAMPLE ASSESSMENTS	Terms (Vocabulary) and Content Information	SUGGESTED / SAMPLE ACTIVITIES
<p>6.1 c) Identify the six components of skill-related fitness (agility, balance, coordination, power, reaction time, and speed).</p> <p>Suggested Learning Targets:</p> <p>I can name the six components of skill-related fitness and demonstrate this through an exit ticket.</p> <p>I can define and give one example for each of the six skill-related components of fitness and demonstrate this through a graphic organizer.</p>	<p>Assessment of Learning (Formative)</p> <ul style="list-style-type: none"> • Written: List the six skill-related components of fitness. • Match each skill-related component of fitness with the correct picture/definition. <p>Assessment for Learning (Summative)</p> <ul style="list-style-type: none"> • Written: Define and give one example for each of the six skill-related components of fitness. 	<ul style="list-style-type: none"> • Agility: Ability to change and control direction and position of the body while maintaining a constant, rapid motion. Examples: Stopping, starting, and changing direction to avoid a defender such as in football where the player with the ball dodges a defender or in badminton and tennis, moving around the court quickly to reach the shuttlecock/ball in time. • Balance: Ability to control or stabilize the body when a person is standing still or moving. Examples: Standing still — athletic stance. Moving — most notably in gymnastics and ballet but also contact sports where having good balance may prevent you being tackled to the floor. Balance is linked to agility. In order to quickly and efficiently change direction you must be balanced. <ul style="list-style-type: none"> ○ Static balance: When a person is controlling their center of gravity without moving. ○ Dynamic balance: When a person is controlling their center of gravity while still moving. 	<ul style="list-style-type: none"> • Games/activities that apply to the components of skill-related fitness. Examples — <ul style="list-style-type: none"> ○ Agility: Divide class into two teams. Place cones all about the gym. One team are the bulldozers knocking down all the cones. The other team are the builders that put them back up again. Reverse roles. ○ Balance: Tag game where the students' tagged must freeze in a balance position. To be unfrozen, another student must mimic the balance for five seconds. ○ Coordination: Variety of juggling activities using scarves, balls, rings, etc. ○ Power: Circuits that include, vertical jump and reach, long jump, ball throw for distance, medicine ball throw, kick for distance. ○ Reaction time: Students work with a partner. One student holds a piece of paper 10 cm above his or her partner's thumb and forefinger. The student drops the paper and the partner tries to catch it between the thumb and forefinger without moving the hand down. ○ Speed: Students (individually or with a partner) count the number of rope jumps they can do in one minute.

		<ul style="list-style-type: none"> • Coordination: Ability to use the senses together with body parts during movement. Examples—Juggling, ping pong, hand-eye coordination in racket sports and the co-ordination to use the opposite arm and leg when sprinting. • Power: Ability to move the body parts swiftly while applying the maximum force of the muscles. Examples: Vertical or long jump, sprint start, a shot-put or javelin throw. • Reaction time: Ability to reach or respond quickly to what you hear, see, or feel. Examples: Catching a fast pitch, responding to the gun at the start of a race, a goalkeeper saving a penalty or a badminton player reacting to a smash shot. • Speed: Ability to move your body or parts of your body quickly. Speed is not always about how quickly you can move your whole body (e.g. fifty meter run). It also relates to body parts (e.g. golfing—the speed of your arms and upper body in creating the swing are vital in driving the ball over a long distance). 	<ul style="list-style-type: none"> • Stations with a variety of activities highlighting specific skill-related components of fitness. • Use demonstrations or video clips to explain skill-related components of fitness. • Leading students to a predetermined goal using a series of questions in which they have to physically explore possible answers. Example—Balance: What happens to your balance when you make your center of gravity higher? Center of gravity lower? Base of support wider? Base of support narrower? Center of gravity over the center of the base of support? Center of gravity over the edge of the base of support?
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Resources:
VDOE Physical Education Instructional Resources <http://www.doe.virginia.gov/instruction/phyped/index.shtml>
Glencoe Health Books—Copyright by the McGraw Hill Companies, Inc.
http://www.glencoe.com/sites/common_assets/health_fitness/gln_health_fitness_zone/pdf/heart_rate_monitor_activities/health_skill_related_fitness/health_skill_related_fitness_activity_4.pdf

VA SOL Standard: 6.1 The student will demonstrate and apply mature movement forms in a variety of activities and identify the six components of skill-related fitness.

ESSENTIAL UNDERSTANDINGS

- Performing a variety of movements in activities/games will lead to effective body management.
- Analysis of movement situations can improve performance.
- There are similarities in movements and skill mechanics between different sports.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>
<p>6.1 d) Analyze movement situations for direction, speed, accuracy, and pathways to improve performance.</p> <p>Suggested Learning Targets:</p> <p>I can analyze movement situations in (specific activity e.g.; volleyball, badminton, etc.) to improve performance and demonstrate it through a video self-assessment.</p> <p>I can adapt movements to changing game situations when challenged, and not challenged, by opponents and demonstrate it through a peer assessment analysis and a plan of action.</p>	<p>Assessment of Learning (Formative)</p> <ul style="list-style-type: none"> • Videotape: Analyze various specialized movement situations and make suggestions for skill improvement. • Self/Peer assessment <p>Assessment for Learning (Summative)</p> <ul style="list-style-type: none"> • Written: Choose a movement situation and research how direction, speed, accuracy, and pathways are involved in a good performance. Compare the findings to a self/peer assessment of the same movement situation and develop a plan of improvement. <p style="text-align: center;">Sample Rubric</p> <p>4 (Advanced) Thoroughly evaluates all direction, speed, accuracy, and pathways in a chosen movement situation and develops a personal plan of improvement based on personal weaknesses.</p> <p>3 (Proficient) Evaluates all direction, speed, accuracy, and pathways in a chosen movement</p>	<ul style="list-style-type: none"> • Force: Strength or energy exerted; cause of motion such as force needed to throw or strike for distance and/or accuracy. • Relationships: <ul style="list-style-type: none"> ○ Person (e.g., alone, with partner, with group, meet, part, match, follow, lead, dodge). ○ Equipment/Objects (e.g., near, far, in, out, over, under, around, on, off, above, below, through). ○ Other (e.g., moving in relation to the environment). • Open skills: Involve movement skills that are affected by the environment. Examples— <ul style="list-style-type: none"> ○ Passing in basketball. ○ When the receiver in badminton/tennis is unaware where the shuttlecock/tennis ball will be returned so they will have to react to their opponents move to select the correct return. • Closed skills: Movement skills that are not affected by the environment. Examples— <ul style="list-style-type: none"> ○ Free throw ○ When an archer takes aim, pulls back the bowstring, and releases the arrow towards the target. 	<ul style="list-style-type: none"> • Small group activities/games involving movement situations. Examples— <ul style="list-style-type: none"> ○ Creating open space by using locomotor movements (e.g., walking, running, jumping & landing) in combination with movement (e.g., varying pathways; change of speed, direction or pace). Specific activity volleyball/badminton: Creating open space by varying force or direction, or by moving opponent side to side and/or forward and back.) ○ Reducing open space by using locomotor movements (e.g., walking, running, jumping & landing, changing size and shape of body) in combination with movement concepts (e.g., reducing the angle in space, reducing distance between player and goal). Specific activity volleyball/badminton: Reducing offensive options for opponents by returning to midcourt position. ○ Opens and closes space during small-sided game play by combining locomotor movements with movement concepts such as: passes, pivots and fakes; give and go.

	<p>situation and develops a personal plan of improvement based on personal weaknesses.</p> <p><i>2 (Emerging)</i> Minimal evaluation of all direction, speed, accuracy, and pathways in a chosen movement situation and somewhat develops a personal plan of improvement based on personal weaknesses.</p> <p><i>1 (Novice)</i> Incomplete attempt to evaluate direction, speed, accuracy, and pathways in a chosen movement situation and does not develop a personal plan of improvement based on personal weaknesses.</p>	<ul style="list-style-type: none"> ● Pathways: (e.g., curved, straight, spiral, zigzag) ● Space (open/closed) 	<ul style="list-style-type: none"> ● Modified small group activities/games: Examples— <ul style="list-style-type: none"> ○ Attention to form, power, accuracy, speed, and follow-through in performing movement skills. (e.g., target games: Selects offensive pathway shot based on opponent's location and varies placement, force, and timing of return to prevent anticipation by opponent.) ○ Dribbling a ball with dominant and non-dominant hand/foot while starting, stopping, changing directions, and passing.
<p>Resources: SHAPE America National Standards and Grade Level Outcomes; VDOE Physical Education Instructional Resources http://www.doe.virginia.gov/instruction/physed/index.shtml; http://www.thephysicaleducator.com/resources/skillposters/volleyball/; http://mrgym.com/SportsandLead1.htm; http://www.thephysicaleducator.com/resources/skillposters/basketball/; http://www.thephysicaleducator.com/resources/skillposters/hockey/</p>			

VA SOL Standard: 6.2 The student will apply both movement principles and concepts and knowledge of anatomical structures to movement skill performance.

ESSENTIAL UNDERSTANDING

- Successful movement includes knowledge of and ability to create, direct, and stabilize a variety of movements in different movement situations.
- Direction, force, and accuracy affect performance.
- Speed describes only how quickly the body is moving; velocity describes both how quickly and in which direction.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>
<p>6.2 a) Refine and adapt individual and group activity skills by applying concepts of relationships, effort, spatial awareness, speed, and pathways.</p> <p>Suggested Learning Targets:</p> <p>I can show how to move in space using different speeds and effort and demonstrate it by performing jump rope skills listed on a checklist.</p> <p>I can recognize how changing my speed, pathway and effort affects my performance in a group activity and explain it through a self-assessment.</p> <p>I will be able to control the speed and pathway of the ball in a modified small group activity and demonstrate it through a peer assessment.</p> <p>I can refine and adapt my activity skills in (specific activity e.g., basketball, softball, soccer, etc.) and demonstrate it through a rubric.</p>	<p>Assessment of Learning (Formative)</p> <ul style="list-style-type: none"> • Teacher observation and questioning. Examples: <ul style="list-style-type: none"> ○ Body awareness—What body parts move and in what way do they move? ○ Spatial awareness—Where does the body move? ○ Effort awareness—How does the body move? ○ Relationship—With whom or with what does the body move? • Skill checklist • Self/Peer assessment <p>Assessment for Learning (Summative)</p> <ul style="list-style-type: none"> • Skill rubric: <p style="text-align: center;">Sample rubric</p> <p>4 (<i>Beyond what was taught</i>) Displays consistent and correct performance of individual/group activity skills by applying concepts of relationships, effort, spatial awareness, speed, and pathways.</p> <p>3 (<i>What was explicitly taught</i>) Demonstrates individual and group activity skills by applying concepts of relationships, effort, spatial awareness, speed, and pathways.</p> <p>2 (<i>Identify basic elements</i>) Demonstrates some individual and group activity skills by applying some concepts of relationships, effort, spatial awareness, speed, and</p>	<ul style="list-style-type: none"> • Peer Assessment <ul style="list-style-type: none"> ○ Position yourself to see the critical components of the activity skills. Use multiple vantage points. ○ Observe performance several times to identify consistent performance problems. ○ Use the whole-part-whole observation method. ○ Be sure to focus both on the performer and any implements. ○ Evaluate the overall effectiveness of the movement. ○ Use a performance checklist to guide your efforts. 	<ul style="list-style-type: none"> • Individual and group activities with opportunities for movement at varying speeds and pathways such as: <ul style="list-style-type: none"> ○ Jump rope activities that can develop specialized motor skills such as visual-tactile coordination. Progressions from individual movements using rope patterns to long rope jumping with turners to individual rope jumping challenges. ○ Dribbling a ball with dominant and non-dominant hand/feet while starting, stopping, changing directions, and passing. • Modified possession games with an emphasis on offensive/defensive skills such as: pivots, fakes, jab steps, cutting, dodging, and feinting. • Games that involve spatial awareness, speed, and pathways. Example: http://www.thephysicaleducator.com/resources/games/pur-suit-evade/

	<p>pathways.</p> <p>1 (<i>With help/prompts/cues</i>) With teacher cues, student can demonstrate individual and group activity skills by applying some concepts of relationships, effort, spatial awareness, speed, and pathways.</p>		<ul style="list-style-type: none"> • Opportunities to self/peer assess to refine and adapt skills. Example: http://www.pecentral.com/assessment/pdf/forehandgroundstrokeassess.pdf
<p>Resources: SHAPE America National Standards and Grade-Level Outcomes http://www.thephysicaleducator.com/resources/games/pursuit-evade/; http://www.pecentral.org/lessonideas/ViewLesson.asp?ID=12110#.Vvp_yrnmqpo Jump Rope Lesson Idea; http://acarey2.wiki.westga.edu/file/view/Jump+Rope+Skills.pdf Jump ropes skills, sample task cards and rubric</p>			

VA SOL Standard: 6.2 The student will apply both movement principles and concepts and knowledge of anatomical structures to movement skill performance.

ESSENTIAL UNDERSTANDING

- Different joints in the body allow different types of movement to occur.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>
<p>6.2 b) Apply knowledge of the skeletal system to identify types of joints and associated bones, to include ball and socket joint, pivot joint, and hinge joint.</p> <p>Suggested Learning Targets:</p> <p>I can identify pictures of ball and socket joints, pivot joints, and hinge joints and demonstrate it by pointing to each of them on a poster when asked to.</p> <p>I can observe movement skills and identify which joints are involved through an exit ticket.</p>	<p>Assessment of Learning (Formative)</p> <ul style="list-style-type: none"> • Observation: Teacher asks students to point out certain bones/joints on posters. • Oral: Partner discussions on ways joints work to do a variety of movements. <p>Assessment for Learning (Summative)</p> <ul style="list-style-type: none"> • Written: Identify pictures of different joints in the body. 	<ul style="list-style-type: none"> • Ball and socket joint: <ul style="list-style-type: none"> ◦ Movement at the joint — External Rotation and Flexion/Extension/Adduction/Abduction/Internal ◦ Example — Shoulder/Hip • Pivot joint: <ul style="list-style-type: none"> ◦ Movement at the joint — Rotation of one bone around another. ◦ Example — Top of the neck. • Hinge joint: <ul style="list-style-type: none"> ◦ Movement at the joint — Flexion/Extension ◦ Example — Elbow/Knee • Range of Motion: The normal range of movement of all body joints. • Types of connective tissue in and around joints. <ul style="list-style-type: none"> ◦ Cartilage: Sits on the ends of bones within a joint to stop the two ends from rubbing. ◦ Ligaments: Connect bones to bones and help keep the joint together. ◦ Tendons: Connect muscle to bone and usually cross a joint so that the associated muscle can cause movement at the joint. 	<ul style="list-style-type: none"> • Partner students for a variety of skills and have them observe one another noticing the way joints work to allow movement. • Activity games to teach joints. Example: Tag game that when the person is tagged they freeze and place a hand over a joint in the body. To become unfrozen, another student must identify the type of joint and associated bones.

Resources:

SHAPE America National Standards and Grade-Level Outcomes;

VDOE Physical Education Instructional Resources <http://www.doe.virginia.gov/instruction/physed/index.shtml>; Kids Health <http://kidshealth.org/kid/htbw/>

<http://classroom.kidshealth.org/classroom/6to8/body/parts/bones.pdf>; http://www.teachpe.com/gcse_anatomy/bones.php

http://www.teachpe.com/gcse_anatomy/joints.php; <http://www.exrx.net/Lists/Articulations.html> Joint articulations and movements

<https://www.fix.com/blog/flexibility-mobility-stability/>

VA SOL Standard: 6.2 The student will apply both movement principles and concepts and knowledge of anatomical structures to movement skill performance.

ESSENTIAL UNDERSTANDING

- Skeletal muscles play many roles in the body such as movement and joint stability.
- Muscles can only cause bones to move by contracting, which means a muscle can only move a bone in one direction so muscles work in antagonistic pairs.

VDOE Standard(s) Student Friendly Language What will the student know and be able to do?	SUGGESTED / SAMPLE ASSESSMENTS	Terms (Vocabulary) and Content Information	SUGGESTED / SAMPLE ACTIVITIES
<p>6.2 c) Apply knowledge of anatomy and joint types to accurately describe a variety of specific movements such as throwing/catching, striking, volleying, and dribbling.</p> <p>Suggested Learning Targets:</p> <p>I can recognize the way joints/muscles work to do (specific activity) and describe it through oral feedback to a peer.</p> <p>I can examine (specific skill movement) and describe the anatomy and joint types through a summary paragraph.</p>	<p>Assessment of Learning (Formative)</p> <ul style="list-style-type: none"> • Oral: Identify pictures of different joints in body. • Peer Observation: Watch peer perform manipulative skill and describe how joints work together to complete movement. <p>Assessment for Learning (Summative)</p> <ul style="list-style-type: none"> • Describe the anatomy and joint types in two specific movements. Example: Throwing—The arm swings back (shoulder: ball and socket joint; centered on flexion) and the elbow (hinge joint) swings forward. The trunk rotates towards the side of the body that has the active arm and the weight of the foot shifts to the side of body that does not have the active arm. Release during a throw is centered on extension. 	<ul style="list-style-type: none"> • Flexion: The action of bending or the condition of being bent, especially the bending of a limb or joint. Example—Bending an elbow. • Extension: The opposite of flexion is extension, the action of straightening. Example—Dropping the arms to the sides, or bringing the knees together. • Isotonic contraction: The muscle length changes without additional tension or force development. The force generated by a muscle while contracting, when the muscle lengthens and shortens during movement, with the force remaining constant. During normal muscle contraction the force varies throughout the movement. Examples include: Doing a sit-up or throwing a ball. • Isometric contractions: Muscle does not change length. Exercises involve muscle contraction without the muscle or joints moving. Examples include: Pushing against a wall or doing a push-up and stopping in the 'up' position. Isometric exercises do not significantly build strength but they can maintain strength. 	<ul style="list-style-type: none"> • Incorporate knowledge concepts into movement activities such as: identifying the joints being used in a skill/activity, and abduction vs adduction in leg/arm movements. • Applying knowledge of anatomy during instruction of skill activities. Examples— <ul style="list-style-type: none"> ◦ Volleyball serve to project the ball over the net and into the opposite court specifically requires a coordinated summation of forces produced by: trunk rotation, shoulder extension (ball and socket joint), elbow extension (hinge joint), and forward translation of the total body, center of gravity, as well as contacting the ball at an appropriate height and angle. ◦ A volleyball spike is a relatively fast jump primarily vertical and is it high enough for the player to contact the ball above the net. The hitting arm positioned with the upper arm in maximal horizontal abduction prior to arm swing to allow a full range of arm motion. The hitting movement initiated by trunk rotation followed by shoulder flexion (ball and socket joint), then elbow extension (hinge joint), then snap-like wrist flexion. ◦ https://www.heart.org/idc/groups/heart-public/@wcm/@fc/documents/downloadable/ucm_306500.pdf Moveable Joint Charades

		<ul style="list-style-type: none"> ● Isokinetic contraction: Is a dynamic contraction but the speed of the entire movement is controlled by the machine. This control prevents injury and also measures areas of strength and weakness in muscles. ● Skeletal muscles on the basis of action: <ul style="list-style-type: none"> ○ Prime movers (agonists): Brings about the desired movement. ○ Antagonists (opponents): Oppose the prime movers. 	<ul style="list-style-type: none"> ○ Incorporate knowledge concepts into movement activities such as having students identify the joints being used in warm-up activities and a variety of skills.
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Resources:

SHAPE America National Standards and Grade Level Outcomes; <http://www.exrx.net/Lists/Articulations.html> Joint articulations and movements;
<http://www.mananatomy.com/basic-anatomy/actions-skeletal-muscles>

VA SOL Standard: 6.2 The student will apply both movement principles and concepts and knowledge of anatomical structures to movement skill performance.

ESSENTIAL UNDERSTANDING

- Basic offensive and defensive strategies can be learned during physical activities highlighting individual and group activity skills.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>
<p>6.2 d) Describe basic offensive and defensive strategies in noncomplex, modified, and small-sided activities.</p> <p>Suggested Learning Targets:</p> <p>I can describe basic offensive strategies in a (specific activity/game) and explain it through an exit ticket.</p> <p>I can describe basic defensive strategies in (specific activity/game) and demonstrate it through an exit ticket.</p>	<p>Assessment of Learning (Formative)</p> <ul style="list-style-type: none"> Teacher observation: Example: Basic defensive skills (i.e. athletic “ready” stance, staying with their attacker, moving, staying in a goal-side position, etc.) in modified/small-sided activities. Written: List basic offensive and defensive strategies. <p>Assessment for Learning (Summative)</p> <ul style="list-style-type: none"> Skill rubric: <p style="text-align: center;">Sample Rubric</p> <p>4 <i>(Beyond what was taught)</i> Describes consistently the correct basic offensive and defensive strategies in non-complex, modified, and small-sided activities.</p> <p>3 <i>(What was explicitly taught)</i> Describes most of the basic offensive and defensive strategies in non-complex, modified, and small-sided activities.</p> <p>2 <i>(Identify basic elements)</i> Somewhat describes most of the basic offensive and defensive strategies in non-complex, modified, and small-sided activities.</p> <p>1 <i>(With help/prompts/cues)</i></p>	<ul style="list-style-type: none"> Offensive Skills <ul style="list-style-type: none"> Give and go Fakes (ball/head) Pivots Changing (direction/speed) Defensive Skills <ul style="list-style-type: none"> Player to player Reducing size of passing lane Reducing space Transitioning from offense to defense quickly Communicating with teammates Selecting appropriate tactics to gain defensive advantage Man to man defense: Matching players against opponents of equal size, skill, and quickness. Each player is assigned a particular opponent and held responsible, defensively, for that player Zone defense: Corresponds the number of players on the front of the zone (farthest from the goal) and works its way to the back of the zone. Example — A two-three (2-3) zone is a zone defense in which two defenders are covering areas in the top of the zone while three defenders are covering areas near the baseline. 	<ul style="list-style-type: none"> Modified and small-sided activities that develop movement competencies necessary to successfully apply the movement solutions required of a tactical problem. Includes activities such as: offensive tactics to create open space (moves to create open space on and off the ball; a variety of passes, fakes and pathways; and give and go. Examples: <ul style="list-style-type: none"> Create teams of defenders and offenders. Offenders must dribble up to the cones and pass through the cones to their partner on the other side. Defenders must prevent the offenders from scoring by stealing the ball. If the ball does get stolen, the defending pair become the offenders and vice versa. For every pass that is successfully passed through the cones to a partner, it is a point. After passing through the cone to a partner, dribble to another set of cones. Switch roles to allow everyone to have a turn in being the defender and offender. http://www.sparkpe.org/wp-content/uploads/2011/05/03Basketball3CatchWPost.pdf Capture the Flag Basketball Style http://www.pecentral.org/lessonideas/VielLesson.asp?ID=132866#.V3VTI9rLIU Sneak Attack http://www.pecentral.org/lessonideas/VielLesson.asp?ID=534#.V3VMp9rLIU

	<p>Inadequately describes the basic offensive and defensive strategies in non-complex, modified, and small-sided activities.</p>		<ul style="list-style-type: none"> ○ Frisbee Keep Away http://www.pecentral.org/lessonideas/ViewLesson.asp?ID=5684#.V3VUPdIrLIU ○ 21 Football http://www.pecentral.org/lessonideas/ViewLesson.asp?ID=817#.V3VUI9IrLIU ● Student created games/activities that use locomotor skills, object manipulation, an offensive and defensive strategy and is taught to others. ● Basic offensive and defensive strategies. Example: <ul style="list-style-type: none"> ○ Basketball defensive technique cues: http://www.pecentral.org/lessonideas/cues/ViewCues.asp?ID=219
<p>Resources: SHAPE America National Standards and Grade-Level Outcomes VDOE Physical Education Instructional Resources http://www.doe.virginia.gov/instruction/physed/index.shtml</p>			

VA SOL Standard: 6.3 The student will apply skills of measurement, analysis, goal setting, problem solving, and decision making to improve or maintain physical fitness.

ESSENTIAL UNDERSTANDINGS

- Physical fitness can be evaluated through a variety of methods including criterion-referenced health-related fitness standards, Internet, software data-management systems, heart-rate monitors, pedometers, and skinfold calipers.
- Self-assessments allow you to determine the factors that you can alter to make changes towards a healthy lifestyle.
- Relevant fitness data helps a good planner know when and where to make adjustments to improve physical fitness.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>
<p>6.3 a) Use measurement and assessment tools and data (e.g., criterion-referenced health-related fitness standards, Internet, software data-management systems, heart-rate monitors, pedometers, and skinfold calipers) to complete a self-assessment and develop goals for improvement in at least two fitness components.</p> <p>Suggested Learning Targets:</p> <p>I can determine how to improve my personal fitness using specific method during aerobic activities and explain it to my accountability partner.</p> <p>I can assess and evaluate my current level of fitness using various assessment tools and log this information into my journal.</p> <p>I can develop goals using the SMART technique to improve at least two fitness components and record them in my data analysis journal.</p>	<p>Assessment of Learning (Formative)</p> <ul style="list-style-type: none"> Written: Complete a teacher prepared exercise or fitness log over a two-week period, including student choice activities that will improve a specified fitness component. Oral: Naming methods for evaluating personal fitness levels <p>Assessment for Learning (Summative)</p> <ul style="list-style-type: none"> Create Wellness Portfolios *(see Suggested/Sample Activities for details.) Written: Develop a data analysis journal to address at least two components of health-related fitness to improve/maintain, including intermediate (quarterly) and long-term SMART goals and reassessments. <p style="text-align: center;">Sample Rubric</p> <p>4 (Advanced) Thoroughly evaluates all measurement, assessment tools and data in at least two fitness components. Determines personal weaknesses, develops goals, and explains in detail the connection and need for improvement to achieve a healthy body.</p>	<ul style="list-style-type: none"> SMART (specific, measurable, attainable, realistic, timely) goal Health-related criterion referenced tests Target Heart Rate: Determining target heart rate: Step 1— Subtract your age from 220 to determine maximum heart rate. Step 2— For beginners, multiply .60 and .70 times the maximum heart rate to determine the target heart rate zone. Age minus 220: ___ = Maximum heart rate. What is your target heart rate (.60 x maximum heart rate)? ___ What is your target heart rate (.70 x maximum heart rate)? ___ Beginner heart rate range (.60 to .70) ___ to ___. Maximum safe heart rate during exercise (.85 x maximum heart rate). = ___ 	<ul style="list-style-type: none"> Multiple opportunities to gather personal fitness data throughout the year using methods such as: criterion-referenced health-related fitness standards, Internet, software data-management systems, heart-rate monitors, pedometers, and skinfold calipers. Stations targeting specific health-related fitness components where stations are selected based on personal fitness plan. Students create “Wellness Portfolios” with the following information: baseline data, SMART goal(s), activities targeting specific health-related components for improvement, reflection on progress throughout, post-fitness testing results, and graphs/charts depicting progress. Student “accountability buddy” for the duration of the year. Buddies check in (walk and talk, closure, etc.) to see how each other are progressing with fitness plan and SMART goal(s). Record Pedometer Steps In or Out of Class:

	<p>3 (Proficient) Evaluates all measurement, assessment tools and data in at least two fitness components. Determines personal weaknesses, develops goals, and demonstrates the connection and need for improvement to achieve a healthy body.</p> <p>2 (Emerging) Minimal evaluation of all measurement, assessment tools and data in at least two fitness components. Somewhat determines personal weaknesses, develops goals, but demonstrates inadequately the connection and need for improvement to achieve a healthy body.</p> <p>1 (Novice) Incomplete attempt to evaluate measurement, assessment tools and data in at least two fitness components. No understanding of personal weaknesses, does not develop goals. Does not show a connection and need for improvement to achieve a healthy body.</p>	<ul style="list-style-type: none"> ● Health related fitness components: <ul style="list-style-type: none"> ○ Cardiovascular fitness: The ability to work continuously for extended periods of time. ○ Flexibility: The range of motion that your joints have during movement. ○ Muscular Strength: The maximal force that you can exert when you contract your muscles. ○ Muscular Endurance: The ability to contract your muscles several times without excessive fatigue. ○ Body Composition: The ratio of water, bone, muscle, and fat in the body. ● Evaluation tools: <ul style="list-style-type: none"> ○ stopwatch ○ body composition assessment: skin caliper, body mass index ○ computer and software application ○ heart and pulse monitor ○ step counter ○ self/peer assessment ○ digital camera ○ iPad for video recording 	<p>Information...</p> <ul style="list-style-type: none"> ○ 30 minutes/day of MVPA <ol style="list-style-type: none"> 1. 8,000 steps/day for 30 min. of MVPA for adults. 2. Step target for MVPA for all kids: 12,000/day ○ 150 minutes/week of MVPA translates to 7,000 steps/day (or 49,000 steps/week). ○ Accumulating 8,000 steps/day is a good proxy for 30 minutes of daily MVPA, while accumulating 7,000 steps/day is consistent with obtaining 150 minutes of weekly MVPA. (MVPA: moderate to vigorous physical activity) ○ http://www.sparkpe.org/wp-content/uploads/2011/05/11JumpRopeWhichTakesMoreSteps.pdf ○ http://www.sparkpe.org/wp-content/uploads/2011/05/02FitnessDaytona2000.pdf <p>Note: It is an inappropriate practice to grade students on fitness test results.</p>
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Resources:

VDOE Physical Education Instructional Resources <http://www.doe.virginia.gov/instruction/physed/index.shtml>
http://www.heart.org/HEARTORG/Educator/Educator_UCM_001113_SubHomePage.jsp
<http://www.shapeamerica.org/standards/pe/upload/Grade-Level-Outcomes-for-K-12-Physical-Education.pdf>
<http://www.livestrong.com/article/95271-normal-pulse-rate-teenager/#ixzz1YV5chxVS>; <https://www.vbcps.com/Apps/WelNet/Pages/default.aspx>

VA SOL Standard: 6.3 The student will apply skills of measurement, analysis, goal setting, problem solving, and decision making to improve or maintain physical fitness.

ESSENTIAL UNDERSTANDINGS

- A well designed personal fitness plan will outline how often, how long, and how hard a person exercises, and what kinds of exercises are selected.
- The FITT principle can be used to design a personal fitness plan for achieving SMART goals.
- Physical activity can vary by frequency, intensity, time, and type.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>
<p>6.3 b) Describe and apply the components of the FITT (frequency, intensity, time, type) principle and their relationship to implementing safe and progressive personal fitness programs for aerobic capacity, muscle fitness, and flexibility.</p> <p>Suggested Learning Targets:</p> <p>I can recognize how the FITT principle can be used to create a personal fitness program and explain it on an exit ticket.</p> <p>I can create and apply a personal fitness plan using the FITT principle to help me achieve my personal fitness goals and demonstrate it through a written and executed plan.</p>	<p>Assessment of Learning (Formative)</p> <ul style="list-style-type: none"> ● Oral: Determine if each example is frequency, intensity, time, or type. Examples— <ul style="list-style-type: none"> ○ Exercise 3 days per week. ○ Lift your own body weight. ○ Complete 8 repetitions. ○ Lift 50% of the maximum weight you can lift. ○ Hold the contraction for 5 seconds. ○ Exercise every other day. ○ Do three sets of 5 repetitions. ○ Raise your heart rate to your THR (target heart rate). ○ Keep your heart rate in your THR zone for 15 minutes. ○ Stretching the muscle beyond its normal length. ○ Play volleyball for physical activity. ● Short Answer: Answers to all the questions are one of the FITT principles. (Frequency, Intensity, Time, Type) <ul style="list-style-type: none"> ○ During a workout session, how <u>hard</u> you work is? ○ During a workout session, how <u>long</u> you work is? ○ How many <u>days a week</u> you do a workout session is? 	<ul style="list-style-type: none"> ● Frequency: How often is commonly measured in days per week. For each component of health-related fitness, a safe frequency is three to five times a week. ● Intensity: How hard is commonly measured in intensity levels. Intensity can be measured in different ways, depending on the connected health-related component. For example, monitoring heart rate is one way to gauge intensity during aerobic endurance activities. ● Time: How long is commonly measured in minutes/hours. Time varies depending on the health-related fitness component targeted. For example, flexibility or stretching may take 10-30 seconds for each stretch, while the minimum time for performing aerobic activity is 15 minutes of continuous activity. 	<ul style="list-style-type: none"> ● Fitness challenge stations, spending one minute at each of seven active stations (e.g., curl ups, bench step ups, wall push ups, bench dips, jumping jacks, planks, side to side jumps), alternating with seven inactive stations (e.g., reading information on benefits of physical activity, fitness components, the FITT [frequency, intensity, time, type] principle). After the 10 minutes, students cool down and discuss the effects of activity and inactivity. Example—on their bones, muscle strength, etc. http://www.sparkpe.org/wp-content/uploads/MS-Fitness-Aerobic-Capacity.pdf ● Give examples of the FITT principle to improve the different components of fitness. Examples— <ul style="list-style-type: none"> ○ Using the FITT principle to improve muscular endurance: <ul style="list-style-type: none"> — Frequency: 3 to 5 days per week. — Intensity: Lighter weights; more repetitions (1-3 sets of 10-20 reps). — Time: 6 seconds per lift. — Type of activity: Free weight, weight training, medicine ball, own body weight. ○ Using the FITT principle to improve muscular strength: <ul style="list-style-type: none"> — Frequency: 3 to 4 days per week — Intensity: Heavier weights; less repetition (1-3 sets of 8-10 reps) — Time: 6 seconds per lift. — Type of activity: Free weight, weight training, medicine ball, own body weight.

- Picking a *new activity* to do for a workout session is changing the?

Assessment for Learning (Summative)

- Written: Students apply FITT principle to their personal fitness plan in order to achieve their SMART goal(s).

Sample Rubric
4 (Advanced)
Correctly applies the FITT components to the fitness program and shows changes over time to meet the SMART goal(s) developed for improvement.

3 (Proficient)
Applies some of the FITT components to the fitness program and shows changes over time to meet the SMART goal(s) developed for improvement.

2 (Emerging)
Incorrect application of the FITT components to the fitness program. Shows limited changes over time to meet the SMART goal(s) developed for improvement.

1 (Novice)
Without any application of the FITT components to the fitness program. Shows no changes over time to meet the SMART goal(s) developed for improvement.

- Type: What kind is measured in specific health-related component of fitness?
For example, an individual wishing to increase arm strength must exercise the triceps and biceps, while an individual wishing to increase aerobic endurance needs to jog, run, swim or perform some other aerobically challenging activity.

- Opportunities to demonstrate the FITT components applied to a basic personal fitness program.
- Students select stations/activities during PE and outside of PE compatible with their personal fitness plan to improve their SMART goal(s).
- Picture cards for groups that have a person biking, swimming, skating, dancing or jogging. Groups pick one of the activities as their "Type" and develop the "Frequency", "Intensity" and "Time" for that program.
- Monitoring target heart rates for intensity in an exercise activity and reflecting on how they can change the intensity.

Target Heart Rate Ranges:

Age	Beg. heart rate range-10 sec.	Inter. heart rate range-10 sec.	Adv. heart rate range-10 sec.
9	121-149 — 20-24	151-169 — 25-28	171-190 — 29-32
10	121-149 — 20-24	151-169 — 25-28	171-189 — 29-32
11	120-148 — 20-24	150-168 — 25-28	170-188 — 28-31
12	120-148 — 20-24	150-168 — 25-28	170-188 — 28-31

Resources:

SHAPE America National Standards and Grade-Level Outcomes; http://www.teachpe.com/fitness/training_principles.php
<http://www.ode.state.or.us/teachlearn/subjects/pe/curriculum/fittprinciple.pdf>

VA SOL Standard: 6.3 The student will apply skills of measurement, analysis, goal setting, problem solving, and decision making to improve or maintain physical fitness.

ESSENTIAL UNDERSTANDINGS

- Heart rate can be used to help determine personal fitness levels.
- There is a range the heart must beat within for safety and benefits when exercising.
- Monitoring your heart rate will allow you to track the changes taking place in your cardiovascular system as you move towards aerobic fitness.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>
<p>6.3 c) Define and calculate resting heart rate (RHR) and describe its relationship to aerobic fitness.</p> <p>Suggested Learning Targets:</p> <p>I can calculate my resting heart rate and describe its connection to aerobic fitness and demonstrate this by charting and writing a summary.</p>	<p>Assessment of Learning (Formative)</p> <ul style="list-style-type: none"> • Students match activities to the rate of perceived exertion levels. • Oral Examples: <ul style="list-style-type: none"> ○ Students describe connection between heart rate and aerobic fitness. ○ Students differentiate between aerobic and anaerobic capacity, and muscular strength and endurance. • Written: Describe when/how to take resting heart rate and what it indicates. Example: Resting heart rate should be measured first thing in the morning and it indicates cardiovascular health. <p>Assessment for Learning (Summative)</p>	<ul style="list-style-type: none"> • Resting heart rate: When your body is pumping the lowest amount of blood you need because you are not exercising. • How to measure: Resting pulse should be measured first thing in the morning with your fingers and a stopwatch. Put your middle and index finger to either your radial artery on your wrist or your carotid artery in your neck. Once you find your pulse, count how many beats occur in 20 seconds, and multiply this number by 3. This is your resting pulse. • Resting pulse range: Resting pulse varies from person to person. According to the American Heart Association, the average resting pulse should be between 60-80 beats per minute (BPM), but is by no means the only place a healthy person's pulse can be. For athletes or people who often perform cardiovascular activity, a normal resting heart rate may be closer to 40 beats a minute. • What affects resting pulse? —A variety of factors can affect the resting pulse such as: reading, the physical size of the heart, body size, activity level, fitness level, temperature, body position, emotions and medication use. • Importance of monitoring a resting pulse: <ul style="list-style-type: none"> ○ The more one works out, the lower the resting pulse. The lower the resting pulse, the less work the heart has to do. The heart is a muscle and the more you work it the stronger it gets. A stronger heart means more blood with each beat, and the same amount of work can be done with fewer beats. If the heart needs more beats to do the same amount of work, over time this can lead to cardiovascular disease and/or heart attacks. 	<ul style="list-style-type: none"> • Students sit at the beginning of class and calculate resting heart rate. • Record target heart rate while participating in different activities that move up the (RPE) Rate of Perceived Exertion scale. Example: Aerobic fitness activities using technology such as Dance, Dance Revolution® or Wii Fit. • Students determine a range of heart rates that represent their desired workout intensity. Students will keep their heart rates in their zone during activities and monitor their workout intensity level.

	<ul style="list-style-type: none"> ● Written Individual: Calculate resting heart rate and heart rate during variety of activities. ● Written Group: Each group member will record their pulse while doing the following— <ul style="list-style-type: none"> ○ Sitting/relaxed ○ Standing ○ Running in place one minute. Group members will discuss how their pulse rate changed in each situation. Then write a statement about the differences in pulse rate and what that indicates in connection to aerobic fitness. 	<ul style="list-style-type: none"> ○ A higher resting pulse than usual can be a sign of overtraining or illness. When recovering from a workout, your metabolism and heart are working harder to repair the body and get it back to a homeostasis. If there is a higher resting heart rate than usual, the body is still in a state of repair and you should adjust your workout regimen accordingly to prevent overtraining or injury. ● Aerobic: Any activity that uses large muscle groups, can be maintained continuously, and is rhythmic in nature. <ul style="list-style-type: none"> *Defined by the American College of Sports Medicine. ○ For a physical exercise to be considered aerobic, it should be sustained for at least 15 minutes while maintaining 65 to 85 percent of a person's maximum heart rate. For people who are trying to lose body fat, it is usually recommended that they sustain aerobic exercise for at least 30 minutes with 40 to 60 minutes being the preferred range. ○ To achieve health benefits from aerobic activity, exercise anywhere from 2 to 7 times a week. If a person's goal is weight maintenance, 2 to 5 times a week may allow them to maintain their fitness levels. If a person's goal is fat loss, they may want to increase the frequency to 6 to 7 times a week or increase the duration of the exercise. ● Aerobic Fitness: A person's lungs may process more air with less effort. The heart may be able to pump more blood with fewer beats, while direct blood supply to the muscles increases. Cardiovascular endurance increases and resistance to fatigue. 	
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Resources:

SHAPE America National Standards and Grade-Level Outcomes;

VDOE Physical Education Instructional Resources <http://www.doe.virginia.gov/instruction/phased/index.shtml>; Kids Health <http://kidshealth.org/kid/htbw/> <http://blog.digifit.com/2013/05/resting-heart-rate/>

VA SOL Standard: 6.3 The student will apply skills of measurement, analysis, goal setting, problem solving, and decision making to improve or maintain physical fitness.

ESSENTIAL UNDERSTANDINGS

- A minimum level of physical fitness is required for all activities of daily living with one or more physical fitness components required in performing any type of activity well and safely.
- Fit people engage in physical activity on a regular basis.
- Regular participation in physical activity in childhood is associated with a decreased cardiovascular risk in youth and adulthood.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>																																																												
<p>6.3 d) Describe how being physically active leads to a healthy body.</p> <p>Suggested Learning Targets:</p> <p>I can describe how being physically active leads to a healthy body on an exit ticket.</p> <p>I can analyze different types of fitness programs and compare their benefits through a graphic organizer.</p> <p>I can research the benefits of being physically active and compose a written list.</p> <p>I can compare different types of exercise and evaluate how they promote a healthy body through a foldable.</p>	<p>Assessment of Learning (Formative)</p> <ul style="list-style-type: none"> • Oral Examples: <ul style="list-style-type: none"> ○ Teacher discussions on how previous generations were active more naturally through work and manual labor, but today we have to find ways of integrating activity into our daily lives. ○ Students describe connection between heart rate and aerobic fitness. • Written: Log heart rate during a variety of activities. <p>Assessment for Learning (Summative)</p> <ul style="list-style-type: none"> • Written: Research and reflect on how being active leads to a healthy body. Examples: <ul style="list-style-type: none"> ○ Improves blood circulation which reduces the risk of heart disease. ○ Keeps weight under control. ○ Improves blood cholesterol levels. ○ Prevents and manages high blood pressure. ○ Prevents bone loss. ○ Boosts energy level. 	<ul style="list-style-type: none"> • Types of fitness programs and the benefits for a healthy body: <table border="1" data-bbox="1052 621 1722 1019"> <thead> <tr> <th>Type of Exercise</th> <th>Anaerobic or Aerobic</th> <th>Effective for Fat Burning</th> <th>Effective for Muscle Building</th> <th>Effective For Muscle Toning</th> <th>Effective for Increasing Flexibility</th> </tr> </thead> <tbody> <tr> <td>Walking</td> <td>Aerobic</td> <td>Yes</td> <td>No</td> <td>Yes</td> <td>No</td> </tr> <tr> <td>Jogging</td> <td>Aerobic</td> <td>Yes</td> <td>No</td> <td>Yes</td> <td>No</td> </tr> <tr> <td>Swimming</td> <td>Aerobic</td> <td>Yes</td> <td>Yes</td> <td>Yes</td> <td>No</td> </tr> <tr> <td>Isotonic</td> <td>Anaerobic</td> <td>No</td> <td>Yes</td> <td>Yes</td> <td>No</td> </tr> <tr> <td>Isometrics</td> <td>Anaerobic</td> <td>No</td> <td>Yes</td> <td>Yes</td> <td>No</td> </tr> <tr> <td>Calisthenics</td> <td>Anaerobic</td> <td>No</td> <td>Yes</td> <td>Yes</td> <td>Yes</td> </tr> <tr> <td>Yoga</td> <td>Aerobic</td> <td>Yes</td> <td>Yes</td> <td>Yes</td> <td>Yes</td> </tr> <tr> <td>Pilates</td> <td>Aerobic</td> <td>Yes</td> <td>Yes</td> <td>Yes</td> <td>Yes</td> </tr> <tr> <td>Stretching</td> <td>Anaerobic</td> <td>No</td> <td>No</td> <td>Yes</td> <td>Yes</td> </tr> </tbody> </table> <ul style="list-style-type: none"> • Types of exercise and the benefits for a healthy body: <ul style="list-style-type: none"> ○ Flexibility exercise — Is performed to enhance the movements of muscles and joints. Stretching and bending are the common ways of flexibility training. This exercise type helps in preventing muscle stiffness and to some extent of joint pain. ○ Aerobic Exercise — Also known as cardiovascular exercise, strengthens the muscles and promotes cardiovascular endurance (by targeting a specific heart rate). Helps to control weight and improve stamina. Improves the oxygen intake by the body cells. Over a period of time, aerobic activities make your heart and lungs stronger, reducing the risk of cardiovascular disease. 	Type of Exercise	Anaerobic or Aerobic	Effective for Fat Burning	Effective for Muscle Building	Effective For Muscle Toning	Effective for Increasing Flexibility	Walking	Aerobic	Yes	No	Yes	No	Jogging	Aerobic	Yes	No	Yes	No	Swimming	Aerobic	Yes	Yes	Yes	No	Isotonic	Anaerobic	No	Yes	Yes	No	Isometrics	Anaerobic	No	Yes	Yes	No	Calisthenics	Anaerobic	No	Yes	Yes	Yes	Yoga	Aerobic	Yes	Yes	Yes	Yes	Pilates	Aerobic	Yes	Yes	Yes	Yes	Stretching	Anaerobic	No	No	Yes	Yes	<ul style="list-style-type: none"> • Discussions on different physical activity and the benefits for the pursuit of a healthy body. • Match physical activities to rate of perceived exertion levels. • Stations for aerobic, anaerobic, and flexibility exercises.
Type of Exercise	Anaerobic or Aerobic	Effective for Fat Burning	Effective for Muscle Building	Effective For Muscle Toning	Effective for Increasing Flexibility																																																										
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- Helps manage stress and releases tension.
- Counters anxiety and depression.
- Helps you fall asleep faster and sleep more soundly.
- Increases muscle strength, increasing the ability to do other physical activities.
- Reduces risk of stroke.
- Helps delay or prevent chronic illnesses and diseases associated with aging. Maintains quality of life and independence longer for seniors.

Sample Rubric

4 (*Advanced*)

Thoroughly understands and describes with detail the connection between being physically active and a healthy body.

3 (*Proficient*)

Describes an understanding of the connection between being physically active and a healthy body.

2 (*Emerging*)

Recognizes and describes briefly the connection between being physically active and a healthy body.

1 (*Novice*)

Incomplete attempt, without complete understanding of the connection between being physically active and a healthy body.

- **Anaerobic Exercise:** Anaerobic exercise or weight-lifting exercise is performed mostly to build muscles and enhance their size, strength, and endurance. It can speed up metabolism by replacing inactive fat tissue with active muscle. Strength training can also reverse the gradual loss of muscle and bone strength that occurs as people get older.

Resources:

SHAPE America National Standards and Grade Level Outcomes; VDOE Physical Education Instructional Resources

<http://www.doe.virginia.gov/instruction/physed/index.shtml>; Kids Health <http://kidshealth.org/kid/htbw/>

<http://kidshealth.org/en/teens/exercise-wise.html?WT.ac=ctg#catdieting>; <https://health.gov/dietaryguidelines/2015/guidelines/appendix-1/>;

<http://www.acefitness.org/acefit/healthy-living-article/60/5460/physical-activity-vs-exercise-what-s-the/>; <https://health.gov/paguidelines/pdf/paguide.pdf>

VA SOL Standard: 6.3 The student will apply skills of measurement, analysis, goal setting, problem-solving, and decision making to improve or maintain physical fitness.

ESSENTIAL UNDERSTANDINGS

- Assessment of the health-related fitness components produces data that helps develop short and long-term goals that determine if the fitness plan is effective.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>
<p>6.3 e) Interpret fitness data comparing individual scores to health-related criterion-referenced standards (Virginia wellness-related fitness standards, FitnessGram®, GDC guidelines).</p> <p>Suggested Learning Targets:</p> <p>I can identify appropriate personal fitness goals in each of the components of health-related fitness, based on fitness test results, and demonstrate it through a fitness data analysis summary.</p> <p>I can interpret my fitness data and list activities that apply towards developing an activity plan to maintain/achieve score(s) for health-related fitness through a written log.</p>	<p>Assessment of Learning (Formative)</p> <ul style="list-style-type: none"> Written: Interpret fitness data with a partner and list activities for improvement. <p>Assessment for Learning (Summative)</p> <ul style="list-style-type: none"> Fitness Data Analysis: Criteria example: <ul style="list-style-type: none"> Determine if each fitness test score is satisfactory or falls below the healthy fitness zone. Reflect on personal satisfaction of the score. Plan of action to maintain or improve the score. <p style="text-align: center;">Sample Rubric</p> <p><i>4 (Advanced)</i> Thoroughly evaluates all of the fitness tests. Determines personal satisfaction or weakness and explains in detail a plan to maintain/achieve a score for health-related fitness.</p> <p><i>3 (Proficient)</i> Evaluates all of the fitness tests. Determines personal satisfaction or weakness and explains a plan to maintain/achieve a score for health-related fitness.</p> <p><i>2 (Emerging)</i> Somewhat evaluates all of the fitness tests. Somewhat determines personal satisfaction or weakness but inadequately explains a plan to maintain/achieve a score for health-related fitness.</p> <p><i>1 (Novice)</i></p>	<ul style="list-style-type: none"> FitnessGram® standards for the healthy fitness zones. <ul style="list-style-type: none"> Scores are evaluated against criterion-referenced standards called Healthy Fitness Zones that have been established to indicate levels of fitness corresponding with health. Standards have been set for boys and for girls based on age and what is optimal for good health. The use of health-related criteria helps to minimize comparisons between children and emphasizes personal fitness for health, rather than goals based solely on performance. 	<ul style="list-style-type: none"> Complete a self-assessment of health-related fitness and interpret fitness data comparing individual scores to established Virginia Wellness fitness standards and BMI calculations to the CDC protocols and recommendations. Retest a self-assessment of health-related fitness and reassess personal fitness plan goals. After physical activities, discuss how the activity can cause improvement in fitness testing. <p>Note: It is an inappropriate practice to grade students on fitness test results.</p>

	Does not evaluate all of the fitness tests. Has no understanding of personal satisfaction or weaknesses. Does not have a plan to maintain/achieve a score for health-related fitness.		
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Resources:
SHAPE America National Standards and Grade Level Outcomes; VDOE Physical Education Instructional Resources
<https://www.youtube.com/watch?v=YSbdoldO-3A>; <https://www.youtube.com/watch?v=eiS8xGzRlw>
<https://www.youtube.com/watch?v=61k7MmtoFFc>

VA SOL Standard: 6.3 The student will apply skills of measurement, analysis, goal setting, problem solving, and decision making to improve or maintain physical fitness.

ESSENTIAL UNDERSTANDINGS

- The fitness components relate to how well the body systems operate and if developed, they can contribute toward the prevention of disease and the promotion of health.
- Preparing a written plan can improve your adherence to the plan.
- Setting goals is a fundamental component to long-term success.
- SMART goals clarify exactly what to do and the measures needed to improve and maintain your fitness level and plans.

VDOE Standard(s) Student Friendly Language What will the student know and be able to do?	SUGGESTED / SAMPLE ASSESSMENTS	Terms (Vocabulary) and Content Information	SUGGESTED / SAMPLE ACTIVITIES
<p>6.3 f) Develop a personal fitness plan using baseline data to address one or more components of health-related fitness, to improve or maintain fitness level to include SMART goals, action plan, and documentation of activities inside and outside of school.</p> <p>Suggested Learning Targets:</p> <p>I can create a personal fitness plan (including SMART goals, action plan, and documentation of activities inside and outside of school) to improve or maintain one or more components of health-related fitness.</p>	<p>Assessment of Learning (Formative)</p> <ul style="list-style-type: none"> ● Record physical activity outside of school. Example: Pick one physical activity and log it for a determined amount of time. ● Peer assessment: Exchange fitness plan goals and evaluate if they are written as a correct SMART goal. <p>Assessment for Learning (Summative)</p> <ul style="list-style-type: none"> ● Develop a personal fitness plan to address at least one or more components of health-related fitness to improve/maintain, including intermediate (quarterly) and long-term SMART goals, action plan, reassessments, and modify/alter/change plans as needed. 	<ul style="list-style-type: none"> ● Health Related Fitness Components: <ul style="list-style-type: none"> ○ Muscular Strength: The ability of your muscles to exert force (push or pull) one time. ○ Muscular Endurance: The ability of your muscles to exert force or repeat a movement many times or for a long period of time. ○ Cardiovascular Endurance: The ability of your heart, lungs, and respiratory system to supply oxygenated blood and energy to all of the working muscles while exercising for a long period of time. ○ Body Composition: The amount of fat and muscle that your body is made up of. Body composition is a result of your overall exercise, eating, and lifestyle patterns or behaviors. ○ Flexibility: The ability to move joints through their full range of motion. Good flexibility in the joints can help prevent injuries through all stages of life. ● Developing SMART Goals: Specific, Measurable, Attainable, Realistic, Timely <ul style="list-style-type: none"> ○ Specific: A specific goal has a much greater chance of being accomplished than a general goal. To set a specific goal you must answer the six "W" questions: <ul style="list-style-type: none"> *Who: Who is involved? *What: What do I want to accomplish? *Where: Identify a location. *When: Establish a time frame. *Which: Identify requirements and constraints. *Why: Specific reasons, purpose or benefits of accomplishing the goal. 	<ul style="list-style-type: none"> ● Students pick an 'accountability buddy' for the duration of the year. Buddies check in (walk and talk, closure, etc.) to see how each other are progressing with fitness plan and SMART goal. ● Discuss physical activity outside of school. ● Documentation of activities: http://kidshealth.org/en/teens/exercise-log.html?WT.ac=ctg#catdieting

		<p>Example: A general goal would be “get in shape”. A specific goal would be “join a health club and work out 3 days a week”.</p> <ul style="list-style-type: none"> ○ Measurable: Establish concrete criteria for measuring progress toward the attainment of each goal you set. To determine if your goal is measurable, ask questions such as..... *How much? *How many? *How will I know when it is accomplished? ○ Attainable: When you identify goals that are most important to you, you begin to figure out ways you can make them come true. You develop the attitudes, abilities, skills, and financial capacity to reach them. You begin seeing previously overlooked opportunities to bring yourself closer to the achievement of your goals. ○ Realistic: To be realistic, a goal must represent an objective toward which you are both willing and able to work. A goal can be both high and realistic; however, be sure that every goal represents substantial progress. ○ Timely: A goal should be grounded within a time frame. Example — If you want to lose 5 pounds, anchor it within a timeframe such as: May 1st. Then you’ve set your unconscious mind into motion to begin working on the goal. 	
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Resources:
 SHAPE America National Standards and Grade Level Outcomes; VDOE Physical Education Instructional Resources
<http://www.doe.virginia.gov/instruction/physed/index.shtml>; — http://www.cdc.gov/healthyweight/assessing/bmi/adult_bmi/english_bmi_calculator/bmi_calculator.html
<http://classroom.kidshealth.org/classroom/6to8/personal/fitness/fitness.pdf>; http://www.thephysicaleducator.com/resources/infographics/fitness_components/

VA SOL Standard: 6.3 The student will apply skills of measurement, analysis, goal setting, problem solving, and decision making to improve or maintain physical fitness.

ESSENTIAL UNDERSTANDINGS

- Setting goals is a fundamental component to long-term success.
- Long-term goals are achieved through short-term goals.
- Causing change/improvement in fitness requires a strategy and the development of a new plan as needed.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>
<p>6.3-g) Reassess health-related fitness components and reflect on personal fitness goals at least twice during the school year.</p> <p>Suggested Learning Targets:</p> <p>I can use (Virginia wellness-related fitness standards, Fitnessgram®, CDC) guidelines to reassess and develop future goals for health-related fitness. Comparing past and present data through a graph.</p> <p>I can use (Virginia wellness-related fitness standards, Fitnessgram®, CDC) guidelines to write about my health-related fitness levels through a reflective summary.</p>	<p>Assessment of Learning (Formative)</p> <ul style="list-style-type: none"> ● Journals documenting thoughts/improvement; post-fitness testing results. ● Graphs/charts depicting progress. <p>Assessment for Learning (Summative)</p> <ul style="list-style-type: none"> ● Written reflection: Example: <ul style="list-style-type: none"> ○ An in-depth valid comparison of the data between two fitness test periods (Pre/Post) that determine if improvement has occurred and relevant examples of goals for future fitness testing. ○ An analysis of how the experience contributed to student understanding of self, others, and/or course concepts of fitness. <p style="text-align: center;">Sample Rubric</p> <p>4 (Advanced) An in-depth valid comparison of the data between the two fitness test periods that determines if improvement has occurred and relevant examples of SMART goals for future fitness testing.</p>	<ul style="list-style-type: none"> ● Characteristics of Goals—Should be: <ul style="list-style-type: none"> ○ Within your skills and abilities: Knowing your strengths and weaknesses will help you set goals you can accomplish. ○ Realistic: e.g., setting a goal to learn the spelling of three new words a day is realistic. Trying to learn the spelling of fifty new words a day is not realistic. ○ Flexible: Sometimes things will not go the way you anticipate and you may need to change your goal. Stay flexible so when you realize a change is necessary, you will be ready to make the change. ○ Measurable: It is important to be able to measure your progress toward a goal. It is especially important to recognize when you have accomplished your goal and need to go no further. Failure to measure your progress toward a goal and recognize the accomplishment will result in effort that is misdirected and wasted. ○ Within your control: Other than when working as part of a group, accomplishment of your goal should not depend on other students. You can control what you do, but you have little or no control over others. You may do what you have to, but if others don't, you will not accomplish your goal. 	<ul style="list-style-type: none"> ● Physical activities targeting specific health-related components students are looking to improve.

	<p>3 (Proficient) A valid comparison of the data between the two fitness test periods that determine if improvement has occurred and SMART goals for future fitness testing.</p> <p>2 (Emerging) Did not include a valid comparison of the data between the two fitness test periods or valid SMART goals for future fitness testing.</p> <p>1 (Novice) No comparison of the data between the two fitness test periods or an example of a SMART goal for future fitness testing.</p>		
<p>Resources: SHAPE America National Standards and Grade-Level Outcomes; VDOE Physical Education Instructional Resources http://www.doe.virginia.gov/instruction/physed/index.shtml;</p>			

VA SOL Standard: 6.3 The student will apply skills of measurement, analysis, goal setting, problem-solving, and decision-making to improve or maintain physical fitness.

ESSENTIAL UNDERSTANDINGS

- Rate of perceived exertion (RPE) is used to measure your intensity level when completing physical activities.
- Heart rate is a useful indicator of the intensity of effort and body's physiological adaptation.
- The RPE scale relies on bodily sensations during exercise, such as muscular fatigue, increased sweating, and increased breathing rate and heart rate.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>												
<p>6.3 h) Describe rate of perceived exertion and identify associated activity levels.</p> <p>Suggested Learning Targets:</p> <p>I can match activities to the rate of perceived exertion levels and tell my partner.</p> <p>I will be able to explain the RPE scale through an exit ticket.</p> <p>I can identify how the RPE scale can be used to adjust workout intensity during physical activity and describe it through a summary paragraph.</p>	<p>Assessment of Learning (Formative)</p> <ul style="list-style-type: none"> • Written: Calculate resting heart rate and heart rate during variety of activities. • Match activities to rate of perceived exertion levels. • Oral: Students describe connection between heart rate and aerobic fitness. • Questioning: http://www.sparkpe.org/wp-content/uploads/2011/05/18LimitedSpaceQuizCalisthenics.pdf <p>Assessment for Learning (Summative)</p> <ul style="list-style-type: none"> • Describe the rate of perceived exertion, identify the associated activity levels based on the physical sensations you experience during physical activity. Example: <ul style="list-style-type: none"> ○ Increased heart rate. ○ Increased respiration or breathing rate. ○ Increased sweating. ○ Muscle fatigue. 	<ul style="list-style-type: none"> • Rate of perceived exertion: Using a scale from 0-10, measure the intensity of your exercise. On a scale of 1-10 monitor exercise intensity when doing cardio workouts. <ul style="list-style-type: none"> ○ How to use RPE: <table border="0"> <thead> <tr> <th>RPE</th> <th>What It Means</th> </tr> </thead> <tbody> <tr> <td>0-1</td> <td>No exertion: The only movement you're getting is pushing buttons on the remote.</td> </tr> <tr> <td>2-3</td> <td>Light exertion: This is how you should feel when you're warming up, cooling down, and stretching.</td> </tr> <tr> <td>4-5</td> <td>Medium exertion: You're breathing a little faster. Your heart is pumping a little faster. You're feeling a little warmer.</td> </tr> <tr> <td>6-7</td> <td>Moderate exertion: You're breathing pretty hard now, you're probably sweating. You can talk, but it's getting tougher.</td> </tr> <tr> <td>8-9</td> <td>Hard exertion: You're breathing really hard and you can only say a few words at a time. You're wondering how long you can go on like this.</td> </tr> </tbody> </table>	RPE	What It Means	0-1	No exertion: The only movement you're getting is pushing buttons on the remote.	2-3	Light exertion: This is how you should feel when you're warming up, cooling down, and stretching.	4-5	Medium exertion: You're breathing a little faster. Your heart is pumping a little faster. You're feeling a little warmer.	6-7	Moderate exertion: You're breathing pretty hard now, you're probably sweating. You can talk, but it's getting tougher.	8-9	Hard exertion: You're breathing really hard and you can only say a few words at a time. You're wondering how long you can go on like this.	<ul style="list-style-type: none"> • Calculate resting heart rate before a lesson. • Evaluating various activities listed on a chart by performing them, evaluating the rate of perceived exertion, and logging the information. • Taking target rates throughout physical activities that move through the different intensity levels • Physical activities that cause the body to change physically and record or talk about the changes. Examples: <ul style="list-style-type: none"> ○ Increased heart rate ○ Increased respiration or breathing rate ○ Increased sweating ○ Muscle fatigue • Discuss how the RPE scale can be used to determine workout intensity.
RPE	What It Means														
0-1	No exertion: The only movement you're getting is pushing buttons on the remote.														
2-3	Light exertion: This is how you should feel when you're warming up, cooling down, and stretching.														
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		40 Hardest exertion: You cannot keep this pace for more than a minute. Speaking is impossible. This is your limit. • Resting heart rate: When your body is pumping the lowest amount of blood you need because you are not exercising.	
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Resources:
SHAPE America National Standards and Grade-Level Outcomes;
VDOE Physical Education Instructional Resources <http://www.doe.virginia.gov/instruction/physed/index.shtml>

VA SOL Standard: 6.4 The student will demonstrate and apply skills of communication, conflict resolution, and cooperation to achieve individual and group goals that apply to working independently and with others in physical activity settings.

ESSENTIAL UNDERSTANDING

- To maintain a positive learning environment, students must be safe, inclusive, cooperative, and positively solve problems.
- Self-confidence grows as challenges are successfully mastered.

VDOE Standard(s) Student Friendly Language What will the student know and be able to do?	SUGGESTED / SAMPLE ASSESSMENTS	Terms (Vocabulary) and Content Information	SUGGESTED / SAMPLE ACTIVITIES
<p>6.4 a) List and demonstrate problem-solving, conflict resolution, and decision-making skills.</p> <p>Suggested Learning Targets:</p> <p>I can list (specific skill: i.e.; problem-solving, conflict resolution, or decision-making) skills through an exit ticket.</p> <p>I can demonstrate decision-making skills when creating a group game and demonstrate it through a self-assessment using a checklist.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • Written: List the elements of problem solving, conflict resolution, and decision-making. *(See content information for the elements). • Observation: <p style="text-align: center;">Sample Rubric</p> <p>4 (Beyond what was taught) Consistently displays ability to follow rules, cooperate with classmates, and solve problems, while being safe and inclusive.</p> <p>3 (What was explicitly taught) Displays ability to follow rules, cooperate with classmates, and solve problems, while being safe and inclusive.</p> <p>2 (Identify basic elements) Barely follows the rules, or cooperates with classmates, or solves problems, while being safe and inclusive</p> <p>1 (With help/prompts/cues) With teacher cues, follow rules, cooperates with classmates, and solves problems, while being safe and inclusive.</p> <ul style="list-style-type: none"> • Reflective Questioning: (Compare/Contrast) — How is the decision-making process different between competitive and team-building physical activities? 	<ul style="list-style-type: none"> • Conflict Resolution: <ul style="list-style-type: none"> ○ Talk about problems without assigning blame ○ Use active listening ○ Identify and clarify issues and needs ○ Brainstorm solutions ○ Choose and apply solution ○ Evaluate solution • Problem solving: <ul style="list-style-type: none"> ○ Clarify problem ○ Analyze causes ○ Identify alternatives ○ Assess alternatives ○ Choose and implement an alternative ○ Evaluate choice • Decision-Making Process: <ul style="list-style-type: none"> ○ Describe the situation that requires a decision. ○ List possible decisions you might make. ○ Share the list of possible decisions with a trusted person. ○ Evaluate the consequences of each decision. ○ Decide which decision is responsible and most appropriate. ○ Act on your decision and evaluate the results. 	<ul style="list-style-type: none"> • Activities/Games such as: <ul style="list-style-type: none"> ○ Lining up squads in a particular order. ○ Examples— <ul style="list-style-type: none"> ○ Line up in order of birth dates (month and day). One end of the line should start at January 1st and the other end be December 31st. (To make the game more challenging, have people line up in silence.) Repeat the challenge by combining two squads. ○ Line up based on topics like shoe size, height, number of brothers and sisters, etc. • Decision making activities: <ul style="list-style-type: none"> ○ Students develop creative training activities for improvement of skills. ○ Activities that put players in unfamiliar situations so they have to develop solutions to the problems posed. ○ Students question each other and provide feedback on their performance. ○ Students create games <p>http://www.humankinetics.com/excerpts/excerpts/an</p>

	<p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> • Self-assessment using a checklist. After reading “Don Hellison’s Levels of Responsibility”, evaluate what level applies to your actions during physical activities. List evidence of your actions that place you at that level and the actions you will take to improve your level or maintain the level you have achieved. <p>Levels of Awareness:</p> <p>Level 4— Self Responsibility and Caring</p> <ul style="list-style-type: none"> ○ Demonstrates level three behaviors ○ Cares about others ○ Involved with others ○ Sensitive to the needs of others <p>Level 3— Self Responsibility</p> <ul style="list-style-type: none"> ○ Works independently ○ Self-motivated ○ Positive attitude <p>Level 2— Under Control Teacher Directed/Involved:</p> <ul style="list-style-type: none"> ○ Frequently off task ○ Needs prompting ○ Needs frequent reminders <p>Level 1— Under Control/Not Involved:</p> <ul style="list-style-type: none"> ○ Not participating ○ Not prepared ○ Non-productive <p>Level 0— Little Self Control:</p> <ul style="list-style-type: none"> ○ Not involved ○ Uses putdowns ○ Irresponsible 	<ul style="list-style-type: none"> • Decision Making Styles: <ul style="list-style-type: none"> ○ Inactive decision-making: Is a failure to make choices, and this failure determines what will happen. Individuals do not know what they want to do, and put off making difficult decisions. Therefore, they end up having to deal with whatever happens, and they do not gain the self-confidence they would have if they had made a decision and been accountable for it. ○ Reactive decision-making: Is when you allow others to make your decisions. Being easily influenced by what others think, do, or suggest, lacking self-confidence, and having a need to be liked by others. ○ Proactive decision-making: Is one in which you examine the decision to be made, identify and evaluate actions you might take, select an action, and take responsibility for the consequences of this action. • Teaching levels of responsibility: http://www.pecentral.org/climate/january09article.html 	<p>introduction to student designed games</p>
<p>Resources: SHAPE America National Standards and Grade Level Outcomes; VDOE Physical Education Instructional Resources http://www.doe.virginia.gov/instruction/physed/index.shtml; http://lessonplanspage.com/peempowereddecisionmaking612.html/; http://classroom.kidshealth.org/classroom/6to8/personal/growing/conflict_resolution.pdf; http://classroom.kidshealth.org/classroom/6to8/personal/growing/getting_along.pdf</p>			

VA SOL Standard: 6.4 The student will demonstrate and apply skills of communication, conflict resolution, and cooperation to achieve individual and group goals that apply to working independently and with others in physical activity settings.

ESSENTIAL UNDERSTANDING

- To maintain a positive learning environment, students must be safe, inclusive, cooperative, and positively solve problems.
- Rules promote the safety of the players and the integrity of the game.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>
<p>6.4 b) Compare and critique rules, safety procedures, and etiquette for two different physical activities.</p> <p>Suggested Learning Targets:</p> <p>I can recognize safety procedure guidelines for (specific physical activity) and demonstrate it by developing a checklist.</p> <p>I can compare and critique rules, safety procedures, and etiquette for two activities and demonstrate it through a graphic organizer.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • Oral: Explain why safety guidelines are necessary. • Observation: Checklist/Rubric— <ul style="list-style-type: none"> 4 (<i>Beyond what was taught</i>) Consistently follows the safety procedures, rules and etiquette in a physical activity. 3 (<i>What was explicitly taught</i>) Frequently follows the safety procedures, rules and etiquette in a physical activity. 2 (<i>Identify basic elements</i>) Sometimes follows the safety procedures, rules and etiquette in a physical activity. 1 (<i>With help/prompts/cues</i>) Rarely follows the safety procedures, rules and etiquette in a physical activity. • Written: Example— <ul style="list-style-type: none"> ○ During an activity/game, have you ever experienced an incident that made you angry? ○ Describe what happened in the incident. When/where did it happen? ○ What were your thoughts and feelings at the time? ○ Describe your actions and how you handled the situation. ○ What was the result? ○ Now that you have had time to think about it, how would you act now in a similar situation? 	<ul style="list-style-type: none"> • Etiquette: Proper acceptable actions, behavior or conduct within an activity. Elements: <ul style="list-style-type: none"> ○ Be kind ○ Be courteous ○ Be respectful • Acceptable conduct within physical activities that portrays respecting the rights and feelings of others: <ul style="list-style-type: none"> ○ By maintaining self-control. ○ By respecting everyone's right to be included. ○ By respecting everyone's right to a peaceful conflict resolution. 	<ul style="list-style-type: none"> • Brainstorm the safety rules and behaviors related to equipment and facility use prior to any physical activity. Examples: <ul style="list-style-type: none"> ○ gym area procedures/rules ○ climbing frame guidelines/rules ○ routines for division and use of activity space ○ proper use of portable equipment (e.g., balls, racquets, floor hockey sticks, baseball bats, gymnastics mats) ○ use of fixed equipment (e.g., tetherball poles, playground structures, basketball backboards, baseball backstops, curtains or folding wall dividers) ○ reporting injuries, medical problems, equipment breakage, and hazards to the teacher • Safety checklist developed before participation in a physical activity. Following the activity, self-assessment of the ability to play safely using the student-designed safety checklist.

	<p>◦ What communication skills and strategies would you have applied to this situation?</p> <p>Assessment of Learning (Summative)</p> <p>• <i>Written</i> Task: Compare and critique the rules, safety procedures and etiquette for two physical activities you have participated in this year.</p> <p style="text-align: center;">Sample Rubric</p> <p><i>4 (Advanced)</i> Thoroughly compares and explains the purpose of rules, procedures, and respectful behaviors specific to participation in two physical education activities.</p> <p><i>3 (Proficient)</i> Compares and explains the purpose of rules, procedures, and respectful behaviors specific to participation in two physical education activities.</p> <p><i>2 (Emerging)</i> Somewhat compares and explains the purpose of rules, procedures, and respectful behaviors specific to participation in two physical education activities.</p> <p><i>1 (Novice)</i> Does not compare and explain the purpose of rules, procedures, and respectful behaviors specific to participation in two physical education activities.</p>		
<p>Resources: SHAPE America National Standards and Grade-Level Outcomes; VDOE Physical Education Instructional Resources http://www.doe.virginia.gov/instruction/physed/index.shtml</p>			

VA SOL Standard: 6.4 The student will demonstrate and apply skills of communication, conflict resolution, and cooperation to achieve individual and group goals that apply to working independently and with others in physical activity settings.

ESSENTIAL UNDERSTANDING

- Learning and practicing self-management skills can help individuals develop a new way of thinking.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>
<p>6.4 c) Reflect on completion of an improvement plan for a personally challenging skill or activity.</p> <p>Suggested Learning Targets:</p> <p>I can reflect on goal achievement in an improvement plan for a challenging skill and demonstrate it through a summary with specific purpose.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> Oral Questioning: Identifying strengths and weaknesses of performance accurately. Written: Self-reflection checklist for behavior or conduct during a personally challenging skill/activity: <ul style="list-style-type: none"> Supported classmates by demonstrating acceptance and cooperation. Followed all of the classroom procedures for safe participation in game/activity. Showed commitment to the game/activity. Cared for classmates by showing kind treatment during game/activity. Encouraged classmates instead of using put-downs during game/activity. Owned up to mistakes/fouls that are made during game/activity. Showed control and standing tall when faced with defeat in game/activity. Showed humility by refraining from boasting when winning a game/activity. <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> Written: <p>Reflect on the completion of an improvement plan for a movement situation that involved improvement in direction, speed, accuracy, and pathways. *(Refer to summative assessment in 6.1.d).</p> <p style="text-align: center;">Sample Rubric</p>	<ul style="list-style-type: none"> Ways to reflect: <ul style="list-style-type: none"> Individually Teacher-led discussion Student-to-student dialogues Journals Possible Reflection Points: <ul style="list-style-type: none"> The reason for selection of the challenging skill or activity. The process of developing the plan. Methods that worked or did not work within the plan. The concluding results of the plan. Future goals beyond the plan. 	<ul style="list-style-type: none"> Students partner up with another student to receive feedback to help enhance performance. Participate in a variety of physical activities focusing on refining basic sport specific skills such as: shooting a basketball, handing off and receiving a football, hitting a pitched ball, serving a volleyball over the net, etc. Self-assessments on conduct during personally challenging skills or activities. Example: http://www.pecentral.org/assessment/paperandpencil/sportsmanship.pdf

	<p><i>4 (Advanced)</i> Thoroughly reflects on a developed personal plan of improvement based on personal weaknesses in a chosen movement situation that demonstrates direction, speed, accuracy and pathways.</p> <p><i>3 (Proficient)</i> Reflects on a developed personal plan of improvement based on personal weaknesses in a chosen movement situation that demonstrates direction, speed, accuracy and pathways.</p> <p><i>2 (Emerging)</i> Minimal evaluation of a developed personal plan of improvement based on personal weaknesses in a chosen movement situation that demonstrates direction, speed, accuracy and pathways.</p> <p><i>1 (Novice)</i> Incomplete attempt to evaluate a developed personal plan of improvement based on personal weaknesses in a chosen movement situation that demonstrates direction, speed, accuracy and pathways.</p>		
<p>Resources: SHAPE America National Standards and Grade-Level Outcomes; VDOE Physical Education Instructional Resources http://www.doe.virginia.gov/instruction/physed/index.shtml</p>			

VA SOL Standard: 6.4 The student will demonstrate and apply skills of communication, conflict resolution, and cooperation to achieve individual and group goals that apply to working independently and with others in physical activity settings.

ESSENTIAL UNDERSTANDING

- Non-competitive physical activities breed success without any losers, with teammates learning that the cooperative process is what is important and winning becomes a by-product.
- Competitive physical activities that allow individuals to work as a decision-making team that take risks, make decisions, succeed, and sometimes fails; will prepare individuals to be confident adults, able to make decisions and work well within a group.
- Moral behavior is acquired through social interaction that occurs through games and physical activity conducted in a collective cooperative group.
- Participation in physical activities/sports can provide an opportunity for developing an understanding and respect for differences among people.

VDOE Standard(s) Student Friendly Language What will the student know and be able to do?	SUGGESTED / SAMPLE ASSESSMENTS	Terms (Vocabulary) and Content Information	SUGGESTED / SAMPLE ACTIVITIES
<p>6.4 d) Describe the benefits of competitive and noncompetitive physical activities.</p> <p>Suggested Learning Targets</p> <p>I can explain the benefits of competitive and non-competitive activities through a compare/contrast graphic organizer.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> ● Oral: Questioning the benefits of a competitive or noncompetitive physical activities performed during a lesson. ● Partner/group share ● Compare/Contrast: Pick one competitive and one noncompetitive physical activity. <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> ● Describe the benefits of competitive and non-competitive physical activities in relationship to social skills, development of sportsmanship and emotional benefits. 	<ul style="list-style-type: none"> ● Benefits of team activities: <ul style="list-style-type: none"> ○ Builds character — social skills like teamwork, cooperation and leadership. ○ Ability to handle winning and losing while being a good sport. ○ Helps develop discipline. ○ Helps set goals and then work to achieve those goals. ● Social and emotional benefits of participation in a variety of physical activities: <ul style="list-style-type: none"> ○ Improves your mental health and mood. ○ Reduces the risk of depression and anxiety. ○ Develops higher self-esteem and body image. ○ Helps develop basic motor skills needed for day-to-day life. ○ Effective in promoting mutual understanding and empathy among young people. 	<ul style="list-style-type: none"> ● Games/Activities that are competitive or non-competitive: Example — http://mrgym.com/Cooperatives/Knots.htm The human knot game where groups untangle themselves to form a full circle again. ● Set up two different activities in a play space (competitive and noncompetitive) highlighting the same skill in each area. After students participate in both, compare benefits of each environment.
<p>Resources: SHAPE America National Standards and Grade-Level Outcomes; VDOE Physical Education Instructional Resources http://www.doe.virginia.gov/instruction/physed/index.shtml</p>			

VA SOL Standard: 6.4 The student will demonstrate and apply skills of communication, conflict resolution and cooperation to achieve individual and group goals that apply to working independently and with others in physical activity settings.

ESSENTIAL UNDERSTANDING

- To maintain a positive learning environment, students must be safe, inclusive, cooperative, and positively solve problems.
- Physical activities that display integrity can often be recognized as honest and genuine in its dealings, championing good sportsmanship, providing safe, fair and inclusive environments for all involved and ‘play by the rules’ as the defining code.
- Team building activities can prepare individuals to become confident adults, able to make decisions, and work well within a group.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>
<p>6.4 e) Demonstrate integrity and apply rules/etiquette for a team-building activity.</p> <p>Suggested Learning Targets:</p> <p>I will demonstrate acceptable conduct and proper application of rules during team building activities and demonstrate it through a checklist.</p> <p>I can show integrity, application of rules/etiquette by creating a group game that aligns to the task criteria and demonstrate it through a rubric.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> ● Oral: Statements you agree, disagree, or are unsure of and give a reason why. Examples – <ul style="list-style-type: none"> ○ Everyone has to put up with a certain amount of disrespect in team/group activities. ○ Saying “please” and “thank-you” shows respect for people. ○ Treat people with respect. ○ I’ll talk to you any way I want. ○ Swearing is an acceptable way of communicating. ○ There is no “I” in teamwork. ○ There are occasions when one has to raise one’s voice when talking in a group. ● Observation checklist for team-building activities: <ul style="list-style-type: none"> ○ Respected and observed the rules. ○ Respected others in the group by listening and accepting their comments. ○ Gave everyone an opportunity to participate in the activity. ○ Maintained self-control at all times. 	<ul style="list-style-type: none"> ● Safe: Not apt to cause harm, injury, or danger. ● Cooperative described as: <ul style="list-style-type: none"> ○ following rules ○ encouraging others ○ complimenting others ○ controlling temper ○ wanting everyone to play well and succeed ○ working together toward a common goal ○ helping classmates ○ playing under control ○ sharing ○ showing concern for classmates’ feelings ● Integrity: The quality of being honest and fair. ● Empathy: The ability to understand another person’s feelings, behaviors and attitudes. 	<ul style="list-style-type: none"> ● Team building activities that conclude in group discussions on behaviors that encourage effort and participation of others. Suggested criteria – Evidence of students: <ul style="list-style-type: none"> ○ Encouraging others with non-verbal gestures. ○ Encouraging others with positive remarks. ○ Inviting others to participate or take a turn. ○ Helping others when experiencing difficulty. ○ Being good listeners. ● Work together in small groups or as a class with the criteria of achieving a certain goal or playing successfully as a team. http://www.thephysicaleducator.com/resources/games/cooperation/ ● Class discussions before an activity on the importance of following rules and its relationship to the improvement of performance. ● Cooperative games with the criteria being the demonstration of integrity as groups work together. ● Students evaluate the role of cooperation and positive interactions with others when participating in physical activity.

- Reflection: Groups reflect on the rules of a team-building activity.
Example—Rules for group workout is listed under suggested/sample activities.

Assessment of Learning (Summative)

- Group creation of a game individually or in small groups using teacher provided criteria. The game must include a description of rules/etiquette and must incorporate the safe use of equipment.

Sample Rubric

4 (Advanced)
Thoroughly understands and demonstrates with detail integrity and application of rules/etiquette through the creation of a team-building activity.

3 (Proficient)
Demonstrates an understanding of integrity and application of rules/etiquette through the creation of a team-building activity.

2 (Emerging)
Recognizes and demonstrates briefly integrity and application of rules/etiquette through the creation of a team-building activity.

1 (Novice)
Incomplete attempt, without complete understanding of integrity and application of rules/etiquette through the creation of a team-building activity.

- Activities that require teamwork to follow teacher instructions/rules:
Example—Teams of six to eight appoint an organizer for the group. On the signal, organizers run to the instructor, who is at the opposite end of the gym, to receive a list of exercises. (Exercises can vary from stationary exercises to locomotor skills such as skipping around the entire gym). The entire team should do the exercises in the order on the card. (Each card should vary the order of listed activities).
 - Rule 1: Team members must wait until all teammates are finished before going to the next exercise.
 - Rule 2: The organizer signals when the team can move to the next activity.
 - Rule 3: Everyone must use at least one “praise phrase” to another teammate or to the entire group.
 - Rule 4: Teammates should call one another by first names only.
- Encouragement/support building activities:
After a team-building activity, teammates pick positive adjectives to describe another teammate’s performance. The speaker should look at the person, say the person’s name and use at least two adjectives when describing individuals.
Examples—kind, strong, quiet, nice, shy, happy, active, cheerful, courteous, polite, friendly, organized, courageous, honest, clever, inventive, helpful, imaginative, reserved, enthusiastic, aggressive, determined, creative, humorous, pleasant, calm, confident, daring, etc.

Resources:
SHAPE America National Standards and Grade-Level Outcomes;
VDOE Physical Education Instructional Resources <http://www.doe.virginia.gov/instruction/physed/index.shtml>

VA SOL Standard: 6.4 The student will demonstrate and apply skills of communication, conflict resolution, and cooperation to achieve individual and group goals that apply to working independently and with others in physical activity settings.

ESSENTIAL UNDERSTANDING

- A responsible participant views behaving well and including others as important as playing safely.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>
<p>6.4 f) Create and implement strategies, to include others and promote safe participation in physical activities.</p> <p>Suggested Learning Targets:</p> <p>I can create rules to promote safety in (specific physical activity) and present them in a group presentation.</p> <p>I can self-reflect on my ability to include others in physical activities, create future strategies for improvement and demonstrate it a summary paragraph.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • Observation: What to look for (measure/assess) during activity: <ul style="list-style-type: none"> ◦ Are students accepting of all partners? ◦ Are students hustling to find partners? ◦ Are they mixing themselves up? • Self-reflection: <ul style="list-style-type: none"> ◦ If a classmate says or does something I agree with, I... ◦ When I want to make a point to the group, I... ◦ If a group member ignores my suggestions, I... ◦ If a group member says or does something I disagree with, I... ◦ If I don't understand the group leaders' ideas, I... • Teacher Feedback: <ul style="list-style-type: none"> ◦ Level 4: Caring— Students help others, share equipment willingly welcome students who are not included in partner activities. ◦ Level 3: Self-Direction— Students are able to follow all of the classroom rules as well as working without direct supervision of the teacher. ◦ Level 2: Respect— Works without bothering other students. Participates willingly in all activities. ◦ Level 1: Irresponsibility— Touching others, blaming others, 	<ul style="list-style-type: none"> • Safe: Not apt to cause harm, injury, or danger. • Cooperative is described as: <ul style="list-style-type: none"> ◦ following rules ◦ encouraging others ◦ complimenting others ◦ controlling temper ◦ wanting everyone to play well and succeed ◦ working together toward a common goal ◦ helping classmates ◦ playing under control ◦ sharing ◦ showing concern for classmates' feelings • Guidelines for including others: <ul style="list-style-type: none"> ◦ Positive strategies such as offering suggestions/assistance, leading/following others. ◦ Providing possible solutions when faced with a group challenge ◦ Helping and encouraging others, avoiding negative talk, and providing support to classmates 	<ul style="list-style-type: none"> • Partner grouping strategies: <p>Example—</p> Have students move in open space, on the signal, each child stands back to back with another child. Then skip, gallop, slide, away from partner. When the signal is sounded, they immediately find a new partner and stand back to back. Commands can differ such as: toe to toe, elbow to elbow, or combinations of different body parts. <p>Rules:</p> <ul style="list-style-type: none"> ◦ Must get with closest person ◦ Find a partner as quickly as possible ◦ Find a different partner each time ◦ Variation: get a mixed gender partner ◦ Move to lost and found to find someone <p>*Lost and Found: Students who can't find a partner quickly go to the middle of the gym with their hand up and meet other "Lost and Found" students.</p> • Class grouping strategies: <p>Example—</p> Children are scattered throughout the area. Teacher calls out locomotor movements such as: skipping, galloping, etc... Students move in any direction they wish. Teacher whistles a number of times in succession and raises the same number of fingers above their head to signal the group size. Students then form small groups with the number in each group equal to the number of whistles. For example, if there are four short whistles, children form circles of four— no more, no less. As soon as a group has the desired number, they sit

	<p>damaging equipment or making excuses.</p> <ul style="list-style-type: none"> • Written: List strategies of how to include others when creating groups for physical activities and explain how these strategies improve time wasted and ease confusion. <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> • Create strategies that promote inclusion and safety, and explain how the strategies help achieve this. <p style="text-align: center;">Sample Rubric</p> <p><i>4 (Advanced)</i> Highly effective creation of strategies to include others and promote safety in physical activities.</p> <p><i>3 (Proficient)</i> Effective creation of strategies to include others and promote safety in physical activities.</p> <p><i>2 (Emerging)</i> Somewhat effective creation of strategies to include others and promote safety in physical activities.</p> <p><i>1 (Novice)</i> Ineffective creation of strategies to include others and promote safety in physical activities.</p>		<p>down to signal that others may not join the group. Children who cannot find a group nearby should move to the center of the area and raise their hand to facilitate finding others without a group.</p> <p>Rules:</p> <ul style="list-style-type: none"> ◦ Must get with closest group. ◦ Find a group as quickly as possible. ◦ Find a different group each time. ◦ Variation: get a mixed gender group ◦ Move to the middle to find a partner.
<p>Resources: SHAPE America National Standards and Grade Level Outcomes; — http://mrgym.com/Teams.htm VDOE Physical Education Instructional Resources — http://www.doe.virginia.gov/instruction/physed/index.shtml</p>			

VA SOL Standard: 6.5 The student will explain the connection between energy balance and nutrition guidelines, meal planning, and exercise intensity.

ESSENTIAL UNDERSTANDING

- Planning healthy meals will help the body grow and develop normally and increase overall health and wellness.
- Energy for movement comes from the food we eat (animal and plant sources), which provides energy-rich nutrients in the form of carbohydrates, fats, and proteins.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>
<p>6.5 a) Create a one-day meal and snack plan based on Recommended Dietary Allowances (RDA), portions, macronutrients, vitamins, minerals, hydration, sugar, and salt.</p> <p>Suggested Learning Targets:</p> <p>I can create a meal/snack plan for one day (including RDA, portions, macronutrients, vitamins, minerals, hydration, sugar, and salt) and present it through a group presentation.</p>	<p>Assessment of Learning (Formative)</p> <ul style="list-style-type: none"> ● Written: Log or journal snacks and evaluate their nutritional value. ● Oral questioning: Identifying foods within each of the basic food groups, appropriate servings and portions for student's age and physical activity levels. <p>Assessment for Learning (Summative)</p> <ul style="list-style-type: none"> ● Written: Students create a one-day meal and snack plan based on RDA, portions, macronutrients, vitamins, minerals, hydration, sugar, and salt. 	<ul style="list-style-type: none"> ● Macronutrients <ul style="list-style-type: none"> ○ Carbohydrates: Found in starchy and sugary foods and are the main source of energy. ○ Protein: Is essential for growth, repair and maintenance of our body tissues. Examples include meats, eggs, fish, dairy products, nuts and seeds. ○ Fats: Provide energy and when stored, provide protection to our vital organs. There are two types of fats. <ul style="list-style-type: none"> — Saturated fats are 'the bad fats' which are normally solid at room temperature, such as butter and meat fat. — Unsaturated fat is more difficult to breakdown and so is mainly stored within the body. Generally better for us and are often liquid at room temperature. Examples include olive oil and sunflower oil, although they can also be found in avocados and nuts. ● Hydration: Fluids help prevent dehydration. When we are physically active, our bodies sweat to help cool us down. Electrolytes such as sodium are also lost in our sweat. For this reason many sports drinks contain a mix of water and electrolytes. The presence of these electrolytes also helps the water to diffuse through the small intestine, back into the body. ● Balanced diet: Varies depending on the activity levels, type of exercise and health status of individuals, but for most people it should consist of: 	<ul style="list-style-type: none"> ● Students create a log for one day of meals/snacks and bring to class. Look at RDA and other guidelines. Students discuss (in group/partner/with class) if their log is within the RDA and other guidelines. ● Games/activities that teach information needed to develop appropriate meals. Example: Students are placed behind different cones. Across from each cone are hula hoops with index cards in the middle. The index cards have words on them which will eventually form a sentence. In relay race style, one student at a time runs to their hoop, picks up an index card from inside, brings it back to their team and places it inside their team's envelope. (Envelopes waiting under cone.) Teams will keep going until no cards are left in hoop. Once all cards are in envelope, students must work together to place cards on the floor and form a sentence which will correlate to MY Food Plate. There will be an exercise on one index card. Groups will place the exercise card at the end of the sentence and perform the exercise while waiting for other groups to be finished. When all teams are finished, teams will read their sentence out loud as a group to the class. ● Display informational posters such as: <ul style="list-style-type: none"> ○ http://www.thephysicaleducator.com/resources/infographics/nutrition/ ○ RDA Guidelines:

- 60% Carbohydrates
- 30% Fat
- 10% Protein
- Vitamins, minerals, and water

- Portion size
- Recommended dietary allowance (RDA):
The recommended minimum amount of a nutrient needed for good health.
- Vitamins: Organic substances need in small amounts to enable the body to complete chemical reactions.
- Minerals: Inorganic compounds needed in small amounts:
 - Milk — for calcium
 - Red meats — for iron
 - Vegetables — for phosphorus

Food Group	No. of Servings
Bread, Cereal, Rice & Pasta	6–9
Vegetables	3–4
Fruit	2–3
Milk, Yogurt & Cheese	2–3
Meat, Poultry, Fish, Beans, Eggs & Nuts	2–3 (about 5–6 ounces)

Additional Resources:

<http://www.choosemyplate.gov/food-groups/>; VDOE Physical Education Instructional Resources <http://www.doe.virginia.gov/instruction/physed/index.shtml>;
<http://www.fda.gov/Food/IngredientsPackagingLabeling/LabelingNutrition/ucm274593.htm>; <http://www.fitness.gov/eat-healthy/dietary-guidelines-for-americans/>;
<http://www.choosemyplate.gov/tools-supertracker>; <http://kidshealth.org/en/teens/myplate.html?WT.ac=ctg#catdieting>;
<http://classroom.kidshealth.org/classroom/6to8/personal/nutrition/breakfast.pdf>; <http://classroom.kidshealth.org/classroom/6to8/personal/nutrition/food-labels.pdf>;
<http://kidshealth.org/en/kids/fat.html>; <http://classroom.kidshealth.org/classroom/6to8/personal/nutrition/school-lunch.pdf>; <https://www.supertracker.usda.gov/>

VA SOL Standard: 6.5 The student will explain the connection between energy balance and nutrition guidelines, meal planning, and exercise intensity.

ESSENTIAL UNDERSTANDING

- Resting Pulse is a valuable metric to not only determine your fitness level, but also your cardiovascular health.
- Heart rate and resting heart rate can be used to help determine personal fitness levels.
- Monitoring your heart rate will allow you to track the changes taking place in your cardiovascular system as you move towards aerobic fitness.
- Intensity level descriptions help a person understand what level of physical activity they are engaged in.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>
<p>6.5 b) Describe the relationship between resting heart rate and exercise intensity.</p> <p>Suggested Learning Targets:</p> <p>I can describe the connection between resting heart rate and exercise intensity through a summary paragraph.</p>	<p>Assessment of Learning (Formative)</p> <ul style="list-style-type: none"> ● Written: Calculate resting heart rate and heart rate during a variety of exercise levels. ● Oral: Students describe connection between heart rate and exercise intensity. <p>Assessment for Learning (Summative)</p> <ul style="list-style-type: none"> ● Activity: Students log resting heart rate periodically throughout the year. Discuss results and connection to exercise intensity after time elapse. 	<ul style="list-style-type: none"> ● Resting heart rate: when your body is pumping the lowest amount of blood you need because you are not exercising. ● What affects resting pulse? <ul style="list-style-type: none"> ○ A variety of factors can affect your resting pulse such as: reading, the physical size of your heart, body size, activity level, fitness level, temperature, body position, emotions and medication use. ○ A higher resting pulse than usual can be a sign of over-training or illness. When recovering from a workout, your metabolism and heart are working harder to repair the body and get it back to a homeostasis. If there is a higher resting heart rate than usual, the body is still in a state of repair and you should adjust your workout regimen accordingly to prevent over-training or injury. 	<ul style="list-style-type: none"> ● Students sit at the beginning of class and calculate resting heart rate do this multiple times throughout the year. ● Give students a chart with various activities listed and empty spaces. Students complete various activities logging exercise intensity and heart rate. Have students complete this activity again later in the year compare resting heart rates as well as heart rates for activities.

Resources:

SHAPE America National Standards and Grade Level Outcomes;
 VDOE Physical Education Instructional Resources <http://www.doe.virginia.gov/instruction/physed/index.shtml>;
 Kids Health <http://kidshealth.org/kid/htbw/>

VA SOL Standard: 6.5 The student will explain the connection between energy balance and nutrition guidelines, meal planning, and exercise intensity.

ESSENTIAL UNDERSTANDING

- Physical activity guidelines and energy expenditure make up half the scale needed for energy balance.
- Moderate and vigorous physical activity is needed for energy balance and physical health.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>																						
<p>6.5 c) Explain the impact of physical activity guidelines on energy expenditure.</p> <p>Suggested Learning Targets:</p> <p>I can explain the effect of physical activity guidelines to how much energy a person uses, and demonstrate it by (i.e., exit slip, explaining to a partner/group, summary paragraph, etc.)</p>	<p>Assessment of Learning (Formative)</p> <ul style="list-style-type: none"> Oral: Describe the effects of energy balance on the body. <p>Assessment for Learning (Summative)</p> <ul style="list-style-type: none"> Oral: Explain energy expenditure and impact on energy balance to a peer/teacher. Activity: Calculate energy expenditure based on physical activity guidelines and collect from food/nutrition cards the correct amount of calories to balance energy. 	<ul style="list-style-type: none"> Moderate to vigorous physical activity (MVPA) <p>New vocabulary and content.</p> <ul style="list-style-type: none"> Energy expenditure: the amount of energy a person uses in the form of calories. Common aerobic activities and how many calories burned doing an hour at a moderate intensity. <table border="1" data-bbox="1016 850 1495 1230"> <thead> <tr> <th>Type of Aerobic Exercise</th> <th>Calories/hour</th> </tr> </thead> <tbody> <tr> <td>Walking, 3 mph</td> <td>280</td> </tr> <tr> <td>Dancing</td> <td>420</td> </tr> <tr> <td>Bicycling</td> <td>450</td> </tr> <tr> <td>Jogging, 5 mph</td> <td>500</td> </tr> <tr> <td>Swimming</td> <td>500</td> </tr> <tr> <td>Step aerobics</td> <td>400</td> </tr> <tr> <td>Running</td> <td>700</td> </tr> <tr> <td>Canoeing</td> <td>280</td> </tr> <tr> <td>Gardening</td> <td>300</td> </tr> <tr> <td>Golf</td> <td>280</td> </tr> </tbody> </table> <ul style="list-style-type: none"> Physical activity guidelines for ages 6 to 17 include doing 60 minutes (1 hour) or more of physical activity daily. <ul style="list-style-type: none"> Aerobic: Most of the 60 or more minutes a day should be either moderate or vigorous aerobic physical activity, and should include 	Type of Aerobic Exercise	Calories/hour	Walking, 3 mph	280	Dancing	420	Bicycling	450	Jogging, 5 mph	500	Swimming	500	Step aerobics	400	Running	700	Canoeing	280	Gardening	300	Golf	280	<ul style="list-style-type: none"> Use physical activity guidelines to determine possible energy expenditure. Calculate how many calories are needed to maintain an energy balance. Introduce physical activity guidelines for their age group and calculate energy expenditure. Activities where food/nutrition cards are used and students need to earn/get enough food/nutrition cards to balance their energy expenditure. Discussions on calories in vs. calories out relationship and gaining weight. Physical activities that move from moderate to vigorous.
Type of Aerobic Exercise	Calories/hour																								
Walking, 3 mph	280																								
Dancing	420																								
Bicycling	450																								
Jogging, 5 mph	500																								
Swimming	500																								
Step aerobics	400																								
Running	700																								
Canoeing	280																								
Gardening	300																								
Golf	280																								

		<p>vigorous-intensity physical activity at least 3 days of the week.</p> <ul style="list-style-type: none">○ Muscle strengthening: As part of the 60 or more minutes of daily physical activity, it should include muscle-strengthening physical activity for at least 3 days of the week.○ Bone strengthening: As part of the 60 or more minutes of daily physical activity, it should include bone-strengthening physical activity at least 3 days of the week.	
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Resources:

SHAPE America National Standards and Grade-Level Outcomes;

VDOE Physical Education Instructional Resources <http://www.doe.virginia.gov/instruction/phased/index.shtml>;

<http://www.choosemyplate.gov/physical-activity-calories-burn>; <http://www.cdc.gov/physicalactivity/basics/index.htm>

VA SOL Standard: 7.1 The student will demonstrate competence and apply movement concepts in modified versions of various game/sport, rhythmic and recreational activities.

ESSENTIAL UNDERSTANDINGS

- Understanding movement improves motor skills and increases skillful performance enabling participation in a variety of physical activities.
- There are similarities and differences between movement skills that use similar patterns and concepts that can be transferred from one movement skill to another.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>
<p>7.1 a) Demonstrate and apply mature movement forms and skill combinations competently in a variety of cooperative and tactical activities that include dynamic and unpredictable situations.</p> <p>Suggested Learning Targets:</p> <p>I can perform the skills needed to be successful in (specific activity) isolation and in-game situations and demonstrate my ability to be successful through a checklist.</p> <p>I can transfer skills from (specific activity) to (specific activity) and show proper application to my teacher.</p> <p>I can adapt movements to changing game situations in (specific activity) when challenged and not challenged by opponents and demonstrate it through a video self-assessment.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • Pre-test skill performance of mature movement forms and skill combinations. • Written: <ul style="list-style-type: none"> ◦ Pre-test cognitive knowledge for skills needed to be successful in activity(s) selected. ◦ Identify skills and movements in selected activities/games, compare to other activities/games and explain how to adapt those skills to fit the needs of that activity/game. ◦ Self and peer assessments. ◦ Teachers Observation with feedback. • Teacher Verbal feedback • Skill Checklist (for discrete skills) • Skill Rubric (for game/activity application) • Videotape: Self/Peer Assessments <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> • Written: Post cognitive tests and skill comparisons. Example: Similarities and differences between the striking patterns found in 	<ul style="list-style-type: none"> • Mature individual skills such as: Hand Dribbling (specific activity i.e. basketball) Examples— <ul style="list-style-type: none"> ◦ Control Dribble (when the defender is guarding you closely). ◦ Speed Dribble (moving the ball quickly down the floor). ◦ Crossover Dribble (dribbling from one hand to the other). ◦ In and Out Dribble (fake move to get around a defender). ◦ Hesitation Dribble ("Rocker Move"). ◦ Behind the Back Dribble, Through the Legs Dribble. ◦ Spin Move (to get around a defender in the open court). ◦ Back-up Dribble and Crossover (retreating from a defender or a trap). • Passing and receiving in combination with locomotor patterns of running and change of direction & speed with competency in modified invasion games such as: soccer or speedball, etc. Examples— <ul style="list-style-type: none"> ◦ Dribbling up to a stationary cone or defender, fake and go. ◦ Dribbling up to a defender who 	<ul style="list-style-type: none"> • Mature movement forms and skills such as: hand dribbling, foot dribbling, kicking and striking. • Modified small group activities/games involving: <ul style="list-style-type: none"> ◦ Attention to form, power, accuracy and follow-through in performing movement skills. ◦ Appropriate use of levels in dynamic movement situations such as jumping high for a rebound and bending knees and lowering center of gravity when guarding an opponent. ◦ Relationships, levels, speed, direction and pathways effectively such as crouching low for volleyball digs, stretching high to catch a disc, positioning for a soccer pass or passing ahead of a receiver. ◦ Dribbling a ball with dominant and non-dominant hand/foot while starting, stopping, changing directions and passing. ◦ Smooth combinations of fundamental locomotor skills such as running and dodging. ◦ Manipulative skills in dynamic situations such as overhand throw, catch, shooting, hand dribble, foot dribble, kick and striking activities such as hitting in floor hockey. ◦ Combinations of locomotor and manipulative skills such as pivoting and throwing, twisting and striking and running and catching. ◦ Volleying an object using hands, arms, paddle or racquet back and forth. ◦ Similarities in body position when receiving a serve (e.g., volleyball, badminton, tennis, etc.). ◦ Detecting and correcting errors in alignment in target sports (e.g., archery, golf) based on

	<p>two different sports skills such as: overhead throw in soccer, tennis serve, overhand volleyball serve and overhead clear in badminton.</p> <ul style="list-style-type: none"> • Skill rubric <p style="text-align: center;">Sample Rubric</p> <p>4 (<i>Beyond what was taught</i>) Displays consistent and correct performance of all elements during unpredictable situations); includes smooth transitions between skills/movements; includes advanced strategies and tactics.</p> <p>3 (<i>What was explicitly taught</i>) Performs all critical elements (mature movement skills and patterns) appropriately and consistently during unpredictable situations and adapts movements to changing situations during game play.</p> <p>2 (<i>Identify basic elements</i>) Performs critical elements (mature movements skills and patterns) in isolation (outside of game play or when unchallenged).</p> <p>1 (<i>With help/prompts/cues</i>) With teacher cues, student can demonstrate some/most of the critical elements in isolation (outside of game play).</p>	<p>takes one, two or three steps in the direction of the fake.</p> <ul style="list-style-type: none"> ○ Complete move and pass to a teammate or shoot at a goal. ○ Dribbling up to a defender who is “full live”. <ul style="list-style-type: none"> • Kicking (specific activity i.e. flag football) <ul style="list-style-type: none"> ○ Distance ○ Accuracy ○ Grounded and held object • Striking <ul style="list-style-type: none"> ○ With body parts (specific activity i.e. handball, volleyball, soccer). ○ With short/long implements (specific activity i.e. badminton, cricket, floor hockey, pickle ball, tennis, softball, table tennis and golf). ○ Forehand, backhand, overhand, underhand and overhead. 	<p>knowledge of results.</p> <ul style="list-style-type: none"> ○ Identifying similarities in body position when receiving a serve (e.g. volleyball, badminton, tennis, etc.). <ul style="list-style-type: none"> • Modified small-group games and activities to include game/sport (strategic, net/wall, target and fielding/striking), rhythmic and dance and recreational activities (such as bicycling), aquatics, individual performance activities (such as track and field). <p>Examples –</p> <ul style="list-style-type: none"> ○ http://www.sparkpe.org/wp-content/uploads/2011/05/08GolfBocceGolf.pdf ○ http://www.sparkpe.org/wp-content/uploads/2011/05/09HandballRoyalCourt.pdf ○ http://www.sparkpe.org/wp-content/uploads/2011/05/10HockeyFirstTo4.pdf ○ http://www.sparkpe.org/wp-content/uploads/2011/05/12RacqPaddlesExtremeRally.pdf ○ http://www.sparkpe.org/wp-content/uploads/2011/05/14Softball2-PitchStickball.pdf
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Resources:

SHAPE America National Standards and Grade-Level Outcomes
American Alliance for Health, Physical Education, Recreation and Dance Grade-Level Outcomes for K-12 Physical Education
<http://www.doe.virginia.gov/instruction/physed/index.shtml>; <http://www.pecentral.org/lessonideas/cues/cuesmenu.asp>
<http://www.thephysicaleducator.com/resources/games/invasion/>; <http://www.thephysicaleducator.com/resources/games/net-wall/>
<http://www.thephysicaleducator.com/resources/games/striking-fielding/>; <http://www.thephysicaleducator.com/resources/games/target/>

VA SOL Standard: 7.1 The student will demonstrate competence and apply movement concepts in modified versions of various game/sport, rhythmic and recreational activities.

ESSENTIAL UNDERSTANDINGS

- Concepts of space, effort and relationships affect movements.
- Movement concepts are comparable to adverbs (i.e., they describe how an action is performed) and are subdivided into three categories: space awareness, effort and relationships.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>
<p>7.1 b) Demonstrate offensive strategies and tactics, to include creating open space, skilled movement, speed, accuracy and selection of appropriate skill/tactic to gain offensive advantage.</p> <p>Suggested Learning Targets:</p> <p>I can create open space and control my speed, direction and movements to gain offensive advantage in (specific activity) and demonstrate it through a peer reflection of my performance.</p> <p>I can apply appropriate offensive skills at the right time and in the right situation and write a reflective paragraph on how I demonstrated this in (specific activity).</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • Written: Cognitive knowledge of offensive strategies and tactics for selected activity(s). • Teachers Observation: Verbal or written feedback. • Videotaping • Self/Peer Assessment • Problem Solving Example: When there is no one right solution to gain an offensive advantage, how can quick detection and adaptability be effective decision-making skills? Give examples. <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> • Game situation performance rubric. <p style="text-align: center;">Sample Rubric</p> <p>4 (Beyond what was taught) Demonstrates consistently the correct basic offensive and defensive strategies in non-complex, modified and small-sided activities.</p>	<ul style="list-style-type: none"> • Offensive principles serve to create a high percentage of scoring opportunities. Offensive play begins the moment a team gains possession of the object used for scoring. • Offensive strategies: <ul style="list-style-type: none"> ○ Pressure: A quick player movement that forces the defender to react (e.g., adjust one's position) more quickly than they would like; creates time and space for the attacker(s). Accomplished by: speed/quickness of the attack. ○ Concentration of Attack: Any action or movement in a small, specific area which creates an offensive numerical advantage. ○ Speed: Is the quickness an attack is made; this limits the reaction time of the defender and can force defensive error. ○ Open space: Players move to open space to make it difficult for a defender to block. • Control: Be able to maintain possession. 	<ul style="list-style-type: none"> • Practice opportunities for offensive skills such as pivots, fakes, jab-steps designed to create open space. • Modified small-group activities that apply strategies of attacking space (cutting, dodging and feinting). • Modified small-group activities that apply strategies of agility, coordination, balance, speed and power. • Modified small-group activities that involve pass and receive with change of direction and speed with competency in tactical activities such as Ultimate, Tchoukball, soccer or international games. Examples: <ul style="list-style-type: none"> ○ http://www.pecentral.org/lessonideas/ViewLesson.asp?ID=1462#.V6Sohrf6vcs ○ http://www.pecentral.org/lessonideas/ViewLesson.asp?ID=818#.V6SpX7f6vcs ○ http://www.pecentral.org/lessonideas/ViewLesson.asp?ID=820#.V6Spk7f6vcs ○ http://www.pecentral.org/lessonideas/ViewLesson.asp?ID=821#.V6Sp2bf6vcs ○ http://www.pecentral.org/lessonideas/ViewLesson.asp?ID=8893#.V6Sql7f6vcs

3 *(What was explicitly taught)*
 Demonstrates most of the basic offensive and defensive strategies in non-complex, modified and small-sided activities.

2 *(Identify basic elements)*
 Somewhat demonstrates most of the basic offensive and defensive strategies in non-complex, modified and small-sided activities.

1 *(With help/prompts/cues)*
 Inadequately demonstrates the basic offensive and defensive strategies in non-complex, modified and small-sided activities.

Resources:

SHAPE America National Standards and Grade-Level Outcomes; <http://files.eric.ed.gov/fulltext/EJ795561.pdf>;
http://hooptactics.com/Free_Area_Offensive_Basketball_Strategies/; http://www.soccer-training-info.com/soccer_strategy_tactics.asp;
<http://learntocoachbasketball.com/sign-up/coaching-course/skill-development/level-i-tactical-skills>; <http://www.tennistips.org/tennis-technique.html>;
<http://www.strength-and-power-for-volleyball.com/volleyball-strategies.html>; http://www.usultimate.org/assets/1/Page/Teaching%20Ultimate_beta3.pdf
<http://youth-sports-drills-cdn.teamsnap.com/tips1.pdf>; <http://www.ducksters.com/sports/footballstrategy.php>

VA SOL: 7.1 The student will demonstrate competence and apply movement concepts in modified versions of various game/sport, rhythmic and recreational activities.

ESSENTIAL UNDERSTANDINGS

- Possessing proficient motor skills and having confidence and competence in movement behavior can lead to a lifetime of involvement in organized, free play and recreational experiences.
- Safety precautions, such as a proper warm-up and cool-down procedures, affect performance and prevent injury in recreational pursuits.
Correct techniques in outdoor activity help ensure the safety of self and others.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>
<p>7.1 c) Demonstrate basic abilities and safety precautions in recreational pursuits (e.g., in-line skating orienteering, hiking, cycling, ropes courses, backpacking, canoeing, rock climbing).</p> <p>Suggested Learning Targets:</p> <p>I can state the importance of taking personal responsibility for reducing hazards, avoiding accidents and preventing injuries during (specific recreational activity) and describe it to my partner.</p> <p>I can demonstrate the safety procedures associated with (specific activity) by showing my teacher.</p> <p>I can perform basic skills associated with (specific activity i.e. bike riding) and demonstrate it using a checklist.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • Self/peer assess ability to participate safely in recreational pursuits. • Skill checklist • Journals: Examples <ul style="list-style-type: none"> ○ Writing to learn—Gathering and organizing information about recreational pursuits. ○ Writing to motivate—How adventure, curiosity and creativity are effects of recreational pursuits. ○ Writing to assess, to evaluate progress—Comprehension of an individual recreational pursuit such as the basic skills, safety precautions and benefits of the activity. <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> • Skill rubrics: Demonstration of skills and safety. • Cognitive assessment for knowledge, skills, strategies and safety of a selected recreational activity. 	<ul style="list-style-type: none"> • Critical Elements as determined by the activity selected. • Introduction of basic skills, safety precautions and the benefits of recreational pursuits. Example: Tips to prepare for an outdoor adventure such as: developing trip itineraries; carrying appropriate equipment, including guides, maps and a compass; sufficient food and water; dressing in proper clothing; carrying emergency contact numbers; and preparing for access to shelter, such as tents, cabins or lean-tos. 	<ul style="list-style-type: none"> • Basic abilities needed for recreational activities such as: Cycling, fishing, canoeing, disc golf, hiking, kayaking, rock climbing, sailing, skiing, surfing, swimming, paddle boarding or scuba diving. • Have experts of selected recreational pursuit provide a presentation of the activity for students. • Quick videos/power points of recreational pursuits. Example: http://www.pecentral.org/lessonideas/ViewLesson.asp?ID=9934#.V6VB2_36upe • Create pretend situations using any available equipment that can mimic the equipment used for the recreational pursuit being introduced. Example: Pretend a folded up mat is a canoe or kayak. Use any long handled implement to pretend it is a paddle to teach the basic skills and safety precautions of this pursuit. • Bring in and present equipment used in a recreational activity. • Safety precautions for different recreational activities. Examples: <ul style="list-style-type: none"> ○ Hiking: Bring a charged mobile phone, warm clothing and supplies such as water and light

			<p>food or energy bars, a flashlight or headlamp, rain gear, sunscreen and matches. Travel in groups or with another person whenever possible. Lookout for challenges you may encounter in the outdoors, such as wildfires, sudden storms, muddy trail conditions and fast moving waters. Wear light-colored clothing and long pants and long-sleeved shirts to protect against ticks and other biting insects.</p> <ul style="list-style-type: none"> ◦ Boating and paddling: wear a personal floatation device, check the weather forecast before heading out on the water and seek immediate shelter on shore if you hear thunder. If paddling in waters where there are motorboats, keep close to shorelines and out of main channels.
<p>Resources: SHAPE America National Standards and Grade-Level Outcomes http://www.fs.fed.us/recreation/safety/safety.shtml; http://www.cdc.gov/homeandrecrreationalssafety/water-safety/waterinjuries-factsheet.html; http://museumofdisability.org/wp-content/uploads/2016/01/Adaptive_Sports_and_Recreational_Activities.pdf</p>			

VA SOL Standard: 7.1 The student will demonstrate competence and apply movement concepts in modified versions of various game/sport, rhythmic and recreational activities.

ESSENTIAL UNDERSTANDINGS

- Dance and/or rhythms can provide opportunities for personal enjoyment, self-expression, challenge and social interaction.
- Dance in schools offers opportunities to teach appropriate social behaviors while building school support.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>
<p>7.1 d) Create and demonstrate movements appropriate to a variety of rhythm patterns in selected folk, social, world, country, square, contemporary and line dances.</p> <p>Suggested Learning Targets:</p> <p>I can perform the proper sequence of steps in movement combinations for (specific dance) and present it to my teacher.</p> <p>I can create and perform a dance/rhythmic sequence that includes various tempos including changes in speed, direction and flow and demonstrate this through a group presentation.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • Teacher observation: Performance of a simple dance step in keeping with a specific tempo. • Peer assessment: Evaluate a teacher taught dance for accuracy, revise and refine. • Peer assessment: Evaluate a peer /peer group created dance / rhythmic sequence. <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> • Rubric for creating a dance/rhythmic sequence. <p style="text-align: center;">Sample Rubric</p> <p>4 (<i>Beyond what was taught</i>) Creates and displays rhythmic movement sequence with variety of movements.</p> <p>3 (<i>What was explicitly taught</i>) Creates and displays a rhythmic movement sequence.</p> <p>2 (<i>Identify basic elements</i>) Performs critical elements of rhythmic movement sequence.</p>	<ul style="list-style-type: none"> • Movement: Counts of 4/8. • Combinations: Putting two or dance moves together. • Pattern: Repeating a sequence. • Flow: The direction of movement. • Transitions: When a movement, phrase or section of a dance progresses into the next. • Leading/following: Leading or following others actions. • Mirroring/matching: Copying another individual's actions. • Routine: A sequence of movements in a fixed program. • Sequence: A particular order in which related movements follow each other. • Beat: The basic unit of a rhythmic measure. • Rhythm: Regular, repeated pattern of sounds or movements. • Tempo: The speed of music or a dance. • Line dance: (such as Electric Slide, Cha-Cha Slide, Cupid Shuffle, Cleveland 	<ul style="list-style-type: none"> • Teacher presented dances that have movement combinations with/without partner. • Teacher presented dances that have movements with a partner such as leading/following and mirroring/matching. • Dance/rhythmic sequences done in small groups, partners or by individuals. • Video clips of dances and rhythmic movements. http://www.schooltube.com/video/414938ac96bc4474ba56/Hey%20Baby%20Line%20Dance%20on%20PE%20Central • Groups create dance/rhythmic movement sequences and perform them for others. • Rhythmic movement activities: <ul style="list-style-type: none"> ◦ http://www.pecentral.org/lessonideas/ViewLesson.asp?ID=1887#.V6SXD7f6vcs ◦ http://www.pecentral.org/lessonideas/ViewLesson.asp?ID=1634#.V6SXLLf6vcs ◦ http://www.pecentral.org/lessonideas/ViewLesson.asp?ID=9638#.V6SXWf6vcs

	<p>1 (With help/prompts/cues) With teacher cues, student can demonstrate some/most of the critical elements in isolation.</p>	<p>Shuffle, Down South Shuffle, etc.)</p> <ul style="list-style-type: none"> • Square dances: (promenade, elbow turn, do-si-do, allemande right) • Folk dance • Multicultural dance 	<ul style="list-style-type: none"> ◦ http://www.pecentral.org/lessonideas/ViewLesson.asp?ID=1307#.V6SXilF6v6s ◦ http://www.pecentral.org/lessonideas/ViewLesson.asp?ID=9841#.V6SXvLf6ves ◦ http://www.pecentral.org/lessonideas/ViewLesson.asp?ID=1297#.V6SX7rf6ves <p>Note: Music for use with students should be pre-approved by the teacher for appropriate lyrics.</p>
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Resources:
 SHAPE America National Standards and Grade-Level Outcomes
<http://www.pecentral.org/>; <http://www.humankinetics.com/excerpts/excerpts/large-group-activities-for-teaching-rhythmic-activities-and-dance>;
<http://www.pecentral.org/lessonideas/ViewLesson.asp?ID=5480#.V6VEyf36upo>

VA SOL Standard: 7.1 The student will demonstrate competence and apply movement concepts in modified versions of various game/sport, rhythmic and recreational activities.

ESSENTIAL UNDERSTANDINGS

- Stability increases in a movement with lower center of the body, larger the base of support and the closer the center of the body is to the base of support.
- Balance is both a static and dynamic process that makes it possible for the body to maintain its center of gravity over its base of support.
- Incorporating all planes of movement into your activity time will increase your range of motion, prevent injuries and provide greater stability for your body.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>
<p>7.1 e) Describe and demonstrate how movement is stabilized, to include balance (center of gravity and center of support) and planes of movement.</p> <p>Suggested Learning Targets:</p> <p>I can describe how balance occurs and how it is a key to all functional movements by completing an exit ticket.</p> <p>I can explain how stability occurs in the planes of movement through a partner discussion.</p> <p>I can perform stability in a variety of activities that involve the planes of movement and demonstrate it through a peer assessment.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • Teacher observation. • Oral: Partner discussions Example: <ul style="list-style-type: none"> ◦ Explain how changes in the center of gravity affect balance and performance in a variety of physical activities. ◦ Assess movement performance of self or others in a specific activity by describing balance in the planes of movement. • Peer assessment <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> • Cognitive assessment for balance, stability, planes of movement: Pick a movement to research and write how the center of gravity and center of support affect the movement. ◦ Example: Sprinting requires losing and regaining your balance on one leg in less than 1/10th of a second. • Peer Observation: Demonstration of stability and balance during static and 	<ul style="list-style-type: none"> • Balance: The ability to maintain the body's center of gravity within the limits of stability as determined by the base of support. <ul style="list-style-type: none"> ◦ The lower the center of gravity to the base of support, the greater the stability. Example— When walking a balance beam, one squats when they feel they are losing balance. ◦ The nearer the center of gravity to the center of the base of support, the more stable the body. Example— Kneeling position for good stability and best positioning for canoe paddling. ◦ Stability can be increased by widening the base of support. ◦ An individual's limits of stability are the distance outside of his or her base of support he or she can go without losing control of the center of gravity. • Planes of movement: <ul style="list-style-type: none"> ◦ Sagittal Plane— Passes through the body front to back, dividing it into left and right. Movements in this plane are the up and down movements of flexion and extension. ◦ Frontal Plane— Divides the body into front and back. Movements in this plane are sideways movements, called abduction and adduction. ◦ Transverse Plane— Divides the body into top and bottom. Movements in this plane are rotational in nature, such as internal and 	<ul style="list-style-type: none"> • Exercise Progressions for Balance/Planes: <ul style="list-style-type: none"> ◦ From slow to fast. ◦ Simple to complex. ◦ Known to unknown. ◦ Low force to high force. ◦ Static to dynamic. ◦ Two arms to one arm. ◦ Two legs to one leg. ◦ Stable to unstable. ◦ Eyes open to eyes closed. ◦ Quality before quantity. • Exercise Programs for Balance/Planes: <ul style="list-style-type: none"> ◦ Safe and challenging. ◦ Stress multiple planes of motion. ◦ Incorporate a multisensory approach. ◦ Derived from fundamental movement skills that apply directly to an activity. • Forms of External Resistance <ul style="list-style-type: none"> ◦ Tubing ◦ Dumbbells ◦ Medicine balls ◦ Power balls • Proprioceptive Progression <ul style="list-style-type: none"> ◦ Floor ◦ Dumbbells ◦ Core board— Two feet to One foot

	dynamic movements. Observer describes where stability and balance were needed in the movements and how well they were performed.	external rotation, pronation and supination.	e Half (1/2) foam roll — one under each foot
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Resources:
 SHAPE America National Standards and Grade-Level Outcomes
[http://www.yogajournal.com/article/practice-section/plumb-perfect/;](http://www.yogajournal.com/article/practice-section/plumb-perfect/)
http://www.heart.org/HEARTORG/HealthyLiving/PhysicalActivity/FitnessBasics/Balance-Exercise-UCM_464001_Article.jsp#.V6eFYP36upe;

VA SOL Standard: 7.1 The student will demonstrate competence and apply movement concepts in modified versions of various game/sport, rhythmic and recreational activities.

ESSENTIAL UNDERSTANDINGS

- Learning a new skill or improvement of skills involves a process of attempt, analysis, correct errors, practice, reassess, practice at a higher level and reassess.
- Self/peer assessments allow students to detect, analyze and correct errors in personal movement patterns.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>
<p>7.1 f) Demonstrate the movement learning progression (practice, self or peer assess, correct, practice at a higher level and reassess) for a specific skill or activity.</p> <p>Suggested Learning Targets:</p> <p>I can examine physical activities critically and suggest improvements for practice at a higher level and demonstrate this through a self-assessment.</p> <p>I can refine skills by identifying errors in skill application, self-correcting those errors and providing feedback to others through a (selected assessment product: i.e., self-assessment, videotape, checklist, etc.).</p> <p>I can create and implement a practice plan to improve a skill and demonstrate it through a written plan of action.</p> <p>I can design evaluation/assessment sheets as a small group for a peer analysis.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> Self/peer assessment: Students evaluate skill performance and provide feedback for improvement and/or practice. Examples of assessment pieces: <ul style="list-style-type: none"> Performer appears to be in complete control of their actions. Actions are refined and precise. Actions seem effortless, energy is not wasted. Dynamics of the action, degree of power/touch or speed are adapted to each situation. Even complicated actions appear simple. Skills can be linked into complex combinations with ease. The correct action is always selected for the situation. The action is applied at the correct time. Actions are adapted with flair and creativity to overcome opponents. The performer can carry out skills automatically without having to think them through. There is a high success rate of the outcome of their actions. Checklist to record/self-assess individual skill performance. Video: Analyze the critical skill elements of manipulative skill sequences and make 	<ul style="list-style-type: none"> Self/peer assessments: <ul style="list-style-type: none"> Fully train students on how to assess other students (how to use a skill assessment rubric or checklist). Require assessors to justify their judgments. Create an environment that feels safe for interpersonal risk-taking so that students will feel more confident in evaluating. Emphasize the main focus in the assessment should be useful feedback. Model appropriate, constructive criticism and descriptive feedback. Small feedback groups so that feedback can be explained and discussed with the receiver. Encourage students to be as supportive as possible in critiquing the work of others. Stress benefits of being a peer assessor, such as it helps them evaluate their own work and become more self-directed learners. Train students how to interpret feedback so that they can make appropriate connections between the feedback received and the quality of their work. Provide exemplars for skill practice planning Peer assessments can be used as assessments of learning if the assessment is focused on the ability of the peer 	<ul style="list-style-type: none"> Teacher think aloud or demonstration of a self/peer assessment. Examples: <ul style="list-style-type: none"> Position yourself to see the critical components of the skill. Use multiple vantage points. Observe performance several times to identify consistent performance problems. Use the whole-part-whole observation method. Be sure to focus both on the performer and any implements. Evaluate the overall effectiveness of the movement. Use a performance checklist to guide your efforts. Peer assessments: <ul style="list-style-type: none"> Examples <ul style="list-style-type: none"> http://www.pecentral.org/assessment/pdf/volleyballsetpasspeerassessment.pdf Groups design self/peer assessments for a specific skill or activity Opportunities for implementation of a student-created practice plan. Example: <ul style="list-style-type: none"> Practice Self-assessment Understanding

	<p>suggestions for skill improvement.</p> <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> • Student skill practice plan: Evaluation of elements of the final plan; elements may include skill assessment, activities and schedule for practice, documentation of skill practice, reassessment, modification of practice activities, reassessment of skill. 	<p>assessor to make an assessment and provide appropriate feedback/justification; not focused on how the student being observed performed.</p> <ul style="list-style-type: none"> • Whole-part-whole method: <ul style="list-style-type: none"> ◦ Whole skill is first demonstrated and practiced ◦ Assessed ◦ Skills/activity broken down into the constituent parts to practice the individual elements for improvement ◦ Demonstrate and practice the whole skill back together ◦ Reassess 	<p>of skill check list, rubric or verbal teacher cues.</p> <ul style="list-style-type: none"> ◦ Correction ◦ Practice at higher level ◦ Re-assess
<p>Additional Resources: SHAPE America National Standards and Grade-Level Outcomes http://www.teachpe.com/sports_psychology/teaching.php</p>			

VA SOL Standard: 7.2 The student will understand and apply movement principles and concepts and knowledge of major body structures.

ESSENTIAL UNDERSTANDINGS

- The body works as a whole and when certain body regions are inefficient, the body will recruit another muscle or joint in a way that was not intended in order to perform that movement.
- Core muscles are incorporated into almost every movement of the human body and act as stabilizers.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>
<p>7.2 a) Identify the “core muscles” to include pelvis, lower back, hips, gluteal muscles and abdomen and explain their role in stabilizing movement.</p> <p>Suggested Learning Targets:</p> <p>I can describe the structure and function of the core muscles and how this muscle group is used to stabilize movement through a summary paragraph.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • Written: Name and label core muscles. <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> • Written: Labeling of the core muscles and explaining the role of core muscles in stabilizing movement. 	<ul style="list-style-type: none"> • Two types of muscles: <ul style="list-style-type: none"> ○ Movers: Large muscles that are responsible for moving the body through all planes of motion. ○ Stabilizers: Muscles responsible for holding everything in place while the body is moving to prevent injury. • Pelvis Hip flexors: <ul style="list-style-type: none"> ○ Psoas major ○ Iliacus ○ Tensor fasciae latae ○ Adductor brevis ○ Adductor longus • Gluteal Hip extensors, abductors, external rotators <ul style="list-style-type: none"> ○ Gluteus medius ○ Gluteus maximus ○ Gluteus minimus • Lower back Spinal flexors, extensors, rotators <ul style="list-style-type: none"> ○ Lumbar multifidus ○ Transversus abdominis ○ Quadratus lumborum • Abdominals <ul style="list-style-type: none"> ○ Rectus abdominis ○ Transverse abdominis ○ Pectoralis major ○ External oblique ○ Internal oblique • Components of Core Stability 	<ul style="list-style-type: none"> • Rotate through exercise stations and write the core muscle or muscle groups that are being used. • Use visuals to depict muscles. • Incorporate knowledge concepts of muscles into movement activities.

		<ul style="list-style-type: none">○ Strength○ Endurance○ Flexibility○ Motor Control○ Function <ul style="list-style-type: none">● Structure and function of the muscular system as they relate to physical performance and stabilization of movement.○ Muscles pull on bones to cause movement○ Muscles work in pairs○ Muscles work by contracting and relaxing	
<p>Additional Resources: SHAPE America National Standards and Grade Level Outcomes http://breakingmuscle.com/mobility-recovery/do-you-know-what-your-core-really-is-and-what-it-does http://www.thehealthygamer.com/2013/05/31/chapter-9-core-training-concepts/</p>			

VA SOL Standard: 7.2 The student will understand and apply movement principles and concepts and knowledge of major body structures.

ESSENTIAL UNDERSTANDING

Balance works in conjunction, not isolation, with all movements, whether dominated by strength, speed, flexibility or endurance.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>
<p>7.2 b) Apply biomechanical principles (e.g., center of gravity, base of support) to understand and perform skillful movements.</p> <p>Suggested Learning Targets:</p> <p>I can explain how balance and stability affects the skill performance in (selected activity) through an exit ticket.</p> <p>I can explain how force is generated when performing (selected activity or specific skill) and describe it to a peer.</p> <p>I can apply center of gravity, base of support, to (selected activity or specific skill) and evaluate the application in my journal.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • Teacher observation • Self/peer assessment for skill improvement. • Journals: Examples <ul style="list-style-type: none"> ○ Writing to learn— Gathering and organizing information about the biomechanical principles of different movements. ○ Writing to motivate— How applying biomechanical principles help the performance of movements. ○ Writing to assess, to evaluate progress— Comprehension of biomechanical principles of different movements and the benefits for self-assessment. <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> • Written: Explain the use of balance and stability on a variety of dynamic balance activities; explain how force is generated in a variety of activities/skills. • Movement plan: Apply the principles of science to the development of an appropriate, authentic, practice plan for a variety of movement skills. 	<ul style="list-style-type: none"> • Balance training is continually increasing awareness of a person's balance threshold or limits of stability by creating controlled instability. • An integrated balance training program requires: <ul style="list-style-type: none"> ○ Training balance ○ Core strength ○ Reactive neuromuscular control ○ Integrated functional strength ○ Dynamic flexibility ○ Speed strength • Mechanical Principles <ul style="list-style-type: none"> ○ Force: The effect that one object has on another. ○ Production of Force: Produced by the actions of muscles; the stronger the muscles, the more force the body can produce. ○ Application of Force: The force of an object is most effective when it is applied in the direction that the object is to travel. ○ Absorption of Force: The impact of a force should be gradually reduced ("give with the force") and spread over a large surface. ○ Proprioception: The ability to sense stimuli arising within the body regarding position, motion and equilibrium. 	<ul style="list-style-type: none"> • Teacher may wish to instruct this standard with 7.1.f. • Perform a variety of movements that demonstrate appropriate use of balance, stability, force and form, to include ready position, reaction and body position in motion, in a variety of movement activities. • Discussions on biomechanical principles (e.g., center of gravity, base of support). Example: <ul style="list-style-type: none"> ○ Students are asked to think about the importance of ankle stability. ○ Teacher talks about what might cause an ankle injury during physical activities. Example: Athletes in sports that require high amounts of cutting and jumping are particularly affected by ankle sprains and often find a high rate of recurrent injuries due to instability. Ankle sprains can be attributed to slow reaction times of surrounding musculature, poor proprioception, muscle imbalances and mechanical instability (ligaments lengthened, creating poor structural stability). • Examining and applying the forces of inertia and momentum to determine

*Note: Assessment of this standard may be incorporated into the practice plan in 7.1.f.

their effect on a variety of dynamic balance activities.

Resources:

SHAPE America National Standards and Grade-Level Outcomes

<http://www.humankinetics.com/excerpts/excerpts/five-factors-determine-stability-and-mobility>

[https://www.google.com/search?q=biomechanical+principles+\(e.g.,+center+of+gravity,+base+of+support\)&biw=1536&bih=696&tbm=isch&tbo=u&source=univ&sa=X&ved=0ahUKEwjU7_Kf6gzOAhWDbiYKHRoiDG0QsAQIKQ&dpr=1.25](https://www.google.com/search?q=biomechanical+principles+(e.g.,+center+of+gravity,+base+of+support)&biw=1536&bih=696&tbm=isch&tbo=u&source=univ&sa=X&ved=0ahUKEwjU7_Kf6gzOAhWDbiYKHRoiDG0QsAQIKQ&dpr=1.25)

VA SOL Standard: 7.2 The student will understand and apply movement principles and concepts and knowledge of major body structures.

ESSENTIAL UNDERSTANDINGS

- Most human motion is general, with both linear and angular components; occurring in multiple planes of motion.
- By incorporating all three planes of movement into your mobility time, you will increase your range of motion, prevent injuries and provide greater stability for your body.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>
<p>7.2 c) Describe the planes of motion in which movement occurs, to include sagittal plane, frontal plane and transverse plane.</p> <p>Suggested Learning Targets:</p> <p>I can explain the planes of motion in which specific movements occur through a group presentation.</p> <p>7.2 d) Analyze skill patterns and movement performance of self and others, detecting and correcting mechanical errors and describing balance in the planes of movement for selected movements.</p> <p>Suggested Learning Targets:</p> <p>I can evaluate a peer's skill performance for errors, provide corrective feedback and describe how balance occurred in the planes of movement to my partner.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • Questioning: Example—What plane does flexion and extension occur? Answer: Sagittal • Group work: Phase analysis of a movement pattern (Self/Peer) Example— <ul style="list-style-type: none"> ○ Select a motor skill. ○ Establish the phases into which the movement can be divided for analysis. ○ Describe and correct mechanical errors. ○ Describe the planes of motion in which the movements occur. ○ Describe the biomechanical principles needed to perform the motor skill. • Analysis: Example Evaluate the differences and similarities between qualitative and quantitative analysis of sports movements (e.g., Imagine you are teaching catching to an individual. Which of the following factors do you think is most important in catching and why?—Readiness, vision, motivation, experience or hand and arm position.) • Compare/Contrast: The advantages and disadvantages of using a video camera as 	<ul style="list-style-type: none"> • Sagittal plane: Vertical plane passing from the rear (posterior) to the front (anterior), dividing the body into left and right halves. It is also known as the anteroposterior plane. Most sport and exercise movements that are almost two dimensional, such as running, long jumping, biking and rowing, take place in this plane. • Frontal plane: Vertical and passes from left to right, dividing the body into posterior and anterior halves (front and back). When moving along this plane, we are moving toward or away from the midline. Adduction and abduction are movements along this plane. • Transverse plane: Divides the body into top (superior) and bottom (inferior) halves. Any time we rotate a joint we are moving along the transverse plane. • Abduction: Away from the body. • Adduction: Back towards the body. • Medial: Internal (into the body) rotation of the limbs. 	<ul style="list-style-type: none"> • Teacher presents examples of movements in the planes of motion. Examples <ul style="list-style-type: none"> ○ Movements that involve forward and backward motion are referred to as sagittal plane movements. When a forward roll is executed, the entire body moves parallel to the sagittal plane. ○ Marching, bowling and cycling are all sagittal plane movements. ○ Jumping jacks, side stepping and sidekicks in soccer require frontal plane movement at certain body joints. ○ A cartwheel is an example of total body frontal plane movement. ○ Total body transverse plane movement includes a twist executed by a diver, airborne gymnast and a dancer's pirouette. <p>*Note: Teacher may wish to instruct these standard with 7.1.f and 7.2.b.</p>

compared to the human eye for collecting observational data.

**Assessment of Learning
(Summative)**

- **Written:** Pick a locomotor skill and describe the planes of movement and movements that occur in the performance of the locomotor skill.

Example

Running: Occurs in three planes.

- **Sagittal:** Flexion and extension are the movements. Flexion occurs in the legs at the beginning of swing phase of running, when the limb is moving forwards. Extension occurs in the stance limb, reaching its full extension.
- **Frontal:** Abduction and adduction are the movements. Observing the waistline, abduction is movement away from the middle line of the body and adduction is movement towards the middle line. Frontal plane movement is also seen in the rear foot when the shoe strikes the ground this is termed ankle inversion and eversion.
- **Transverse:** Rotation occurs in this plane between the pelvis, ribcage and shoulders.

- **Student practice plan:** Include activities that address the specified planes of motion for the skill included in the plan.

*Note: This standard may be assessed with 7.1.f. and 7.2.b. as part of the practice plan.

- **Lateral:** External (away from the body) rotation of the limbs.

- **Muscle movement example:**
<http://www.teachpe.com/anatomy/muscles/soleus.php>

Resources:

<http://www.teachpe.com/anatomy/movements.php>; <https://www.acefitness.org/blog/2863/explaining-the-planes-of-motion>

VA SOL Standard: 7.3 The student will apply concepts and principles of training and fitness planning skills to improve physical fitness.

ESSENTIAL UNDERSTANDINGS

- The risk of injury can be reduced by performing appropriate amounts of activity and setting appropriate personal goals.
- Performing a variety of different physical activities may reduce the risk of overuse injury.
- Choosing safe behaviors improves mental and physical health.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>
<p>7.3 a) Identify safe practices for improving physical fitness.</p> <p>Suggested Learning Targets:</p> <p>I can recognize proper warm up/cool-down techniques and reasons for using them and explain it to my teacher/partner.</p> <p>I can develop a warm up and cool down that has proper techniques and apply it to my written fitness plan.</p> <p>I can describe the difference between dynamic and static stretches through an exit ticket.</p> <p>I can describe how to exercise safely in cold and hot weather conditions and tell it to a peer.</p> <p>I can show how to use appropriate safety equipment in (specific activity) and demonstrate it to my teacher.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • Questioning to check for understanding: Example During very hot and humid weather: How can people reduce the risks of dehydration and heat stress during physical activity? Possible Answers <ul style="list-style-type: none"> ○ Exercise in the cool of early morning as opposed to mid-day heat. ○ Switch to indoor activities (playing basketball in the gym rather than on the playground). ○ Change the type of activity (swimming rather than playing soccer). ○ Lower the intensity of activity (walking rather than running). ○ Pay close attention to rest, shade, drinking enough fluids and other ways to minimize effects of heat. • Teacher observation <ul style="list-style-type: none"> ○ Demonstrate safety rules for classroom safety and activity-specific safety. ○ Ability to work independently, cooperatively with peers and on-task during physical education activities. ○ Move in a safe and controlled manner in personal and general space. • Research how safety has improved (e.g. 	<ul style="list-style-type: none"> • Safe: Not apt to cause harm, injury or danger. • Proper warm-up and cool-down techniques. • Safety precautions for exercising in cold and hot weather conditions. • Use of appropriate safety equipment in various types of activities. • Safety procedures while exercising outdoors (traffic laws, right of way). • Static stretching: Consists of stretching a muscle (or group of muscles) to its farthest point and then maintaining or holding that position. • Dynamic stretching: Involves moving parts of your body and gradually increasing reach, speed of movement or both. • Dangers of ballistic stretching: This is stretching or "warming up", by bouncing into (or out of) a stretched position, using the stretched muscles as a spring which pulls you out of the stretched position. (e.g., bouncing down repeatedly to touch your toes.) This type of stretching can lead to injury. It does not allow your muscles to adjust to and relax in, the stretched position. It may instead cause them to tighten up by repeatedly activating the stretch reflex. 	<ul style="list-style-type: none"> • Students and teachers create classroom rules and expectations. • Practice of routines and expectations for safe behavior. • Participation in activities alone or with a partner that demonstrate safe practices. • Assign groups to develop activities for either warm-up or cool-down. Present ideas to create a group workout. • Discussions on safe practices such as: with physical activity equipment, being active in hot or cold weather, foot and clothing wear. • Taking target heart rates throughout physical activities and determine if they are within a safe range. • Practice pacing during running activities. • Describe and demonstrate the

<p>I can calculate my target heart rate during physical activities to determine if I am in a safe target rate range for my age and tell that number to my teacher/partner.</p> <p>I can explain the importance of pacing during continuous exercise and write it in my fitness journal/portfolio.</p>	<p>how athletic shoes have changed to reduce injury).</p> <ul style="list-style-type: none"> • Research local ordinances and state safety equipment laws regarding requirements such as the use of helmets while bicycling or skating. <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> • Design and present fitness stations, teaching safety practices for each station. • Create posters of safety guidelines being taught in conjunction with physical activities. • Design and perform warm-up and cool-down sequences appropriate for a variety of different physical activities 	<ul style="list-style-type: none"> • Resistance Training: Activity that places an additional force against the muscle or muscle group. • Interval Training: Method of training that involves alternating high intensity exercises with recovery periods. • Pacing methods during continuous exercise. • Target heart rates: Exercising within a range of 60 to 80% of one's maximum heart rate. • Workout appeal: Having the right footwear and clothing for physical activity for both comfort and safety. <ul style="list-style-type: none"> ◦ Choose the right workout clothing that is ideal for your exercise and body type for safety. Clothing that enables the right amount of movement to perform the activity correctly and comfortably. For instance, if you wear jeans and try to stretch, you won't be able to push your body as far. ◦ http://www.fitness-tips-for-life.com/workout-clothing-why-it-is-important.html ◦ https://medlineplus.gov/ency/patientinstructions/000817.htm 	<p>differences between dynamic and static stretches.</p>
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Resources:
SHAPE America National Standards and Grade-Level Outcomes
<http://www.health.harvard.edu/healthbeat/10-tips-for-exercising-safely>; <http://www.earlytorise.com/10-best-practices-for-safe-workouts/>;
<http://www.everydayhealth.com/fitness/basics/tips/how-to-exercise-safely.aspx>;
http://www.heart.org/HEARTORG/HealthyLiving/PhysicalActivity/FitnessBasics/Warm-Up-Cool-Down_UCM_430168_Article.jsp#.V7G32bf6vcs

VA SOL Standard: 7.3 The student will apply concepts and principles of training and fitness planning skills to improve physical fitness.

ESSENTIAL UNDERSTANDINGS

- A well thought out strategy of applying knowledge of health-related fitness and basic training principles can improve performance.
- SMART goal setting provides focused, realistic and measureable goals and objectives.
- Relevant fitness data is essential to fitness planning at the beginning, to track progress and informs the need for adjustments to improve physical fitness.
- The FITT principle is a set of guidelines to apply when developing fitness plan action steps to become or remain physically fit.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>
<p>7.3 b) Complete a self-assessment of health-related fitness and develop a comprehensive personal fitness plan, including SMART (specific, measurable, attainable, realistic, timely) goals, action plan that incorporates the FITT (frequency, intensity, time and type) principle, timeline, documentation of activities inside and outside of school, roadblocks/barriers and solutions, mid-year and end-of-year assessments and reflection on progress for improving at least three self-selected components of health-related fitness.</p> <p>Suggested Learning Targets:</p> <p>I will evaluate my fitness and analyze the results to determine areas to improve/maintain and demonstrate it through a fitness data analysis summary.</p> <p>I can create specific, measurable, attainable, realistic and timely personal fitness goals for at least three components of health-related fitness based on fitness</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • Examine elements of the fitness plan: Example of a design brief for a personal fitness plan: ◦ Situation: What are you trying to develop? ◦ Problem: What are the concerns? ◦ Requirements: What individual requirements must be met to complete the task? ◦ Resources: What resources will you use? ◦ Evaluation: What is the criteria by which the task will be graded? • List 4 possible ways you can change your physical activity program based on the FITT components. • List the essential components of a personal fitness plan (goals, FITT principle, training strategies) and discuss the impact of each component to the plan. • Describe how family values, beliefs and availability influence a comprehensive personal fitness plan outside of school and reflect on possible solutions. • Fitness Data Analysis—Analyze health-related fitness and body composition data comparing individual scores to established health-criterion referenced standards (Virginia Wellness fitness standards, Fitnessgram, CDC guidelines). 	<ul style="list-style-type: none"> • Health-related fitness: Muscular Strength, muscular endurance, flexibility, cardiovascular endurance and body composition http://www.teachpe.com/fitness/health.php • FITT principle: Used to guide the development of fitness plans that cater for an individual's specific needs. ◦ http://www.ode.state.or.us/teachlearn/subjects/pe/curriculum/fittprinciple.pdf ◦ http://stretchcoach.com/articles/fitt-principle/ • SMART Goals http://www.unh.edu/hr/sites/unh.edu/hr/files/pdfs/SMART-Goals.pdf • Body Mass Index (BMI) https://www.cdc.gov/healthyw eight/assessing/bmi/ 	<ul style="list-style-type: none"> • Participate in activities that help improve flexibility, muscle strength and endurance, cardiovascular endurance and body composition and have students identify which component of fitness connects to the activity. • Groups come up with a list of physical activities they enjoy and align the activities with related fitness components. Identify which activities improve multiple components. • Groups are assigned to a component of health-related fitness and come up with a list of activities that apply to that component. Demonstrate and lead the class in their list of activities. • Participate independently in the implementation of a personal fitness plan inside of school. • Evaluate (self/peer) a personal fitness plan in relation to the FITT principle.

<p>test results and write them in a fitness log/journal.</p> <p>I can create a written fitness plan to reach my SMART goals that includes action steps and appropriate activities, aligns with the FITT principle, includes safe practices and conditioning principles, timeline and addresses challenges.</p> <p>I can document implementation of an individualized fitness program in my (selected assessment product: i.e., fitness log, journal and portfolio).</p> <p>I can reassess and reflect on progress at midyear and end of year in my (selected assessment product: i.e., fitness log, journal and portfolio).</p>	<p>Example questions for each fitness test score:</p> <ul style="list-style-type: none"> ○ What is your test score? ○ Does your score fall within the healthy fitness zone? ○ Write a SMART goal for this fitness test. ○ List different activities that you can do to cause improvement of this fitness test. <p>● Written reflections of fitness data. Example:</p> <ul style="list-style-type: none"> ○ An in-depth valid comparison of the data between two fitness test periods (Pre/Post) that determines if improvement has occurred and relevant examples of goals for future fitness testing. ○ An analysis of how the experience contributed to student understanding of self, others and/or course concepts of fitness. <p>Assessment of Learning (Summative)</p> <p>Personal fitness plan to address at least three components of health-related fitness to improve/maintain, including intermediate (quarterly) and long-term SMART goals, action plan, reassessments and modify/alter/change plans as needed.</p>	<p>● Roadblocks/barriers http://www.heart.org/HEARTORG/HealthyLiving/PhysicalActivity/StayingMotivatedforFitness/Breaking-Down-Barriers-to-Fitness_UCM_462208_Article.jsp#.V6eGEf36upo</p>	<p>● Complete a self-assessment of health-related fitness and interpret fitness data comparing individual scores to established Virginia Wellness fitness standards and BMI calculations to the CDC protocols and recommendations. Retest a self-assessment of health-related fitness and reassess personal fitness plan goals</p>
<p>Resources: SHAPE America National Standards and Grade-Level Outcomes; http://www.teachpe.com/fitness/training_principles.php http://www.ode.state.or.us/teachlearn/subjects/pe/curriculum/fittprinciple.pdf; http://www.heart.org/HEARTORG/HealthyLiving/PhysicalActivity/FitnessBasics/Types-of-Fitness_UCM_462352_Article.jsp#.V6d9AP36upo; http://www.heart.org/HEARTORG/HealthyLiving/PhysicalActivity/StayingMotivatedforFitness/Identifying-Your-Fitness-Goals_UCM_462202_Article.jsp#.V6eCrf36upo; http://www.doe.virginia.gov/instruction/physed/index.shtml; http://www.cdc.gov/healthyweight/assessing/bmi/adult_bmi/english_bmi_calculator/bmi_calculator.html http://classroom.kidshealth.org/classroom/6to8/personal/fitness/fitness.pdf; http://www.thephysicaleducator.com/resources/infographics/fitness_components/</p>			

VA SOL Standard: 7.3 The student will apply concepts and principles of training and fitness planning skills to improve physical fitness.

ESSENTIAL UNDERSTANDINGS

- Selection of a measurement method depends on the purpose of the evaluation, the nature of the study and the resources available.
- An effective monitoring and evaluation plan is to determine how well an individual is meeting its objectives.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>
<p>7.3 c) Use a variety of resources, including available technology, to evaluate, monitor and record activities for fitness improvement.</p> <p>Suggested Learning Targets:</p> <p>I can conduct a self-assessment of a physical fitness activity using various types of assessment equipment and give my conclusions to a peer.</p> <p>I can self-monitor my heart rate during exercise and summarize my performance to my teacher.</p> <p>I can incorporate technology to enhance knowledge, improve performance and provide feedback for self-assessing and application for the development of a personal fitness plan.</p> <p>I can identify methods of calculating Body Mass Index (BMI) and present them in an exit ticket.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • Questioning to check for understanding. • Demonstration of appropriate and accurate use of technology. <ul style="list-style-type: none"> ◦ Pose/Define Problems ◦ Collaborate ◦ Conclude ◦ Practice ◦ Refine <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> • Monitor pulse rate while participating in cardiorespiratory endurance activity (e.g., walking, jogging, running and jumping rope). <ul style="list-style-type: none"> ◦ Develop a hypothesis on the effects of activity on heart rate ◦ Record how rates change as activity levels increase/decrease and reflect on the benefits of personal activity progression ◦ Investigate and reflect the reliability of the hypothesis. <p>*This standard may be assessed within the 7.3.b. fitness plan</p>	<ul style="list-style-type: none"> • Evaluation tools: <ul style="list-style-type: none"> ◦ Heart/pulse monitors: Used primarily to assess and monitor exercise intensity. Predict the energy expenditure associated with various durations, intensities and frequencies of physical activity. ◦ Pedometer: Tracks distance and pace. ◦ Computers: Internet resources such as pictures, videos and proper instruction on hundreds of exercises which can help individuals plan workouts or check their form when following recommended programs on their own. An important source of health and fitness related information but validity of information depends on the source. ◦ Skin calipers: Method of determining lean body mass. Involves measuring the skinfold thickness of the layer of fat just under the skin in several parts of the body with calipers. ◦ Sit and reach box: Measures flexibility, specifically the flexibility of the lower back and hamstring muscles. ◦ Body analysis devices such as: Bioelectrical Impedance Analyzer (BIA) A method of measuring body fat, muscle and water. ◦ Stopwatches and timers: Helps individuals in developing programs that meet specific, timed objectives. ◦ Digital cameras and iPads: Methods of video recording for self/peer assessment. ◦ Active video games: Players physically interact via arm, leg or whole-body movements with images onscreen in a variety of activities. 	<ul style="list-style-type: none"> • Define body composition and discuss with students the importance of maintaining acceptable levels of body fat and lean muscle mass. <ul style="list-style-type: none"> ◦ Introduce the various methods of measuring body composition (skin fold measurements, body analysis by electrical impedance, using BMI scales, BMI calculations) and their reliability for accurately portraying body composition. • Monitor target heart rates during physical activities. • Use technology to record and evaluate activities for fitness improvement. • Time cardiorespiratory endurance activities for fitness improvement. • Record Pedometer Steps in or out of class:

		<ul style="list-style-type: none">○ Accelerometers: Record body acceleration minute to minute providing detailed information about the frequency, duration, intensity and patterns of movement.○ Smartphone applications: Applications (Apps) for phones that track activity.○ Global positioning system (GPS): Accurately track a specific activity. Example: During hiking it provides information about altitude, distance, time and average velocity.	
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Resources:

SHAPE America National Standards and Grade Level Outcomes <http://www.doe.virginia.gov/instruction/physed/index.shtml>;
<http://www.humankinetics.com/excerpts/excerpts/using-technology-to-promote-physical-activity>;
<http://www.shapeamerica.org/standards/pe/upload/Grade-Level-Outcomes-for-K-12-Physical-Education.pdf>
<http://www.livestrong.com/article/95271-normal-pulse-rate-teenager/#ixzz1YV5chxVS>;

VA SOL Standard: 7.3 The student will apply concepts and principles of training and fitness planning skills to improve physical fitness.

ESSENTIAL UNDERSTANDINGS

- Physical activity contributes to a significant improvement in energy and macronutrient balance regulation and body functioning.
- The amount of calories needed to maintain health is influenced by body composition, gender, age and level of physical activity.

VDOE Standard(s) Student Friendly Language What will the student know and be able to do	SUGGESTED / SAMPLE ASSESSMENTS	Terms (Vocabulary) and Content Information	SUGGESTED / SAMPLE ACTIVITIES																									
<p>7.3 d) Analyze the relationships among physical activity, caloric intake and body composition.</p> <p>Suggested Learning Targets:</p> <p>I can determine the number of calories I need daily and the level of physical activity and record it in my wellness/fitness journal/portfolio.</p> <p>I can list strategies to balance physical activity with caloric intake to improve or maintain body composition through an exit ticket.</p> <p>I can explain the relationship between physical activity and caloric intake and body composition through a summary paragraph.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> Describe guidelines for physical activity and caloric intake for teens. Describe body composition and its relationship to overall physical fitness. <p>• Activity Logs Example: ○ Log daily amount of moderate to vigorous physical activity and caloric intake for a week. ○ Assess body composition is (e.g., from the self-assessment of health-related fitness tests).</p> <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> Determine the number of calories needed each day based on age, gender, height, weight and level of physical activity. List strategies to meet guidelines for physical activity and caloric intake. Explain the relationship between 	<ul style="list-style-type: none"> Physical Activity: Any bodily movement produced by skeletal muscles that requires energy expenditure. Body composition: The percentages of fat, bone, water and muscle in human bodies. Estimated amount of calories needed to maintain energy balance for females and males at different levels of physical activity levels. <p>Example:</p> <table border="1" data-bbox="957 813 1570 1143"> <thead> <tr> <th>Gender</th> <th>Age (years)</th> <th>Sedentary</th> <th>Moderately Active</th> <th>Active</th> </tr> </thead> <tbody> <tr> <td>Female</td> <td>9-13</td> <td>1,400-1,600</td> <td>1,600-2,000</td> <td>1,800-2,200</td> </tr> <tr> <td>Female</td> <td>14-18</td> <td>1,800</td> <td>2,000</td> <td>2,400</td> </tr> <tr> <td>Male</td> <td>9-13</td> <td>1,600-1,800</td> <td>1,800-2,200</td> <td>2,000-2,600</td> </tr> <tr> <td>Male</td> <td>14-18</td> <td>2,000-2,200</td> <td>2,400-2,800</td> <td>2,800-3,200</td> </tr> </tbody> </table> <p>Source: HHS/USDA Dietary Guidelines for Americans</p> <ul style="list-style-type: none"> Activity levels: <ul style="list-style-type: none"> Sedentary: A lifestyle that includes only the light physical activity associated with typical day-to-day life. Moderately active: A lifestyle that includes physical activity equivalent to walking about 1.5 to 3 miles per day at 3 to 4 miles per hour, in addition to the light physical activity associated with typical day-to-day life. Active: A lifestyle that includes physical activity equivalent to walking more than 3 miles per day at 3 to 	Gender	Age (years)	Sedentary	Moderately Active	Active	Female	9-13	1,400-1,600	1,600-2,000	1,800-2,200	Female	14-18	1,800	2,000	2,400	Male	9-13	1,600-1,800	1,800-2,200	2,000-2,600	Male	14-18	2,000-2,200	2,400-2,800	2,800-3,200	<ul style="list-style-type: none"> Instruction about caloric intake, activity and body composition may include examples such as: <ul style="list-style-type: none"> ○ If a person eats 150 calories more a day than is burned by the body, a person can gain 5 pounds over a 6 month period. That adds up to 10 pounds a year. To balance this, a person would need to either reduce energy in or increase energy out. <p>Example strategies:</p> <ol style="list-style-type: none"> To reduce energy in by 150 calories for a 150 pound person. <ul style="list-style-type: none"> Drink water instead of soft drinks. Downsize medium fries to small. Eat an egg white omelet instead of whole eggs. Use tuna in water instead of oil. To increase energy out by 150 calories for a 150 pound person. <ul style="list-style-type: none"> Play/practice basketball for 30 minutes. Walk two miles in 30 minutes. Do yard work for 30 minutes.
Gender	Age (years)	Sedentary	Moderately Active	Active																								
Female	9-13	1,400-1,600	1,600-2,000	1,800-2,200																								
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	<p>physical activity and caloric intake and body composition.</p>	<p>4 miles per hour, in addition to the light physical activity associated with typical day-to-day life.</p> <ul style="list-style-type: none"> • Caloric intake: The total number of calories in a daily diet allocation. • One pound of body weight is equal to 3,500 calories. • CDC activity guidelines http://www.cdc.gov/HealthyYouth/physicalactivity/guidelines.htm 	<ul style="list-style-type: none"> -Bike ride for 30 minutes. -Dance for 30 minutes • Teacher may wish to include instruction of this standard with 7.3.c while working with technology to determine activity levels.
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Resources:
 SHAPE America National Standards and Grade-Level Outcomes;
<http://www.nhlbi.nih.gov/health/educational/wecan/healthy-weight-basics/balance.htm>
http://www.heart.org/HEARTORG/HealthyLiving/WeightManagement/BodyMassIndex/Frequently-Asked-Questions-FAQs-about-BMI_UCM_307892_Article.jsp#.V6eA0v36upo;
http://www.heart.org/HEARTORG/HealthyLiving/WeightManagement/LosingWeight/Losing-Weight_UCM_307904_Article.jsp#.V6eCFf36upo
http://www.heart.org/HEARTORG/HealthyLiving/HealthyKids/ChildhoodObesity/BMI-in-Children_UCM_308993_Article.jsp#.V6eCVv36upo

VA SOL Standard: 7.3 The student will apply concepts and principles of training and fitness planning skills to improve physical fitness.

ESSENTIAL UNDERSTANDINGS

- The body responds differently based on the demands placed on it by physical activity.
- The type of physical activity or activities chosen depends largely on personal training goals.

VDOE Standard(s) Student Friendly Language What will the student know and be able to do	SUGGESTED / SAMPLE ASSESSMENTS	Terms (Vocabulary) and Content Information	SUGGESTED / SAMPLE ACTIVITIES
<p>7.3 e) Compare and contrast aerobic and anaerobic capacity and muscle strength and endurance.</p> <p>Suggested Learning Targets:</p> <p>I can identify the differences between an aerobic and anaerobic workout and explain it (to a peer, through a graphic organizer).</p> <p>I can identify the differences between activities that focus on muscle strength and activities that focus on muscle endurance and present it (to a peer, through a graphic organizer).</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • Written Examples: <ul style="list-style-type: none"> ○ Identify examples of activities that are aerobic or anaerobic in nature. ○ Identify activities that use muscular strength or muscular endurance. ○ Compare & Contrast Charts: How Similar/How Different ○ Venn Diagrams: How Similar/How Different • Oral: Partner/Teacher discussions Example: <ul style="list-style-type: none"> ○ If you begin to run too hard in the middle of a workout or the start of a race, what happens to your body? (Answer: Your body goes into an anaerobic state, producing lactate. If you go anaerobic early in a race, you will fatigue sooner and your ability to maintain pace will nosedive). <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> • Explain aerobic and anaerobic capacity and muscle strength and endurance. • Describe a workout for improving 	<ul style="list-style-type: none"> • Aerobic: Exercise that improves or is intended to improve the efficiency of the body's cardiovascular system in absorbing and transporting oxygen. • Aerobic capacity: The maximum amount of oxygen that the body can utilize during an exercise session, usually measured during a brief period of high-intensity exercise. • Aerobic System (with oxygen): Provides energy at a slower rate for long-term exercise (e.g., Ironman, Marathon etc.). <ul style="list-style-type: none"> ○ Uses oxygen to help provide fuel. ○ Enables athletes to recover from tough workouts and develop the capacity to increase repetitions. ○ Does not produce fatigue-producing waste products. ○ Lower intensity exercises. ○ Takes longer to overload than the anaerobic systems. ○ Requires a minimum 20 minutes duration training period. ○ Workload can be continuous or broken up into interval training. ○ Burns fat. • Anaerobic Lactic System (without oxygen): Generates energy quickly and the by-product of this system is lactic acid (e.g., sprints, weight training and interval training, at various 	<ul style="list-style-type: none"> • Participate in activities that have examples of aerobic vs. anaerobic and muscular endurance vs. muscular strength. Have students identify differences of the activities. Examples: <ul style="list-style-type: none"> ○ Sets and Reps: Circuit training stations. Weight training circuits use large muscle groups first and require 10 to 20 repetitions per station vs. strength-training programs that require up to five sets of one to eight repetitions. ○ Rest Intervals: Circuit training targets muscular endurance by employing short rest periods of 20 to 30 seconds, between stations or sets vs. strength-training that requires maximal effort lifting during each set. Therefore, strength training programs use rest periods of two to five minutes between sets. Longer rest periods enable full muscular recovery while shorter periods do not. ○ Anaerobic endurance test: Example— Three marker cones placed 5 yards apart. The student starts from one end, runs 5 yards and back to the start, 10 yards and back, then 15 yards and finishes at the start line. A total of 60 yards is completed. The player is to touch the line or cone with their hand at each turn, for a total of five touches. ○ Aerobic exercise workouts that increases your heart rate to 50 to 70 percent of your

	<p>overall aerobic and anaerobic capacity. Describe the roll of muscular strength and muscular endurance activities to improve aerobic and anaerobic capacity.</p> <ul style="list-style-type: none"> • Evaluate through running tests, at what point you personally begin to pant. Research why people begin to pant or “catch their breath” after exercising and reflect on what to do when your body is in this state. (Example: Your body is trying to take in enough oxygen to reestablish a chemical state capable of cleaning up unwanted byproducts such as lactic acid that build up when oxygen is in short supply.) • Develop a workout for improving overall aerobic/anaerobic endurance. Include exercises, sets, reps and rest periods. Reflect on how should weight training, cardio and stretching, all be combined to create a workout to help increase aerobic/anaerobic endurance. 	<p>speeds):</p> <ul style="list-style-type: none"> ○ Less efficient ○ Hastens muscle fatigue ○ High intensity level ○ Body must burn carbohydrates stored in muscle ○ Lactic acid must be removed—can take up to one hour ○ Carbohydrates must be replaced for further activity to occur ○ First ten minutes of active recovery produces greatest reduction in lactic acid ○ Built by alternating periods of work and rest ○ Builds on the aerobic base and challenges the athlete at the upper level of aerobic capacity <ul style="list-style-type: none"> • Muscular endurance: The ability to perform a specific muscular action for a prolonged period of time (e.g., your ability to run a marathon or to pump out 100 squats with no added weight is due to muscular endurance). • Muscular strength: A muscle's capacity to exert force against resistance (e.g., ability to bench press a barbell weighing 200 lbs. for one repetition is a measure of your muscular strength) 	<p>maximum heart rate. It also causes you to break a sweat and deepens your breathing, but not so much that you can't carry a conversation. Brisk walking, mowing the lawn and biking on flat terrain are some examples of moderate aerobic exercise. Intense aerobic exercise increases your heart rate to 70 to 85 percent of your maximum heart rate, causes you to break a sweat and deepens your breathing too much to converse. Running, swimming and biking uphill are some examples of intense aerobic exercise.</p> <ul style="list-style-type: none"> • Teach students how to keep themselves in an aerobic state when running: “Talk test” While running, try to speak to someone (or yourself if alone) out loud. If you can get out a short paragraph without too much trouble (i.e. you can convey a detailed thought, but you're not quoting Shakespeare) you're running aerobically. If you can only get out one sentence before you start grasping for breath, you're running too hard—slow down.
<p>Resources: SHAPE America National Standards and Grade-Level Outcomes http://www.teachpe.com/fitness/health.php; http://www.heart.org/HEARTORG/HealthyLiving/PhysicalActivity/GettingActive/Get-Moving-Easy-Tips-to-Get-Active_UCM_307978_Article.jsp#.V6d8F_36upe http://www.heart.org/HEARTORG/HealthyLiving/PhysicalActivity/GettingActive/Create-Your-Own-Circuit-Workout-at-Home_UCM_484683_Article.jsp#.V6d6Yv36upe</p>			

VA SOL Standard: 7.3 The student will apply concepts and principles of training and fitness planning skills to improve physical fitness.

ESSENTIAL UNDERSTANDINGS

- Current guidelines for physical activity can be reached by building physical activities into your daily routine.
- Establishing patterns of regular activity inside and outside of the classroom helps lead to an active healthy lifestyle.
- Fit people engage in physical activity on a regular basis.

VDOE Standard(s) Student Friendly Language What will the student know and be able to do	SUGGESTED / SAMPLE ASSESSMENTS	Terms (Vocabulary) and Content Information	SUGGESTED / SAMPLE ACTIVITIES
<p>7.3.f) Create and implement an activity plan to meet guidelines of 60 minutes a day of moderate to vigorous physical activity.</p> <p>Suggested Learning Targets:</p> <p>I can identify the in-school and community opportunities for activity and list them in an activity log.</p> <p>I will understand that fitness improvement is based upon appropriate amounts of time set aside to implement physical activity and reflect upon that in my fitness journal/portfolio.</p>	<p>Assessment for Learning</p> <ul style="list-style-type: none"> • Questioning to check for understanding • Activity Logs Example: <ul style="list-style-type: none"> ○ Log your personal amount of daily moderate to vigorous physical activity for a week. ○ Evaluate the amount of activity. • Create a list of examples of different activities that apply to three different physical activity groups: endurance, flexibility and strength. Example: <ul style="list-style-type: none"> ○ Endurance: Walking, cycling, skating, swimming, dancing, yard and garden work. ○ Flexibility: Vacuuming, stretching exercises, Yoga. ○ Strength: Lifting and carrying groceries, climbing stairs, exercises like abdominal curl ups and push-ups. <p>Assessment of Learning</p> <ul style="list-style-type: none"> • Create an activity plan. <ul style="list-style-type: none"> ○ 60 minutes a day of moderate to vigorous physical activity. ○ Reflection on progress and achievement of goals. 	<ul style="list-style-type: none"> • To stay healthy and keep doing the things you enjoy, health experts recommend incorporating all three types of physical activities: <ul style="list-style-type: none"> ○ Aerobic exercise to improve the efficiency of the heart muscle. Any type of physical activity is good if it makes your muscles work more than usual. ○ Strength exercises to keep other muscles of the body in good condition and help your sense of balance. ○ Stretching exercises to keep muscles flexible. 	<ul style="list-style-type: none"> • Teacher introduces examples of moderate to vigorous physical activities. • Groups list physical activities they can do at home and in their communities.

Resources:

SHAPE America National Standards and Grade Level Outcomes; <http://classroom.kidshealth.org/classroom/6to8/personal/fitness/fitness.pdf>;
http://www.heart.org/HEARTORG/HealthyLiving/PhysicalActivity/GettingActive/Create-Your-Own-Circuit-Workout-at-Home_UCM_484683_Article.jsp#.V6d6Yv36upe

VA SOL Standard: 7.4 The student will demonstrate and apply skills to work independently and with others in physical activity settings.

ESSENTIAL UNDERSTANDINGS

- Participation in physical activities can provide an opportunity for developing an understanding and respect for differences among people.
- Personal actions affect more than oneself.
- To a responsible participant behaving well is as important as playing well.
- The best leaders lead by example and encourage others to perform better.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>
<p>7.4 a) Apply safety procedures, rules and appropriate etiquette in physical activity settings by self-officiating modified physical activities/games.</p> <p>Suggested Learning Targets:</p> <p>I can show (safe practices, follow rules, etiquette, cooperation, teamwork, ethical behavior and positive social interaction) and demonstrate it through a checklist.</p> <p>I can demonstrate appropriate etiquette in activity settings and give examples to a peer.</p> <p>I will be able to assist in officiating an activity and show respect for people officiating and demonstrate it to my teacher.</p> <p>I will be able to self-officiate during games and demonstrate the ability and knowledge through a peer assessment.</p> <p>7.4 b) Create guidelines and demonstrate how to solve problems and resolve conflicts in activity settings.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • Observation Checklist/Rubric: <ul style="list-style-type: none"> 4 (<i>Beyond what was taught</i>) Consistently follows the safety procedures, rules and etiquette in a physical activity. 3 (<i>What was explicitly taught</i>) Frequently follows the safety procedures, rules and etiquette in a physical activity. 2 (<i>Identify basic elements</i>) Sometimes follows the safety procedures, rules and etiquette in a physical activity. 1 (<i>With help/prompts/cues</i>) Rarely follows the safety procedures, rules and etiquette in a physical activity. • Teacher observation of students working with a variety of partners/peers. Example: What to look for (measure/assess) during activity: <ul style="list-style-type: none"> ◦ Are students accepting of all partners? ◦ Are students hustling to find partners? 	<ul style="list-style-type: none"> • Safe: Not apt to cause harm, injury or danger. • Cooperative is described as: <ul style="list-style-type: none"> ◦ following rules ◦ encouraging others ◦ complimenting others ◦ controlling temper ◦ wanting everyone to play well and succeed ◦ working together toward a common goal ◦ helping classmates ◦ playing under control ◦ sharing ◦ showing concern for classmates' feelings • Self-Officiate: A physical activity which is officiated by the players, on the "honor system", rather than by an outside observer such as a referee. • Etiquette: Proper acceptable actions, behavior or conduct within an activity. Elements: <ul style="list-style-type: none"> ◦ Be kind ◦ Be courteous ◦ Be respectful 	<ul style="list-style-type: none"> • Students and teachers create classroom rules and guidelines for physical activities. • Practice of routines and expectations for behavior. • Participate in activities that demonstrate how to be gracious when winning or losing (ex. by accepting official rulings). • Cooperative games and activities that develop positive social interaction, increase self-confidence and self-esteem. http://www.pecentral.org/lessonideas/ViewLesson.asp?ID=774#.V6Sms7f6vcs • Use cooperative games and team-building challenges to emphasize inclusion, safety, conflict resolution and problem-solving. • Have students come up with consequences for refusing and failing to follow safety procedures.

<p>Suggested Learning Targets: I can create guidelines to resolve conflict during (selected activity) and tell them to a peer.</p> <p>I can perform cooperation skills in (selected activity) and demonstrate it through a self-reflection summary paragraph.</p> <p>I can demonstrate positive strategies to resolve problems and resolve conflict when faced with a group challenge and demonstrate it through a group skit.</p> <p>7.4 c) Explain the importance of cooperating with classmates and demonstrate supportive behaviors that promote the inclusion and safety of others.</p> <p>Suggested Learning Targets:</p> <p>I can explain the effect of cooperative behaviors on physical activity through an exit ticket.</p> <p>I can show self control during conflicts with peers or an official's decision and demonstrate it to my teacher.</p> <p>I can name the safety procedures for (selected activity/game) and tell them to a peer.</p> <p>I can show how to support others by respecting abilities and strengths of others and demonstrate it through encouraging feedback to peers for teacher observation.</p>	<p>◦ Are they mixing themselves up?</p> <ul style="list-style-type: none"> ● Student reflection on the importance of cooperating with classmates and the importance of supportive behaviors. <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> ● Group Collaboration/Cooperation — Example: <ul style="list-style-type: none"> ◦ Groups will work together to develop a recreational activity/game using the equipment provided and the skill techniques associated with the equipment. Create rules and guidelines for proper behavior during activity. ◦ Students role play teacher created conflicts in different activities and students use appropriate problem solving techniques to resolve the conflict. 	<ul style="list-style-type: none"> ● Problem solving skill set: <ul style="list-style-type: none"> ◦ Clarify problem ◦ Analyze causes ◦ Identify alternatives ◦ Assess alternatives ◦ Choose and implement an alternative ◦ Evaluate choice ● Conflict Resolution skill set <ul style="list-style-type: none"> ◦ Talk about problem without assigning blame. ◦ Use active listening. ◦ Identify and clarify issues and needs. ◦ Brainstorm solutions. ◦ Choose and apply solution. ◦ Evaluate solution. 	<ul style="list-style-type: none"> ● Participate in activities that use resistance, refusal, negotiation, collaboration and conflict resolution skills to maximize personal potential and to build and maintain healthy relationships. ● Student creation of guidelines for resolving conflicts in activity settings that may include: <ul style="list-style-type: none"> ◦ Positive strategies such as offering suggestions/assistance, leading/following others ◦ Providing possible solutions when faced with a group challenge ◦ Helping and encouraging others, avoiding negative talk and providing support to classmates ● Students self-officiate modified physical activities/games to show knowledge of rules and etiquette
<p>Resources: SHAPE America National Standards and Grade Level Outcomes; http://www.teachpe.com/sports_psychology/attitudes.php; http://www.doe.virginia.gov/instruction/physed/index.shtml; http://lessonplanspage.com/peempowereddecisionmaking612.htm/; http://classroom.kidshealth.org/classroom/6to8/personal/growing/conflict_resolution.pdf;</p>			

VA SOL Standard: 7.4 The student will demonstrate and apply skills to work independently and with others in physical activity settings.

ESSENTIAL UNDERSTANDINGS

- Stress is necessary for creativity, learning and survival. It's only harmful when it becomes overwhelming and interrupts the healthy state of equilibrium that the nervous system needs to remain.
 - Effectively dealing with stress means to activate the body's natural relaxation response by practicing relaxation techniques.
- Physical activity has an effect on managing stress.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>
<p>7.4 d) Describe and demonstrate strategies for dealing with stress, such as deep breathing, guided visualization and aerobic exercise.</p> <p>Suggested Learning Targets:</p> <p>I can list strategies for stress reduction through an exit ticket.</p> <p>I can demonstrate strategies that can aid in the relief of stress by performing relaxation techniques and telling a peer how they made me feel.</p> <p>I can describe the relationship between physical activity and stress management and demonstrate it through a summary paragraph.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • Written or Pair/Share: Explain how physical activity can have a positive effect on managing stress. <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> • Journals Examples: <ul style="list-style-type: none"> ◦ Writing to learn: Gathering and organizing information about stress and relaxation techniques ◦ Writing to motivate: How stress is necessary for creativity, learning and survival. ◦ Writing to assess, to evaluate progress: Evaluation of personal implementation of relaxation techniques during activities. ◦ Writing to do: Future goals or strategies to implement relaxation techniques during activities. Considering specific needs, preferences, fitness level and the way you tend to react to stress. 	<ul style="list-style-type: none"> • Stress: the body's reaction to a change that requires a physical, mental or emotional adjustment or response. • Symptoms of Stress <ul style="list-style-type: none"> ◦ Lack of interest in activities or school. ◦ Irritability and impatience. ◦ Frequent stomach problems or headaches. ◦ Anxiety. ◦ Activity burnout. ◦ Trouble sleeping. ◦ Weaken your immune system, making it harder to fight off disease. • Fight or flight stress response: When you are stressed, your body responds as though you are in danger. It makes hormones that speed up your heart, make you breathe faster and give you a burst of energy. • Relaxation response: A state of deep calmness. A mentally active process that leaves the body relaxed, calm and focused. 	<ul style="list-style-type: none"> • Practicing relaxation techniques <ul style="list-style-type: none"> ◦ Breathing meditation: deep breathing ◦ Progressive muscle relaxation: systematically tense and relax different muscle groups in the body ◦ Body scan meditation: focus on the sensations in each part of your body ◦ Mindfulness: staying calm and focused in the present moment ◦ Visualization: imagining a scene in which you feel at peace ◦ Yoga: moving and stationary poses, combined with deep breathing ◦ Tai Chi: a self-paced, non-competitive series of slow, flowing body movements ◦ Rhythmic exercise (such as running, walking, rowing or cycling): Engaging in the present moment, focusing your mind on how your body feels right now.

• **Stress Management:**

http://www.teachpe.com/sports_psychology/stress_management.php

Resources:

SHAPE America National Standards and Grade-Level Outcomes

http://www.teachpe.com/sports_psychology/anxiety.php;

http://www.heart.org/HEARTORG/Conditions/HighBloodPressure/PreventionTreatmentofHighBloodPressure/Stress-and-Blood-Pressure_UCM_301883_Article.jsp#.V6d-5f36upe;

http://www.heart.org/HEARTORG/HealthyLiving/StressManagement/FightStressWithHealthyHabits/Fight-Stress-with-Healthy-Habits_UCM_307992_Article.jsp#.V6eDw-36upe

http://www.heart.org/HEARTORG/HealthyLiving/StressManagement/FourWaysToDealWithStress/Four-Ways-to-Deal-with-Stress_UCM_307996_Article.jsp#.V6eEG-36upe

VA SOL Standard: 7.4 The student will demonstrate and apply skills to work independently and with others in physical activity settings.

ESSENTIAL UNDERSTANDINGS

- When done in the right way and with the right intentions, feedback communication is the avenue to performance greatness.
- How feedback is communicated is based on an individual's communication skills.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>
<p>7.4 e) Demonstrate effective communication skills by providing feedback to a peer, using appropriate tone and other communication skills.</p> <p>Suggested Learning Targets:</p> <p>I can recognize appropriate feedback for (personal or partner's) activity performance and demonstrate it by giving appropriate comments to peers during activities for teacher observation.</p> <p>I can recognize appropriate feedback from a peer assessment and demonstrate it by giving back comments to the presentation of their assessment.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • Demonstration of providing feedback to others. <ul style="list-style-type: none"> ○ Peer Assessments ○ Pair/Share discussions ○ Game play interaction <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> • Have students complete a peer assessment of another peer doing a peer assessment. Base your rubric on the characteristics of good feedback. 	<ul style="list-style-type: none"> • Feedback: Supports the development of self-regulated learning, critical thinking and reciprocal learning. <ul style="list-style-type: none"> ○ Two corrections at the most should be identified for feedback. ○ Should be specific and meaningful. • When specific to motor skills: <ul style="list-style-type: none"> ○ It causes improvement by providing error detection, reinforcement of correct skill performance and motivation. ○ Is based on the critical elements for each skill. • Characteristics of good feedback: <ul style="list-style-type: none"> ○ given with the goal of improvement ○ timely ○ honest ○ respectful ○ clear ○ issue specific ○ objective ○ supportive ○ motivating ○ action-oriented ○ solution-oriented • Peer assessment can: <ul style="list-style-type: none"> ○ Empower students to take responsibility for and manage, their own learning. 	<ul style="list-style-type: none"> • Modeling of effective feedback with multiple opportunities for practice in skill and/or activity settings. <ul style="list-style-type: none"> ○ Clarity: Be clear about what you want to say to the other person. ○ Emphasize the positive: Remember that if there is a mix of positive and negative comments, most people will screen out the positive, so it may need re-emphasizing. ○ Be specific: Avoid general comments and clarify pronouns such as "it," "that," etc. ○ Be descriptive rather than evaluative (e.g., "Did you know you are not stepping with the opposite foot when you throw the ball?" rather than "It was really bad the way you threw that ball.>"). ○ Focus on behavior rather than the person. (e.g., "On a number of occasions you started speaking before I had finished" rather than "You are clearly a bully who is totally uninterested in other people's points of view"!) ○ Acknowledge that all behavior can be changed. ○ Own the feedback — Use 'I' statements. (e.g., "I noticed"; "I saw" ;"I heard") ○ Use positive language that suggests that any problems are time limited, situation specific and capable of solution. (e.g., Just at the moment you don't....; in this instance you seemed; you haven't yet worked out a way of..... next time you might want to.....)

		<ul style="list-style-type: none">○ Enable students to learn to assess and to develop life-long assessment skills.○ Enhance students' learning through knowledge diffusion and exchange of ideas.○ Motivate students to engage with course material more deeply.	<ul style="list-style-type: none">○ Be very careful with advice: People rarely struggle with an issue because of the lack of some specific piece of information; often, the best help is helping the person to come to a better understanding of exactly what they need to improve.
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Resources:

SHAPE America National Standards and Grade-Level Outcomes; http://sydney.edu.au/education_social_work/groupwork/docs/SelfPeerAssessment.pdf

VA SOL Standard: 7.4 The student will demonstrate and apply skills to work independently and with others in physical activity settings.

ESSENTIAL UNDERSTANDINGS

- The intrinsic values and benefits of participating in physical activity that provides personal meaning.
- Physical activity provides opportunities for self-expression and social interaction and can be enjoyable, challenging and fun.
- Physical activity can be creative, enjoyable and individually rewarding by providing opportunities for self-expression and social interactions.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>
<p>7.4 f) Identify positive mental and emotional aspects of participating in a variety of physical activities.</p> <p>Suggested Learning Targets:</p> <p>I can list positive mental and emotional aspects of participating in physical activity through an exit ticket.</p> <p>7.4 g) Describe how participation in physical activities creates enjoyment.</p> <p>Suggested Learning Targets:</p> <p>I can describe why my favorite physical activity is fun in a summary paragraph.</p> <p>7.4 h) Identify specific safety concerns associated with at least one activity that includes rules, equipment and etiquette.</p> <p>Suggested Learning Targets:</p> <p>I can list safety concerns for participating in (selected activity) and explain how the rules, etiquette and equipment help keep participants safe and explain it to a peer.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • Oral questions Example: What are the safety protocols and concerns during a group or family bike ride and how does this activity create enjoyment. • Written Example: What are the intrinsic and extrinsic motivators that keep people involved in physical activity? <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> • List physical activities that are enjoyed and evaluate the positive mental and emotional aspects of participating in each activity. • For a selected activity, list safety concerns for participating in (selected activity) and explain how the rules, etiquette and equipment help keep participants safe. 	<ul style="list-style-type: none"> • Eustress: “Good stress”. Stress that is deemed healthful or giving one the feeling of fulfillment. • Intrinsic vs Extrinsic motivation <ul style="list-style-type: none"> ◦ Intrinsic motivations for exercise: Performance done for the satisfaction gained in the activity itself. Motivations are commonly those of competency, interest and enjoyment. Sports participation has been shown to be more likely to be motivated by intrinsic motivators such as fun and enjoyment. ◦ Extrinsic motivations for exercise: Performance done for external rewards such as getting fitter, improving appearance, weight loss or ‘toning up’. Exercise is more often linked to extrinsic motivators such as weight loss, appearance and stress management. • Benefits of physical activities: <ul style="list-style-type: none"> ◦ Release of Chemicals: Exercise releases endorphins, which create feelings of happiness and euphoria. ◦ Improve Self-Confidence: Regardless of weight, size, gender or age, exercise can quickly elevate a person’s perception of his or her attractiveness or self-worth. ◦ Alleviate Anxiety: The chemicals that are released during and after exercise can help people with anxiety disorders calm down. ◦ Helps Prevent Cognitive Decline: Regular physical activity boosts memory and ability to learn new things. ◦ Increase relaxation. 	<ul style="list-style-type: none"> • Participation in activities for health, enjoyment, challenge, self-expression and/or social interaction. • Give out a list of many different activities and have students write next to each activity whether their motivation for each activity was intrinsic or extrinsic. Group students and have them discuss their answers. • Develop stations that have different pieces of equipment. When groups rotate to a new station, they discuss safety concerns and then decide what rules and etiquette the group must follow before beginning the physical activity.

Resources:

~~SHAPE America National Standards and Grade-Level Outcomes;~~

~~<https://www.acsm.org/public-information/articles/2011/10/04/mental-health-benefits-of-exercise-for-adolescents;>~~

~~<http://www.helpguide.org/articles/exercise-fitness/emotional-benefits-of-exercise.htm>~~

VA SOL Standard: 7.5 The student will describe rate of perceived exertion and nutrients (energy) needed for a variety of activities and explain the importance of sleep for energy balance.

ESSENTIAL UNDERSTANDINGS

- The RPE scale is used to measure the intensity of your exercise.
- The RPE scale relies on bodily sensations during exercise, such as muscular fatigue, increased sweating and increased breathing rate and heart rate.
- While RPE is a useful tool for estimating heart rate, it is only an approximation because physical conditioning and age vary between individuals.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>								
<p>7.5 a) Describe a Rate of Perceived Exertion (RPE) scale.</p> <p>Suggested Learning Targets:</p> <p>I can explain the RPE scale to a peer.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • List and describe the Rate of Perceived Exertion scale. • Describe exercises/activities that may be involved at each level of the RPE Scale. • Documentation of activity and the RPE of the activity (may be included with personal fitness planning instruction 7.3.b.) <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> • Perform the physical activities listed: <ol style="list-style-type: none"> 1. Stretch high in the air and then touch your toes (if they can) 5 times 2. Jog in place for one minute 3. Life a backpack filled with books as many times as possible 4. Do 10 jumping jacks two minutes 5. Stand on one foot for 30 seconds 6. Walk quickly around the room 7. Smile 	<ul style="list-style-type: none"> • The Rate of Perceived Exertion or RPE, is a way to measure your exercise efforts. A 1-10 scale that is used to monitor exercise intensity when doing cardio workouts. <ul style="list-style-type: none"> ○ How to use it: <p>RPE ——— What It Means</p> <p>0-1 No exertion. The only movement you're getting is pushing buttons on the remote.</p> <hr/> <p>2-3 Light exertion. This is how you should feel when you're warming up, cooling down and stretching.</p> <hr/> <p>4-5 Medium exertion. You're breathing a little faster. Your heart is pumping a little faster. You're feeling a little warmer.</p> <hr/> <p>6-7 Moderate exertion. You're breathing pretty hard now, you're probably sweating. You can talk, but it's getting tougher.</p> <hr/> <p>8-9 Hard exertion. You're breathing really hard and you can only say a few words at a time. You're wondering how long you can go on like this.</p> <hr/>	<ul style="list-style-type: none"> • Students use the "Talk Test" (reciting something familiar) as a tool for determining work-out level during physical activity. <p>The Talk Test</p> <table border="1" data-bbox="1541 670 2001 1471"> <tr> <td data-bbox="1541 670 1619 781">Zone 1</td> <td data-bbox="1619 670 2001 781">If you can sing the entire way through your workout, you are working out at Zone 1.</td> </tr> <tr> <td data-bbox="1541 781 1619 979">Zone 2</td> <td data-bbox="1619 781 2001 979">In this zone you should be able to talk comfortably while working out. This is where a beginner should start working out. Zone 2 is generally 60-70% of Maximum Heart Rate.</td> </tr> <tr> <td data-bbox="1541 979 1619 1268">Zone 3</td> <td data-bbox="1619 979 2001 1268">If you are working out at zone 3, the aerobic zone, you should be able to say a few words, catch your breath and then say a few more words. When working out in the Aerobic Zone, you are probably working at 70-80% of Maximum Heart Rate.</td> </tr> <tr> <td data-bbox="1541 1268 1619 1471">Zone 4</td> <td data-bbox="1619 1268 2001 1471">The Anaerobic Zone, is considered performance training. If you are gasping for air, you are working out anaerobically. For a person who is just starting to work out,</td> </tr> </table>	Zone 1	If you can sing the entire way through your workout, you are working out at Zone 1.	Zone 2	In this zone you should be able to talk comfortably while working out. This is where a beginner should start working out. Zone 2 is generally 60-70% of Maximum Heart Rate.	Zone 3	If you are working out at zone 3, the aerobic zone, you should be able to say a few words, catch your breath and then say a few more words. When working out in the Aerobic Zone, you are probably working at 70-80% of Maximum Heart Rate.	Zone 4	The Anaerobic Zone, is considered performance training. If you are gasping for air, you are working out anaerobically. For a person who is just starting to work out,
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	<p>— Afterwards, answer the following:</p> <ul style="list-style-type: none"> ○ Describe how each one makes you feel. ○ Identify differences in the amount of energy the activities used. ○ Which used a medium (moderate) amount of energy? Which used the least amount of energy? ○ Evaluate where each one falls on the RPE scale. ○ What all of these challenges have in common? (Example: They are all different types of physical activity and they all use energy.) 	<p>10</p> <p>Hardest exertion. You cannot keep this pace for more than a minute. Speaking is impossible. This is your limit.</p> <p>Note: There are many RPE scales.</p>	<p><input type="text" value="this is too hard a workout."/></p> <ul style="list-style-type: none"> ● Participate in physical activities that cause the body to change and record or talk about the changes. ● Create activities that cause students to move through the different intensity levels and take target heart rates throughout. ● Teach how the RPE scale can be used to determine workout intensity.
<p>Resources: SHAPE America National Standards and Grade-Level Outcomes; www.choosemyplate.gov</p>			

VA SOL Standard: 7.5 The student will describe rate of perceived exertion and nutrients (energy) needed for a variety of activities and explain the importance of sleep for energy balance.

ESSENTIAL UNDERSTANDINGS

- The heart rate is a gauge by which to assess the intensity of your workout to make sure you're not overexerting or overextending yourself.
- To maximize your aerobic workout, you need to stay in your working heart rate range for at least 20 to 30 minutes continuously.
- Using the RPE scale helps you recognize your body's signs of exertion and modify your normal workout intensity.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>
<p>7.5 b) Explain the connection between an RPE scale and heart rate and the body's response to physical activity.</p> <p>Suggested Learning Targets:</p> <p>I can describe how the RPE scale can be used to determine the perception of the work effort or intensity of exercise through a summary paragraph.</p> <p>I can describe how the RPE scale can be used to adjust workout intensity during physical activity and tell it to peer.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • Questioning to check for understanding Examples: <ul style="list-style-type: none"> ◦ Why it is necessary for the heart rate to increase during exercise? (Answer: Undertaking activities with increasing energy demand has an effect on the volume of blood pumped from the heart "left ventricle" and on the pulse rate. This increase brings more oxygen and glucose to the muscles which results in faster removal of carbon dioxide and lactic acid.) ◦ How does the amount of carbon dioxide in your breath change after exercise? (Answer: There is more carbon dioxide in your breath after exercise, whether aerobic or anaerobic, than at rest. Caused by an increase of respiration which produces more carbon dioxide.) • Training Journal Example: <ul style="list-style-type: none"> ◦ Write an RPE number down next to each set in your training journal. How hard was the workout on a scale of 1-10?" 	<ul style="list-style-type: none"> • "The RPE scale is a psychophysiological scale, meaning it calls on the mind and body to rate one's perception of effort...The RPE scale measures feelings of effort, strain, discomfort and/or fatigue experienced during both aerobic and resistance training." *The American College of Sports Medicine (ACSM) <ul style="list-style-type: none"> ◦ RPE's allow you to customize each and every training session to get the most out of what your body can give you by dialing up or scaling back intensity over the course of a training cycle based on how you feel. • Heart Rates/Training Zones: To train at the right intensity, you will need a way to monitor exercise intensity and one of the best ways is monitoring target heart rates. <ul style="list-style-type: none"> ◦ As you get more fit your RHR will get lower because the heart pumps more blood per beat and therefore doesn't have to beat as fast to pump the same amount of blood as it did before. ◦ After determining your resting and maximum heart rates you can now establish "training zones". Each of the training zones uses different energy systems, different fuel supplies and different muscle fiber types. ◦ Depending on the objective of the training session, the main part of the training session should be in a certain zone or that you shift from zone to zone in a set way. If done correctly, this stresses specific features of that system, 	<ul style="list-style-type: none"> • Physical activities that cause the body to change and record or talk about the changes. Examples: <ul style="list-style-type: none"> ◦ Increased heart rate ◦ Increased respiration or breathing rate ◦ Increased sweating ◦ Muscle fatigue • After each physical activity students are asked to show, by the amount of fingers raised on both hands, what intensity level they are working.

	<p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> ● Given a variety of activities, explain what level of RPE is described, what effort the heart is working and how the body is responding to the level of effort in the activity. 	<p>resulting in improvement and better performance.</p> <ul style="list-style-type: none"> ○ By varying the training zones from day to day you challenge the body to improve as well as allowing your body to recover. ● Body's response to physical activity <ul style="list-style-type: none"> ○ Heart rate increases to supply the muscles with more oxygen to produce extra energy. ○ Blood vessels in the skin dilate, increasing blood flow to the skin resulting in a red appearance of the face. ○ Heat dissipates through the skin into the air which appears as sweat. ○ Breathing becomes faster and heavier. 	
<p>Resources: SHAPE America National Standards and Grade Level Outcomes; http://www.teachpe.com/physiology/energy_systems.php; http://www.cdc.gov/physicalactivity/basics/measuring/index.html; http://www.heart.org/HEARTORG/Educator/FortheClassroom/MiddleSchoolLessonPlans/Middle-School-Lesson-Plans-UCM_304280_Article.jsp#.V685jjiYbIU</p>			

VA SOL Standard: 7.5 The student will describe rate of perceived exertion and nutrients (energy) needed for a variety of activities and explain the importance of sleep for energy balance.

ESSENTIAL UNDERSTANDINGS

- Anaerobic and aerobic respiration are ways your body converts food into energy so that your brain, muscles and other organs can function normally.
- To exercise, your body needs to break down sugar and convert it to glycogen, so it can be used as energy or fuel.
- Energy for movement comes from the food we eat (animal and plant sources), which provides energy rich nutrients in the form of carbohydrates, fats and proteins.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>
<p>7.5 c) Define and describe the anaerobic and aerobic energy systems.</p> <p>Suggested Learning Targets:</p> <p>I can define anaerobic and aerobic to a peer.</p> <p>I can list activities that are aerobic (uses oxygen) and that are anaerobic (do not use oxygen through an exit ticket).</p> <p>I can describe how the anaerobic and aerobic energy systems work to provide energy for movement through a summary paragraph.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • Oral Questioning to check for understanding Examples: <ul style="list-style-type: none"> ◦ Which system (aerobic or anaerobic) does the body rely on for the first couple of minutes during physical activity? Answer: The aerobic energy system produces the largest amounts of energy, although at the lowest intensity. So at the start of exercise the body cannot deliver oxygen to the muscles fast enough to initiate the complex chemical reactions which occur during aerobic metabolism. Therefore the body relies on anaerobic processes for the first couple of minutes. ◦ Explain the anaerobic and aerobic energy systems. Answer: The aerobic energy system, meaning 'with oxygen' which is used for long-term, steady paced exercise and day to day activities. Anaerobic energy system or 'without oxygen' produces fast bursts of energy for short, powerful bursts. 	<ul style="list-style-type: none"> • Aerobic energy systems: Aerobic processes in cellular respiration can only occur if oxygen is present. When a cell needs to release energy it initiates a chemical exchanges that launches the breakdown of glucose. This sugar is carried through the blood and stored in the body as a fast source of energy. The breakdown of glucose releases carbon dioxide, a byproduct that needs to be removed from the body. <ul style="list-style-type: none"> ◦ Aerobic exercise conditions enable you to exercise for long periods of time, potentially benefiting from the sustained energy expenditure (i.e., calories burned). ◦ With aerobic training, you become much more efficient at using fat as an energy source for exercise. This allows muscle and liver glycogen to be used at a slower rate. ◦ Aerobic exercise conditions enable you to exercise for long periods of time, potentially benefiting from the sustained energy expenditure (i.e., calories burned). ◦ With Aerobic training, you become much more efficient at using fat as an energy source for exercise. This allows muscle and liver glycogen to be used at a slower rate. • Anaerobic energy systems: Anaerobic processes do not use oxygen. Lactic acid, which builds up in muscles' cells as aerobic processes fail to keep up with energy demands, is a 	<ul style="list-style-type: none"> • Presenting examples of aerobic and anaerobic energy systems. <ul style="list-style-type: none"> ◦ Aerobic: Activities that are long-term, steady paced exercise and day to day activities; usually last longer than 5 minutes; aerobic capacity activities, muscular endurance activities. ◦ Anaerobic: Activities that require fast bursts of energy for short, powerful bursts; usually last less than 5 minutes sprint, muscular strength activities. • Presenting the terms aerobic and anaerobic as transitions in metabolism, where the proportion between aerobic and anaerobic metabolism changes depending on exercise intensity. Example: <ul style="list-style-type: none"> ◦ Running: When the body has an adequate supply of oxygen for this process, we call it aerobic respiration. When there is not enough oxygen, for example when you are running hard at the end of a 5k, this is called anaerobic respiration.

**Assessment of Learning
(Summative)**

- Define anaerobic and aerobic and list activities that are aerobic (uses oxygen) and that are anaerobic (do not use oxygen).
- Activity Logs: As we approach and pass our metabolic threshold intensity, we start to breathe harder and exercise simply becomes uncomfortable. Record the heart rate at which you sense these symptoms of developing over exertion. Reflect on the significance of this change and what is taking place in the body.
Example:
 - You then know that heart rates below this value occur when you're in your aerobic zone and heart rates above this value reflects an increasing anaerobic contribution. (Addition comment samples are found within the **Content Information** section of this page.)

byproduct of an anaerobic process. Such anaerobic breakdowns provide additional energy, but lactic acid build-up reduces a cell's capacity to further process waste; on a large scale in a human body, this leads to fatigue and muscle soreness. Cells recover by breathing in more oxygen and through the circulation of blood, processes that help carry away lactic acid.

- In anaerobic exercise glycogen is used as fuel.
- Anaerobic exercise is helpful for weight management in that it helps to burn more calories even in a body at rest.

● Activity Levels

- High energy activities that require lots of energy are called vigorous. Vigorous activity burns more than 7 calories per minute.
- Medium energy activities that require a moderate amount of energy are called moderate.
- Moderate activities burn between 3.5 and 7 calories per minute.
- Any activity that burns less than 3.5 calories per minute is low energy.

● Energy is derived from the breakdown of carbohydrates and fats, the two main energy nutrients used during exercise.

Resources:

SHAPE America National Standards and Grade-Level Outcomes;

http://www.teachpe.com/physiology/energy_systems.php; http://www.teachpe.com/anatomy/anaerobic_respiration.php;

http://www.teachpe.com/anatomy/aerobic_respiration.php

VA SOL Standard: 7.5 The student will describe rate of perceived exertion and nutrients (energy) needed for a variety of activities and explain the importance of sleep for energy balance.

ESSENTIAL UNDERSTANDINGS

- To build strength and lean muscle, you need to fuel your body properly before and after your training session.
- Dietary Supplements are used to either supplement or replace lost or insufficient nutrients.
- Energy intake includes 3 major macronutrient groups— carbohydrate, protein and fat.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>
<p>7.5 d) Identify the nutrients needed for optimal aerobic and anaerobic capacity and for muscle strength and endurance.</p> <p>Suggested Learning Targets:</p> <p>I can describe what nutrients the body needs/uses during aerobic and anaerobic capacity and for muscle strength and endurance and demonstrate it through a graphic organizer.</p> <p>7.5 e) Create a snack plan including foods and beverages consumed before, during and after a self-selected vigorous physical activity addressing nutrition needs for each phase and explaining the impact on and relationship to RDA, portions, macronutrients, vitamins, minerals, hydration, sugar and salt.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • Written: Investigation of nutrients needed for aerobic and anaerobic capacity and for muscle strength and endurance; and examples of food and beverages that meet the requirements. <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> • Creation of a snack plan: <ul style="list-style-type: none"> ◦ Selection of a vigorous physical activity. ◦ Snack foods and beverages consumed before, during and after the selected physical activity. ◦ Analysis on the nutrition needs for each phase of the physical activity and how the snack foods and beverages consumed before, during and after meet those needs in relationship to RDA, portions, macronutrients, vitamins, minerals, hydration, sugar and salt. 	<ul style="list-style-type: none"> • Pre workout: A good supply of protein for tissue repair 1-2 hours before workout. A cardio session requires more carbohydrates than protein. Carbohydrates are metabolized into glucose (energy) very quickly so they should be consumed 30-60 minutes before a workout. • During workout: Add protein and fiber to deliver a steadier supply of energy throughout the workout. • After an intense workout: Go for carbohydrates to replace the energy in depleted muscles. Protein, though, is almost equally important in sealing in your workout's benefits and promoting recovery. • Macronutrients <ul style="list-style-type: none"> ◦ Carbohydrates: Found in starchy and sugary foods and are the main source of energy. ◦ Protein: Is essential for growth, repair and maintenance of body tissue. ◦ Fats: Provide energy and when stored, provide protection to our vital organs. • Recommended dietary allowance (RDA): The recommended minimum amount of a nutrient needed for good health. • Vitamins: Organic substances need in small amounts to enable the body to complete chemical reactions. 	<ul style="list-style-type: none"> • Have students bring in empty containers as examples of different foods for each phase of a workout. • Develop individually or with a group, lists of foods and beverages to consume for different phases of a workout. Examples: <ul style="list-style-type: none"> ◦ Pre workout— Egg omelet with spinach, whole grain toast and skim milk. Greek yogurt with banana, walnuts, apples and honey. ◦ After— Take 10-20 grams of protein within 2 hours after strength training. Whole grain, veg., fruits and beans.

<p>Suggested Learning Targets:</p> <p>I can create a snack plan that meets nutrition guidelines and physical activity needs and demonstrate it through laying out nutrition cards for teacher observation.</p>		<ul style="list-style-type: none"> ● Minerals: Inorganic compounds needed in small amounts. <ul style="list-style-type: none"> ○ Milk — for calcium ○ Red meats — for iron ○ Vegetables — for phosphorus ● Salt and sugar <ul style="list-style-type: none"> ○ Salty foods can disrupt the delicate fluid balance required for optimal workouts. ○ Sugary foods and drinks are high in calories. 	
<p>Resources:</p> <p>SHAPE America National Standards and Grade Level Outcomes; www.choosemyplate.gov; http://www.heart.org/HEARTORG/HealthyLiving/PhysicalActivity/FitnessBasics/Food-as-Fuel---Before-During-and-After-Workouts_UCM_436451_Article.jsp#.V6d9Vf36upe; http://www.teachpe.com/training-fitness/sports-nutrition/ http://www.heart.org/HEARTORG/HealthyLiving/HealthyEating/Nutrition/How-to-Eat-Healthy_UCM_307257_Article.jsp#.V6d_h_36upe; http://www.heart.org/HEARTORG/HealthyLiving/HealthyEating/Nutrition/Nutrition-Basics_UCM_461228_Article.jsp#.V6eAH_36upe; http://www.shape.com/healthy-eating/diet-tips/20-foods-can-ruin-your-workout</p>			

VA SOL Standard: 7.5 The student will describe rate of perceived exertion and nutrients (energy) needed for a variety of activities and explain the importance of sleep for energy balance.

ESSENTIAL UNDERSTANDINGS

- Monitoring your heart rate will allow you to track the changes taking place in your cardiovascular system as you move towards aerobic fitness.
- Resting heart rate is a valuable measure of not only determining your fitness level, but also your cardiovascular health.

VDOE Standard(s) Student Friendly Language What will the student know and be able to do	SUGGESTED / SAMPLE ASSESSMENTS	Terms (Vocabulary) and Content Information	SUGGESTED / SAMPLE ACTIVITIES
<p>7.5 f) Calculate resting heart rate (RHR) and describe its relationship to aerobic fitness and an RPE scale.</p> <p>Suggested Learning Targets:</p> <p>I can calculate my resting heart rate and tell a peer.</p> <p>I can explain the connection between resting heart rate, aerobic fitness and an RPE scale using a graphic organizer.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> Oral: Describe when/how to take resting heart rate. Answer—Resting heart rate should be measured first thing in the morning and it indicates cardiovascular health. Identify factors that can affect resting heart rate. Examples: Physical size of your heart, body size, activity level, fitness level, temperature, body position, emotions and medication use. <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> Record resting heart rate every morning for a week. Analyze what your resting heart rate is telling you in regard to your fitness level. Reflect upon the importance of maintaining or lowering your resting heart rate. 	<ul style="list-style-type: none"> Heart rate is an indicator of the level of cardiorespiratory fitness. As one becomes more fit, your heart muscle becomes stronger and is able to pump more blood with each heartbeat. Therefore, a person who is fit has a lower heart rate than an unfit person. As fitness levels improve, resting heart rate (RHR) will decrease. Working out at an aerobic level will cause your heart to be more efficient at pumping blood, therefore it will need to beat less often. If your heart needs more beats to do the same amount of work, over time this can lead to cardiovascular disease and/or heart attacks. Measuring resting heart rate along with one measurement during activity will help you ensure that your workouts are effective, both in burning fat and developing your cardiovascular fitness. 	<ul style="list-style-type: none"> Record target heart rates while resting and participating in different activities that move up the RPE scale. Students determine a range of heart rates that represents their desired workout intensity. Students will keep their heart rates in their zone during activities. They will monitor their workout intensity level. Teacher discussions on resting heart rates and what they reveal. Example: <ul style="list-style-type: none"> A higher than usual resting heart rate can be a sign of over-training or illness. Therefore, if in the morning you have a higher resting heart rate than usual, your body is still in a state of repair and you should adjust your workout regimen accordingly to prevent over-training or injury.
<p>Resources: SHAPE America National Standards and Grade Level Outcomes http://www.heart.org/HEARTORG/HealthyLiving/PhysicalActivity/FitnessBasics/Target-Heart-Rates_UCM_434341_Article.jsp#.V6d8bP36upe</p>			

VA SOL Standard: 7.5 The student will describe rate of perceived exertion and nutrients (energy) needed for a variety of activities and explain the importance of sleep for energy balance.

ESSENTIAL UNDERSTANDINGS

- Getting enough quality sleep at the right times can help protect your mental health, physical health, quality of life and safety.
- In teens, sleep helps support growth and development.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>
<p>7.5 g) Explain the importance of sleep for energy balance.</p> <p>Suggested Learning Targets:</p> <p>I can give reasons why sleep is important for energy balance through an exit ticket.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • Oral: Describe why sleep is important. Answer— Sleep is a powerful regulator of appetite, energy use and weight control. • Investigate how sleep affects body function. • Sleep Logs Example: <ul style="list-style-type: none"> ○ Log your personal amount of sleep each night for a week ○ Calculate the average amount of sleep you are getting each night ○ Evaluate how you feel based on the amount of sleep you are getting and any concerns that keep you from getting a good night's sleep ○ Reflect on the importance of sleep for energy balance ○ Develop a plan to improve or maintain your sleep habits ○ Reassess how the plan is working and any improvements you can make for yourself <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> • Explain the importance of sleep for energy balance (may use reflection from sleep log) 	<ul style="list-style-type: none"> • Importance of sleep <ul style="list-style-type: none"> ○ Brain Function: While you're sleeping, your brain is preparing for the next day. It's forming new pathways to help you learn and remember information. Studies show that a good night's sleep improves learning. ○ Physical Health: Sleep is involved in healing and repair of your heart and blood vessels. Ongoing sleep deficiency is linked to an increased risk of heart disease, kidney disease, high blood pressure, diabetes, stroke and it increases the risk of obesity. The right amount of sleep also reduces heart rate and blood pressure. ○ Productivity/Safety: Getting enough sleep helps you function well throughout the day. People who are sleep deficient are less productive at work and school. They take longer to finish tasks, have a slower reaction time and make more mistakes. 	<ul style="list-style-type: none"> • Discussions on the signs of a lack of sleep. Example: Even if you think you're getting enough sleep, you might not be. Here are some of the signs that you may need more sleep: <ul style="list-style-type: none"> ○ Difficulty waking up in the morning. ○ Inability to concentrate. ○ Falling asleep during classes. ○ Feelings of moodiness and even depression. • Discussions on how to get more sleep. Example: <ul style="list-style-type: none"> ○ Set a regular bedtime. ○ Exercise regularly. ○ Avoid stimulants. ○ Relax your mind. ○ Unwind by keeping the lights low. ○ Don't nap too much. ○ Avoid all nighters. ○ Create the right sleeping environment. ○ Wake up with bright light.

Resources:

SHAPE America National Standards and Grade-Level Outcomes; <http://www.nhlbi.nih.gov/health/health-topics/topics/sdd/why>;
<https://newsinhealth.nih.gov/issue/apr2013/feature1>; <http://www.nhlbi.nih.gov/health/health-topics/topics/obe/causes>

VA SOL Standard: 7.5 The student will describe rate of perceived exertion and nutrients (energy) needed for a variety of activities and explain the importance of sleep for energy balance.

ESSENTIAL UNDERSTANDINGS

- Everything we do, from sleeping to running, requires energy.
- The relationship between the amount of calories we eat in the diet and the amount of energy we use in the body determines our body weight and overall health.
- Balancing calorie consumption & calorie expenditure is the key to maintaining healthy body weight.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>
<p>7.5 h) Explain energy balance and how it leads to a healthy body.</p> <p>Suggested Learning Targets:</p> <p>I can explain what energy balance is and why it is important for good health and demonstrate it through a summary paragraph.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • Oral Questioning Example: How does the body balance energy intake with expenditure? • Define energy balance. • Investigate the effects of energy balance on the body. <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> • Individual assessment: Explain what energy balance is and why it is important for good health • Group assessment: Hand out six index cards to each student group. Read each activity on the cards to students, making sure that they understand what each activity is. Ask students to think about whether each activity is Energy, More Energy or Most Energy. Have them write an H, an M or an L on each index card to correspond with how much energy they think each activity 	<ul style="list-style-type: none"> • Energy balance: The relationship between “energy in” (food calories taken into the body through food and drink) and “energy out” (calories being used in the body for our daily energy requirements). • When it comes to “energy out,” the body’s energy needs to include the amount of energy required for maintenance at rest, physical activity and movement and for food digestion, absorption and transport. • Energy balance also has to do with what’s going on in your cells. When you’re in a positive energy balance (more in than out) and when you’re in a negative energy balance (more out than in), everything from your metabolism, to your hormonal balance, to your mood is impacted. Negative energy balance can lead to: <ul style="list-style-type: none"> ○ Decline in metabolism. ○ Decreases in bone mass. ○ Reductions in thyroid hormones. ○ Reductions in testosterone levels. ○ Inability to concentrate. ○ A reduction in physical performance. • Physical activity means moving the body to use energy. The more vigorous the activity, the more energy is used. 	<ul style="list-style-type: none"> • Discussion on the role of calories in relationship to giving us energy. • Groups are given cards with different foods and beverages. Students will rank the cards by the amount of energy we get from each food or beverage. • Discuss as a class or have student’s research changes in society over the last 30 years that caused a shift in the relationship between energy balance and a healthy body. Example: <ul style="list-style-type: none"> ○ Thirty years ago: More students walked to and from school. Children played outside when they came home from school. Meals were more likely to be home-cooked with reasonable portion sizes and there was always a vegetable on the plate. Eating fast food was rare and snacking between meals was an occasional treat. ○ Today: Walks to school are replaced by car or bus rides. After school activities include TV, video games and the internet. Families eat fewer home-cooked meals and snacking between meals is common. Portion and beverage sizes are two to five times bigger. We now eat 31 percent more calories, 56 percent more fats and oils and 15 more pounds of sugar a year.

	<p>would require. (Hint: 2 are High Energy, 2 are Medium Energy and 2 are Low Energy).</p> <p>Activities:</p> <ul style="list-style-type: none"> ○ Doing Arts and Crafts (L) ○ Karate (H) ○ Shooting Baskets (M) ○ Playing the Piano (L) ○ Walking (M) ○ Playing Soccer (H) <p>After reviewing answers, ask students to rank the activities from highest to lowest related to the specific number of calories a 65-lb. person would burn if doing the activity for 15 minutes.</p>	<ul style="list-style-type: none"> ● Energy comes from what we eat and what we drink. ● Calories are a measurement of the potential energy contained in what we eat or drink. ● Three nutrients carbohydrate, protein and fat contain calories. When we eat or drink something that contains carbohydrate, protein or fat, the body breaks down the nutrients to release energy. That energy can then be used to do all the physical activities we want to do. ● Even when we're at rest, our body needs energy for all its "hidden" functions, such as breathing, circulating blood and growing and repairing cells. 	
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Resources:

SHAPE America National Standards and Grade Level Outcomes; www.choosemyplate.gov;
<http://www.education.com/reference/article/what-energy-balance/>; <http://www.precisionnutrition.com/all-about-energy-balance>;
<http://www.nhlbi.nih.gov/health/educational/wecan/healthy-weight-basics/balance.htm>;
http://www.heart.org/HEARTORG/HealthyLiving/HealthyEating/Nutrition/The-American-Heart-Associations-Diet-and-Lifestyle-Recommendations_UCM_305855_Article.jsp#.V6eAWf36upe

<p>VA SOL Standard: 8.1 The student will apply and demonstrate movement concepts and skills in modified versions of various game/sport, rhythmic and recreational activities.</p> <p>ENDURING UNDERSTANDINGS</p> <ul style="list-style-type: none"> Acquisition of movement concepts and patterns allows students to successfully participate in and apply strategies in a variety of activities. Physical skill proficiency enhances the quality of life by allowing individuals to participate in enjoyable physical activities. 			
<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>SUGGESTED/SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED/SAMPLE ACTIVITIES</p>
<p>8.1 a) Demonstrate and apply movement forms to a variety of cooperative and tactical activities that include dynamic and unpredictable situations with a focus on defensive strategies, to include reducing space, transitioning from offense to defense quickly, communicating with teammates and selecting appropriate tactics to gain defensive advantage.</p> <p>Suggested Learning Targets:</p> <p>I can show the defensive strategy reducing space in (specific activity i.e. basketball) and demonstrate it to my teacher.</p> <p>I can adapt movements to changing game situations in (specific activity) when challenged and not challenged by opponents and demonstrate it through a video self-assessment.</p> <p>I can demonstrates coverage of play in (specific activity i.e. softball e.g., first base person fields the ball and pitcher covers first base) and write a reflective paragraph on how I</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> Pre-test skill performance of mastery movement forms and skill combinations. Teacher observation Written: <ul style="list-style-type: none"> Pre-test cognitive knowledge for skills needed to be successful in activity(s) selected. Identify skills and movements in selected activities/games, compare to other activities/games; and explain how to adapt those skills to fit the needs of that activity/game. Self and peer assessments. Teachers Observation with feedback. Teacher Verbal and Written Feedback Video: Analyze movement forms in cooperative and tactical activities and make suggestions improvement. Skill Checklist (for discrete skills). Skill Rubric (for game/activity 	<ul style="list-style-type: none"> Strategy: An overall game plan and the sum of all tactics used. Tactics: Decisions about what actions to take in response to problems that arise during a game. Skillful play within games requires manipulative skills that come from the following three broad categories: <ul style="list-style-type: none"> Sending an object away: striking, volleying, kicking or throwing it. Receiving/gaining possession of an object: by catching (trapping) or collecting it (i.e., gaining control of and/or redirecting an object coming along the ground. Traveling with and retaining the object: by carrying or propelling it (e.g., dribbling). Offensive Skills <ul style="list-style-type: none"> Give and go Fakes (ball/head) Pivots Changing (direction/speed) Defensive Skills <ul style="list-style-type: none"> Player to player Reducing size of passing lane 	<ul style="list-style-type: none"> Manipulation of game components, such as rules, number of players, dimensions of the playing space and movement within the playing space to create games and 'play practice' scenarios that develop tactical understanding and the application of movement skills for intelligent play. Drills to develop movement competencies necessary to successfully apply the movement solutions of a tactical problem such as: Offensive tactics to create open space: moves to create open space on and off the ball; a variety of passes, fakes and pathways; and give and go. Modified small group activities/games involving passing and receiving with an implement in combination with locomotor patterns of running and change of direction and speed with competency (e.g., lacrosse, hockey: floor, field, ice). Modified small group activities/games involving the execution of at least two of the following to create open space: pivots, fakes, jab steps, and/or screens

<p>demonstrated this in (specific activity). I can show the defensive strategies reducing space, transitioning from offense to defense quickly, communicating with teammates and selecting appropriate tactics to gain defensive advantage in (specific activity) and demonstrate it through a rubric.</p>	<p>application).</p> <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> • Written: Post cognitive tests for comprehension of strategies and tactics to gain defensive advantage. • Skill Rubric <p style="text-align: center;">Sample Rubric</p> <p>4 (<i>Beyond what was taught.</i>) Displays consistent and correct performance of all elements during unpredictable situations; includes smooth transitions between skills/movements; includes advanced strategies and tactics</p> <p>3 (<i>What was explicitly taught.</i>) Performs all critical elements (mature movement skills and patterns) appropriately and consistently during unpredictable situations and adapts movements to changing situations during game play.</p> <p>2 (<i>Identify basic elements.</i>) Performs critical elements (mature movements skills and patterns) in isolation (outside of game play or when unchallenged).</p> <p>1 (<i>With help/prompts/cues.</i>) With teacher cues, student can demonstrate some/most of the critical elements in isolation (outside of game play).</p>	<ul style="list-style-type: none"> ◦ Reducing space ◦ Transitioning from offense to defense quickly ◦ Communicating with teammates ◦ Selecting appropriate tactics to gain defensive advantage. 	<ul style="list-style-type: none"> • Modified small group activities/games involving dribbling with dominant and non dominant hand/foot using a change of speed and direction. • Modified small group activities/games involving a mature overarm pattern, for net/wall games. (e.g., volleyball, handball, badminton, tennis) • Modified small group activities/games involving transitions from offense to defense or defense to offense by recovering quickly, communicating with teammates, and taking advantage for gain • Modified small group activities/games involving the creation of open space in net/wall games using either a long or short handled implement by varying force, direction, moving opponent side to side, and/or forward or back.
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Resources:
 SHAPE America National Standards and Grade Level Outcomes; <http://www.doe.virginia.gov/instruction/physed/index.shtml>;
<http://www.pecentral.org/lessonideas/cues/cuesmenu.asp>; <http://www.pecentral.org/lessonideas/searchresults.asp?category=53>
<http://www.thephysicaleducator.com/resources/games/invasion/>; <http://www.thephysicaleducator.com/resources/games/net-wall/>
<http://www.thephysicaleducator.com/resources/games/striking-fielding/>; <http://www.thephysicaleducator.com/resources/games/target/>;
<http://files.eric.ed.gov/fulltext/EJ795561.pdf>; http://hooptactics.com/Free_Area_Offensive_Basketball_Strategies/;

http://www.soccer-training-info.com/soccer_strategy_tactics.asp; <http://www.ducksters.com/sports/footballstrategy.php>;
<http://learntocoachbasketball.com/sign-up/coaching-course/skill-development/level-i-tactical-skills>; <http://www.tennistips.org/tennis-technique.html>;
<http://www.strength-and-power-for-volleyball.com/volleyball-strategies.html>; http://www.usultimate.org/assets/1/Page/Teaching%20Ultimate_beta3.pdf

VA SOL Standard: 8.1 The student will apply and demonstrate movement concepts and skills in modified versions of various game/sport, rhythmic and recreational activities.

ENDURING UNDERSTANDINGS

- Rhythmic movement builds a sense of community, social skills, music concepts, physical education abilities, timing, and coordination and is a valuable tool for fitness throughout one's life.
- Rhythmic movement enables students to discover their own innate capacity for the communication of ideas, thoughts, and feelings through the medium of dance.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>SUGGESTED/SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED/SAMPLE ACTIVITIES</p>
<p>8.1 b) Create a rhythmic movement sequence to music as an individual or in a group.</p> <p>Suggested Learning Targets:</p> <p>I can develop a proper sequence of steps in movement combinations for an individual or group rhythmic sequence and present it to my teacher.</p> <p>I can perform an individual or group rhythmic sequence and demonstrate this through a group presentation.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • Questioning to check for understanding • Peer assessment: Evaluate a created rhythmic movement sequence to music for revision and refinement. • Videotaping: For refinement of a created movement sequence to music. <p>Assessment of Learning (Summative)</p> <p>Develop a rhythmic movement sequence to music using basic dance elements, (select length), demonstrate and teach it to the class.</p> <ul style="list-style-type: none"> • Rubric for creating a dance/rhythmic sequence. <p style="text-align: center;">Sample Rubric 4 (Beyond what was taught)</p>	<ul style="list-style-type: none"> • Movement: Counts of 4/8. • Combinations: Putting two or dance moves together. • Pattern: Repeating a sequence. • Flow: The direction of movement. • Transitions: When a movement, phrase or section of a dance progresses into the next. • Leading/following: Leading or following others actions. • Mirroring/matching: Copying another individual's actions. • Routine: A sequence of movements in a fixed program. • Sequence: A particular order in which related movements follow each other. • Beat: The basic unit of a rhythmic measure. 	<ul style="list-style-type: none"> • Class discussion on the greater awareness of feelings towards the avenues of self-expression provided through dance and other artistic sports. • Lessons on rhythm or dance, such as combining traveling, balancing, and weight transfer into smooth, flowing sequences with intentional changes in direction, speed, and flow. • Dance/rhythmic sequences done in small groups, partners or by individuals.

	<p>Creates and displays rhythmic movement sequence with variety of movements.</p> <p>3 <i>(What was explicitly taught)</i> Creates and displays a rhythmic movement sequence.</p> <p>2 <i>(Identify basic elements)</i> Performs critical elements of rhythmic movement sequence.</p> <p>1 <i>(With help/prompts/cues)</i> With teacher cues, student can demonstrate some/most of the critical elements in isolation.</p>	<ul style="list-style-type: none"> ● Rhythm: Regular, repeated pattern of sounds or movements. ● Tempo: The speed of music or a dance. ● Levels: <ul style="list-style-type: none"> ○ Low: ground level—crawling, slithering, rolling, and kneeling ○ Medium: walking level—walking, running, and sliding ○ High: movement in the air—hopping, skipping, jumping, and leaping 	<p>Note: Music for use with students should be pre-approved by the teacher for appropriate lyrics.</p>
<p>Resources: SHAPE America National Standards and Grade-Level Outcomes; American Alliance for Health, Physical Education, Recreation and Dance Grade-Level Outcomes for K-12 Physical Education; http://www.pecentral.org/lessonideas/middlehigh/middlehighideas.asp; http://www.pecentral.org/lessonideas/ViewLesson.asp?ID=5480#.V6VEyf36upo;</p>			

VA SOL Standard: 8.1 The student will apply and demonstrate movement concepts and skills in modified versions of various game/sport, rhythmic and recreational activities.

ENDURING UNDERSTANDINGS

- Skill-related fitness increases one's ability to perform in various activities and leads to good overall health.
- Skill-related components of fitness are not skills, but the building blocks of exercise and physical activity.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>SUGGESTED/SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED/SAMPLE ACTIVITIES</p>
<p>8.1 c) Demonstrate skill-related components of fitness (agility, balance, coordination, power, reaction time and speed) specific to a variety of activities.</p> <p>Suggested Learning Targets:</p> <p>I can apply the concept of balance by showing balancing on a balance board and explaining the concepts of static balance to a peer.</p> <p>I can demonstrate speed through fast breaks to a layup in basketball and explain how speed helps to gain advantage over your opponents through an exit ticket.</p> <p>I can demonstrate agility through changing directions to hit a tennis ball and self-assess that ability through a video self-assessment</p> <p>I can show coordination through catching a ball in a lacrosse scoop while running and explain where I demonstrate coordination in other physical</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • Group presentations. Example: Groups are placed in different areas. Class reviews the skill-related components of fitness. Each group is assigned a skill-related component of fitness to identify physical activities or a game-specific activity that relates to each component. Groups present and demonstrate their activities. Example presentation: Balance is important in the sport-specific activity of cross-country skiing, as well as in a general physical activity such as balancing on balance boards or skateboards. • Journals: <ul style="list-style-type: none"> ◦ Gathering and organizing information on the skill-related components of fitness ◦ How the skill-related components of fitness apply to specific activities 	<ul style="list-style-type: none"> • Agility: The ability to change and control the direction and position of the body while maintaining a constant, rapid motion. Examples: <ul style="list-style-type: none"> ◦ Changing directions to hit a tennis ball ◦ Dodging defenders in game play • Balance: The ability to control or stabilize the body when a person is standing still or moving. Balance can be static or dynamic. Static balance means that the athlete is not moving, such as performing a handstand. Dynamic balance means that the athlete maintains equilibrium while moving, such as in slalom ski events. Other Examples: <ul style="list-style-type: none"> ◦ In-line skating ◦ Landing after a rebound in basketball • Coordination: The ability to use the senses together with body parts during movement. To move smoothly and efficiently. Examples: <ul style="list-style-type: none"> ◦ Dribbling a basketball. Using the hands and eyes together is an example of hand-eye coordination. ◦ Catching a ball in a lacrosse scoop while running. • Speed: The ability to move your body or parts of your body as quickly as possible. Many sports rely on speed to gain advantage over your opponents. Examples: <ul style="list-style-type: none"> ◦ A basketball player making a fast break to perform a layup. ◦ A tennis player moving forward to get to a drop shot. 	<ul style="list-style-type: none"> • Activities to improve the skill-related components of fitness. Examples: <ul style="list-style-type: none"> ◦ To improve quickness and speed in order to beat the defenders who are covering you, work with explosive plyometric exercises such as box jumps or squat jumps. They will help improve the muscles for explosive speed. ◦ General movement patterns (e.g., running, jumping, throwing) are used to develop strength and power • Medicine ball training, jump rope and agility ladder exercises to enhance agility and reduce movement time • Demonstration of the skill-related components of fitness through modified game-specific activities. Examples: <ul style="list-style-type: none"> ◦ Power in forehand or backhand strokes in net/wall games ◦ Anticipates the speed of an object or person for the purpose of interception or deflection • Class discussions on how the

<p>activities to my teacher.</p> <p>I can demonstrate power through running quickly to a volleyball net and jumping high to block a volleyball and explain how power is a combination of speed and muscular strength to a peer.</p> <p>I can demonstrate reaction time through passing a baton in a track relay and give other examples through a partner discussion.</p>	<ul style="list-style-type: none"> ● Self/Peer Assessment <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> ● Develop a physical activity routine that will demonstrate each of the skill-related components of fitness. Explain how each activity applies to a different skill-related component and how each activity causes improvement of the specific component. 	<ul style="list-style-type: none"> ○ A football player out running the defense to receive a pass. <ul style="list-style-type: none"> ● Power: The ability to move the body parts rapidly while applying the maximum force of the muscles. Power is a combination of both speed and muscular strength. Examples: <ul style="list-style-type: none"> ○ Fullbacks in football muscling their way through other players and speeding to advance the ball. ○ Volleyball players getting up to the net and lifting their bodies high into the air. ○ Olympic lifting ○ Shot putting ● Reaction Time: The ability to reach or respond quickly to what you hear, see or feel. Examples: <ul style="list-style-type: none"> ○ An athlete quickly coming off the blocks early in a swimming relay ○ A track relay ○ Stealing a base in baseball 	<p>physical activity for the day contributes to the skill-related components of fitness.</p> <p>Example: Sprinting – Stability ball programs, BOSU® training and balance board exercises to enhance balance.</p>
<p>Resources: SHAPE America National Standards and Grade-Level Outcomes; VDOE Physical Education Instructional Resources http://www.doe.virginia.gov/instruction/physed/index.shtml; Glencoe Health Books – Copyright by the McGraw Hill Companies, Inc. http://www.glencoe.com/sites/common_assets/health_fitness/gln_health_fitness_zone/pdf/heart_rate_monitor_activities/health_skill_related_fitness/health_skill_related_fitness_activity_4.pdf</p>			

VA SOL Standard: 8.1 The student will apply and demonstrate movement concepts and skills in modified versions of various game/sport, rhythmic and recreational activities.

ENDURING UNDERSTANDING

- Biomechanics is the scientific study of the mechanics of biological and musculoskeletal activity; helps explain how and why the body moves.

VDOE Standard(s) Student Friendly Language What will the student know and be able to do?	SUGGESTED/SAMPLE ASSESSMENTS	Terms (Vocabulary) and Content Information	SUGGESTED/SAMPLE ACTIVITIES
<p>8.1 d) Apply and demonstrate biomechanical principles of force, motion (laws of motion), rotation and energy.</p> <p>Suggested Learning Targets:</p> <p>I can apply the concept of force when (specific activity e.g., batting in softball, serving a tennis ball) to impact performance and explain it to a peer.</p> <p>I can apply the concept of motion and rotation by producing spin on a (specific object: e.g., bowling ball, tennis ball, ping pong ball) to impact performance and explain it to the teacher.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • Questioning to check for understanding: Example—What is more important in throwing an object, the angle (height of the release) or the speed of release? (Answer: Speed) • Written: Research how the different designs of baseball bats effect how a ball will respond even if the same amount of force is applied. Explain the connection between the bat and transfer of energy from your body to the ball. <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> • Demonstrate and explain the effects of serving a tennis ball on different surfaces. Include the effects of different heights of individuals on the serve. Make connections to the biomechanical principles of force, motion, rotation and energy. 	<ul style="list-style-type: none"> • Force: Strength or energy exerted; cause of motion such as force needed to throw or strike for distance and/or accuracy. • Motion Newton's laws: such as with a tennis ball. <ul style="list-style-type: none"> ○ Newton Law One (Law of Inertia) Object in motion stays in motion while an external force is exerted (An object will not move unless force is applied)—A tennis ball continues on a straight path after being hit unless acted upon by a force (another strike from a racquet or gravity). ○ Newton Law Two (Law of Acceleration) Speed at which an object moves; this speed depends on the amount of force applied to the object.—A tennis ball that is struck with more force has a higher rate of speed/acceleration than being struck with less force; the greater the mass, the greater the amount of force needed to accelerate the object. ○ Newton law Three (Law of Reaction) For every action there is an equal and opposite reaction. When the second player strikes the ball, the ball is acted upon by a force; equal and opposite. Force that the ball exerts on the racket is equal and opposite to the force that the racket exerts on the ball. 	<ul style="list-style-type: none"> • Class discussions of the biomechanical principles of a physical activity. Example— <ul style="list-style-type: none"> ○ Sprinting is produced by a rotary motion of the limbs as they pivot at an individual's joints and the individual's center of gravity rises and falls during each stride. ○ Rotating is a term that indicates an object or an individual is turning through an angle or number of degrees. In sports such as gymnastics, skateboarding, basketball, diving, figure skating, and ballet, the movements used by athletes include quarter turns (90 degrees); half turns (180 degrees); and full turns or "revs" (revolutions), which are multiples of 360 degrees. Slam dunk competitions are a great example of basketball players showing off their "360s." ○ A tennis ball hit with topspin will rebound faster and lower. A tennis ball hit with backspin will rebound slower and higher. • Perform activities on different playing surfaces. Example— <ul style="list-style-type: none"> ○ Tennis on asphalt, grass, and clay/dirt.

		<ul style="list-style-type: none">• Rotation: Applying a motion to produce spin on a tennis ball, bowling ball, ping pong, volleyball, and the resulting movement.• Energy: The ability to do work, work is moving something against a force such as gravity; we use energy for everything we do.	
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Resources:

SHAPE America National Standards and Grade-Level Outcomes;

~~<http://www.hhp.txstate.edu/hper/faculty/pankey/bioprin/htm/index.html>;~~ ~~<http://www.slideshare.net/ryanm9/year-11-biomechanics-with-levers-force-summation>;~~

~~<http://www.teachpe.com/biomechanics/angular-motion/>;~~ ~~<http://www.teachpe.com/biomechanics/forces/>~~

<p>VA SOL Standard: 8.1 The student will apply and demonstrate movement concepts and skills in modified versions of various game/sport, rhythmic and recreational activities.</p> <p>ENDURING UNDERSTANDINGS</p> <ul style="list-style-type: none"> Balance is both a static and dynamic process that makes it possible for the body to maintain its center of gravity over its base of support. The lower the center of the body, the larger the base of support, the closer the center of the body is to the base of support, the more stability increases. Dynamic balance is a key component of normal daily activities such as walking, running and climbing stairs. Core muscles provide the foundation for movement throughout your entire body and are incorporated into almost every movement of the human body acting as a stabilizer to help gain greater balance. 			
<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>SUGGESTED/SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED/SAMPLE ACTIVITIES</p>
<p>8.1 e) Demonstrate balance (center of support and center of gravity) in a variety of activities.</p> <p>Suggested Learning Targets:</p> <p>I can explain and show the importance of body position when receiving a serve in (specific activity e.g., tennis volleyball, badminton) and demonstrate it through a peer discussion.</p> <p>I can describe and demonstrate how balance is a key to all functional movements through a summary paragraph.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> Teacher observation. Oral: Partner discussions— Example: How can your balance become more stable? Answer— Stability is enhanced by determining body’s center of gravity and appropriately changing it. <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> Students will research balance, demonstrate activities that require balance and explain how balance applies to the activities. Example— <ul style="list-style-type: none"> Walking: A person throws the body in and out of balance with each step Running: The center of gravity has to be lowered to maintain balance when stopping or changing direction Jumping: The center of gravity needs to be raised as high as possible 	<ul style="list-style-type: none"> Balance: The ability to maintain the body’s center of gravity within the limits of stability as determined by the base of support. <ul style="list-style-type: none"> The lower the center of gravity to the base of support, the greater the stability. The nearer the center of gravity to the center of the base of support, the more stable the body. An individual’s limits of stability are the distance outside of his or her base of support he or she can go without losing control of the center of gravity. Center of gravity: The point at which all of the body’s mass and weight are equally balanced or equally distributed in all directions. <ul style="list-style-type: none"> Dynamic activities can also be described as those that cause the center of gravity to move in response to muscular activity. The muscles traditionally referred to as “the core” provide a working surface for our extremities to push off of, which is crucial for any kind of movement. The core is where we generate, absorb, and transfer forces to and from our extremities. Strengthening core muscles will improve stability of the lumbar spine which is beneficial for improving balance. 	<ul style="list-style-type: none"> Teach similarities in body position and the relationship to balance when receiving different types of serves (e.g., volleyball, badminton, tennis). Discuss reasons why they are similar. Teach similarities in body position when defending a player (e.g., basketball, soccer, ultimate). Discuss reasons why they are similar. Muscular strength training activities and discussions on how strengthening the core muscles will improve balance in dynamic activities. Discussions on balance, equilibrium and stability in relationship to oncoming forces. Example— In anticipation of an oncoming force, stability may be increased by enlarging the size of the base of support in the direction of the anticipated force.

Resources:

SHAPE America National Standards and Grade-Level Outcomes;

<http://www.humankinetics.com/excerpts/excerpts/five-factors-determine-stability-and-mobility>;

[https://www.google.com/search?q=biomechanical+principles+\(e.g.,+center+of+gravity,+base+of+support\)&biw=1536&bih=696&tbm=isch&tbo=u&source=univ&sa=X&ved=0ahUKewjU7_Kf6gzOAhWDbiYKHReiDG0QsAQIKQ&dpr=1.25](https://www.google.com/search?q=biomechanical+principles+(e.g.,+center+of+gravity,+base+of+support)&biw=1536&bih=696&tbm=isch&tbo=u&source=univ&sa=X&ved=0ahUKewjU7_Kf6gzOAhWDbiYKHReiDG0QsAQIKQ&dpr=1.25);

<http://www.yogajournal.com/article/practice-section/plumb-perfect/>;

http://www.heart.org/HEARTORG/HealthyLiving/PhysicalActivity/FitnessBasics/Balance-Exercise_UCM_464001_Article.jsp#.V6eFYP36upo;

VA SOL Standard: 8.1 The student will apply and demonstrate movement concepts and skills in modified versions of various game/sport, rhythmic and recreational activities.

ENDURING UNDERSTANDINGS

- Improvements in performance depend upon the training methods used.
- Proper and comprehensive warm-up and cool-down protocols are essential to short-term exercise performance, as well as long-term injury prevention and general physical health.
- The principles of overload, specificity and progression are highly interconnected and are interdependent.

VDOE Standard(s) Student Friendly Language What will the student know and be able to do?	SUGGESTED/SAMPLE ASSESSMENTS	Terms (Vocabulary) and Content Information	SUGGESTED/SAMPLE ACTIVITIES
<p>8.1 f) Demonstrate physiological principles of warm-up, cool-down, overload, specificity and progression to improve performance.</p> <p>Suggested Learning Targets:</p> <p>I can perform a proper warm-up and cool-down for (selected activity) and demonstrate it to my teacher.</p> <p>I can apply (overload, specificity or progression) to improve skill performance and demonstrate it to my partner.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • Questioning to check for understanding • Teacher observation • Post diagrams or pictures of various exercises around the area. Groups visit each diagram or picture and decide what type of workout program the illustrated exercise would apply and whether it would be used as part of the warm-up or cool-down. <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> • Design a fitness workout program for one of these areas: flexibility, cardiorespiratory endurance or muscular strength and endurance. The workout program will be designed for a two-month period and include <ul style="list-style-type: none"> ○ A warm-up ○ Exercises that show the principles of overload, specificity and progression. ○ A cool-down <p>Examples:</p> <ul style="list-style-type: none"> ○ Overloading for cardiorespiratory 	<ul style="list-style-type: none"> • Purpose of warm-ups: <ul style="list-style-type: none"> ○ To increase your breathing and heart rate ○ To increase the energy-releasing reactions in the muscles ○ To promote blood flow to the muscles, supply them with more oxygen and to remove waste products ○ Prepares your muscles for stretching • Purpose of cool-downs: <ul style="list-style-type: none"> ○ To help your heart rate and breathing move towards resting levels ○ To help avoid fainting or dizziness. ○ To help remove waste products from your muscles, such as lactic acid. ○ To help prepare muscles for the next exercise session. • Principle of overload: A person must work (load) the body in a higher manner than normal in order to improve fitness. <ul style="list-style-type: none"> ○ For improved cardiorespiratory endurance: It would mean walking faster and farther or more times a week than normal. ○ For improved muscular strength and endurance: It means contracting the muscles for a longer period of time or more frequently during the week or adding weight to the number of repetitions performed. ○ For improved flexibility: It would require 	<ul style="list-style-type: none"> • Specific lessons on the basic principles of training and examples for students to perform (e.g., warm-up, cool-down, overload, specificity and progression) Example: Flexibility training <ul style="list-style-type: none"> ○ Dynamic flexibility: The ability to perform dynamic movements within the full range of motion in the joint. Common examples include twisting from side to side or kicking an imaginary ball. Dynamic flexibility is generally more sport-specific than other forms of mobility. ○ Static Active flexibility: The ability to stretch an antagonist muscle using only the tension in the agonist muscle. An example is holding one leg out in front of you as high as possible. The hamstring (antagonist) is being stretched while the quadriceps and hip flexors (agonists) are holding the leg up. ○ Static Passive flexibility: The ability to hold a stretch using body weight or some other external force. Using the example above, holding your leg out in front of you and resting it

	<p>endurance</p> <ul style="list-style-type: none"> ▪ Frequency = minimum of 3 days/week ▪ Intensity = exercising in target heart rate zone ▪ Time = minimum of 15 minutes <p>○ Progression for cardiorespiratory endurance</p> <ul style="list-style-type: none"> ▪ Begin at a frequency of 3 days/week and work up to no more than 6 days/week ▪ Begin at an intensity near target heart rate threshold and work up to 80% of target heart rate ▪ Begin at 15 minutes and work up to 60 minutes <p>○ Specificity for cardiorespiratory endurance</p> <ul style="list-style-type: none"> ▪ Perform aerobic (with oxygen) activities for at least fifteen minutes without developing an oxygen debt ▪ Aerobic activities include, but are not limited to brisk walking, jogging, bicycling and swimming 	<p>stretching more often, holding stretches for longer periods of time or stretching beyond the usual point of flexion or extension.</p> <ul style="list-style-type: none"> ● Principle of specificity: Only those body parts, muscles or systems involved in a workout will be the ones to experience training. Specificity may apply to muscle groups, energy systems or specific movements and activities. Examples: <ul style="list-style-type: none"> ○ Weight training in the upper body will improve arm, shoulder, and back strength but activities in the lower body such as squats or lunges will not improve ○ A swimmer that swims several times a week will gain cardiorespiratory endurance but may lack in flexibility benefits ○ If a baseball pitcher wants to work specifically on his accuracy he will target this skill by trying to hit a specific target. If he wants to work on his speed he will target the throwing phase of the pitch and somehow measure the speed of his pitch. ● Principle of progression: The increase in exercise to make it more demanding once the body has adapted to the exercise being done before to continue improvements <ul style="list-style-type: none"> ○ When overload is no longer sufficient, adjustments must be made for fitness level improvement. Training status will benefit by gradually increasing the load that the body is working against. Incorrect overload may bring injury and demotivation due to overzealous targets. ○ Changes to frequency, intensity or amount of time in the exercise program. 	<p>on a chair. The quadriceps are not required to hold the extended position.</p> <ul style="list-style-type: none"> ● Teach the physiological principles of warm-up, cool-down, overload, specificity and progression to improve performance <p>Example:</p> <p>○ Warm ups: When a muscle is tight, range of motion can be compromised. Lack of range of motion causes changes in movement patterns that limit quality of performance and ultimately create injury risk. A tight muscle is a weak muscle. An overstretched or long muscle is also a weak muscle. This conundrum is known as the length-tension relationship. This rule says that a muscle must be at mid-length (or on a slight stretch) to generate optimal force.</p>
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Resources:

SHAPE America National Standards and Grade-Level Outcomes; http://www.teachpe.com/fitness/training_principles.php
http://www.heart.org/HEARTORG/HealthyLiving/PhysicalActivity/FitnessBasics/Warm-Up-Cool-Down_UCM_430168_Article.jsp#_V7G32bf6vcs;

VA SOL Standard: 8.1 The student will apply and demonstrate movement concepts and skills in modified versions of various game/sport, rhythmic and recreational activities.			
ENDURING UNDERSTANDINGS <ul style="list-style-type: none"> Technology can be used to provide opportunities to analyze movement, monitor progress toward motor skill and fitness goals, and assess learning/improvement. 			
VDOE Standard(s) Student Friendly Language What will the student know and be able to do?	SUGGESTED/SAMPLE ASSESSMENTS	Terms (Vocabulary) and Content Information	SUGGESTED/SAMPLE ACTIVITIES
<p>8.1 g) Demonstrate use of technology tools to analyze and improve performance.</p> <p>Suggested Learning Targets:</p> <p>I can self-monitor the heart rate during exercise and summarize my performance to my teacher.</p> <p>I can conduct a self-assessment of a physical fitness activity using various types of assessment equipment and give my conclusions to a peer.</p> <p>I can incorporate technology (specific tool i.e. iPads, personal device) to enhance knowledge, improve performance and provide feedback for self-assessing and application for the development of a personal fitness plan.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> Analyze skill/activity performance <p>Student Actions:</p> <ul style="list-style-type: none"> ○ Pose/Define Problems ○ Collaborate ○ Conclude ○ Practice ○ Refine <p>Assessment of Learning (Summative)</p>	<ul style="list-style-type: none"> Pedometers: Tools that show students how much they have moved during their physical education lesson. They can be used to set personal targets for potential improvement in each lesson. Heart rate monitors: Show students what it really means to be physically active. Students wear a heart rate monitor during a physical education class, then download the data and print off their HR activity during the lesson. They can use this information to show how much physical activity they participate in with an elevated heart rate. They can also set goals for increasing the duration at which they maintain an elevated heart rate. Computers: Internet resources such as pictures, videos and proper instruction on hundreds of exercises which can help individuals plan workouts or check their form when following recommended programs on their own. An important source of health and fitness-related information but validity of information depends on the source. Digital cameras and iPads: Methods of video recording for self/peer assessment. Active video games: Players physically interact via arm, leg or whole-body movements with images onscreen in a variety of activities. 	<ul style="list-style-type: none"> Specific lessons that teach students how to independently participate in physical activity monitoring (e.g., through pedometers or activity logs) and regulate physical activity behavior by using appropriate fitness and movement principals. Class discussion and demonstration of technology in outdoor pursuits and how they improve the performance of the activity (e.g., use of a GPS device when hiking or backpacking). Student use of technology to record and evaluate activities for the purpose of evaluation and improvement. Monitor target heart rates during physical activities. Class discussions on technology available such as, fitness bands, apps, interactive video games, for fitness monitoring or improvement.

	<ul style="list-style-type: none"> • Chose a physical activity that can also be done outside of school. Perform the activity over a period of time (e.g., one week). Use at least one technology tool to help analyze the performance of the physical activity to determine if there was improvement. Reflect on the value of the technology tool in relationship to monitoring improvement of the physical activity. 	<ul style="list-style-type: none"> • Smartphone applications: Applications (Apps) for phones that track activity. 	
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Resources:

SHAPE America National Standards and Grade-Level Outcomes; <http://www.humankinetics.com/excerpts/excerpts/using-technology-to-promote-physical-activity>

<p>VA SOL Standard: 8.1 The student will apply and demonstrate movement concepts and skills in modified versions of various game/sport, rhythmic and recreational activities.</p> <p>ENDURING UNDERSTANDINGS</p> <ul style="list-style-type: none"> • Skill-related fitness components are necessary for successfully performing the skills in physical activities. • An improvement in the ability to react quickly, apply significant force rapidly in the appropriate direction, and to redirect that force if needed is the ultimate goal of a program to improve speed, agility and quickness. 			
VDOE Standard(s) Student Friendly Language What will the student know and be able to do?	SUGGESTED/SAMPLE ASSESSMENTS	Terms (Vocabulary) and Content Information	SUGGESTED/SAMPLE ACTIVITIES
<p>8.1. h) Describe how movement is created in activities that involve agility, power, coordination, reaction time, speed, force, motion, rotation and energy.</p> <p>Suggested Learning Targets:</p> <p>I can describe the characteristics of movement that ensure a successful serve in (specific activity i.e.,</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • Questioning to check for understanding: Example— What is the difference between health-related fitness and skill-related fitness? • Written: List your favorite sports or recreational activities, describe the 	<ul style="list-style-type: none"> • Time: When to start motion for contacting an object (speed, pathway, distance). • Space: Directing an object to an intended location (batting, volleyball drive/hit/serve and lead pass). • Flow: Change of direction, acceleration and deceleration. • Force: Speed and effect needed to direct objects (batting, throwing, kicking, and pushing). • Agility: Ability to change and control the direction and position of the body while maintaining a constant, rapid 	<ul style="list-style-type: none"> • Class Discussion— Examples: <ul style="list-style-type: none"> ○ Objects will spin in the direction the force is applied ○ The weight of a body segment or the entire body times the speed of acceleration determines the force Example: In throwing a ball, the force applied to the ball is equal to the weight of the arm times the speed of acceleration of the arm.

<p>volleyball) and explain it to my partner.</p> <p>I can describe how movement is created a (specific activity i.e., golf putt) and explain it through an exit ticket.</p>	<p>specific _____ skill-related components needed for it and explain why they are needed. Give examples.</p> <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> Define and give examples of how movement is created in activities that involve agility, power, coordination, reaction time, speed, force, motion, rotation, and energy. 	<p>motion (changing directions)</p> <ul style="list-style-type: none"> Coordination: Ability to use the sense together with body parts during movement (hand-eye, eye-foot). Power: Ability to move body parts swiftly while apply the maximum force of muscles; combination of speed and muscular strength. Reaction time: Ability to reach or respond quickly to what is heard, seen or felt (stealing a base, starting from a start signal). Speed: Ability to move body or parts of body as rapidly as possible 	<ul style="list-style-type: none"> Specific lessons on individual or several of the skill-related fitness _____ components demonstrated through motor skills. <p>Example:</p> <ul style="list-style-type: none"> Application of force to control distance of an object in a target sport (specific activity i.e., golf putt) Rotation: Golf swing, throwing a baseball, downhill skiing (turning left and right)
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Resources:

SHAPE America National Standards and Grade-Level Outcomes; <http://www.teachpe.com/fitness/skill.php>

VA SOL Standard: 8.1 The student will apply and demonstrate movement concepts and skills in modified versions of various game/sport, rhythmic and recreational activities.

ENDURING UNDERSTANDINGS

- The lower the center of the body, the larger the base of support, the closer the center of the body is to the base of support, the more stability increases.
- Balance does not work in isolation it is a component of all movements, whether dominated by strength, speed, flexibility, or endurance.
- When the line of gravity is centrally located in the base of support, balance should be secure.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>SUGGESTED/SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED/SAMPLE ACTIVITIES</p>
<p>8.1 i) Explain the role of balance (center of support, center of gravity, planes of movement) in creating movement.</p> <p>Suggested Learning Targets:</p> <p>I can explain the role of balance in the movement skill</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> Oral: Partner discussions— Example: What plane does flexion and extension occur? (Sagittal) Written: Gathering and organizing information about the biomechanical principles of different movements. 	<ul style="list-style-type: none"> Planes of movement: <ul style="list-style-type: none"> Sagittal Plane: Passes through the body front to back, dividing it into left and right. Movements in this plane are the up and down movements of flexion and extension. Frontal Plane: Divides the body into front and back. Movements in this plane are sideway movements, called abduction and adduction. Transverse Plane: Divides the body into top and bottom. Movements in this plane 	<ul style="list-style-type: none"> Discussions on the planes of movement. <p>Example: Sagittal or Lateral plane— Vertical plane passing from the rear (posterior) to the front (anterior), dividing the body into left and right halves. Most sport and exercise movements that are almost two-dimensional, such as running, long jumping, biking, and rowing, take place in this plane.</p>

<p>(specific movement: e.g., running, dodging, jumping) to my partner.</p> <p>I can explain the principles of stability in the actions of a baseball catcher through my journal writing.</p>	<p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> ● Explain the role of balance in the following movements: <ul style="list-style-type: none"> ○ Running ○ Hopping ○ Jumping ○ Dodging ● Apply the principles of stability to a baseball catcher: <p>Example:</p> <ul style="list-style-type: none"> ○ Bends his knees to lower his center of gravity. ○ Has knees apart (to increase base of support) in the direction of the force coming towards him. ○ Uses a glove (> surface area to receive force) and brings hand in towards the body (force reception). 	<p>are rotational in nature, such as internal and external rotation, pronation and supination.</p> <ul style="list-style-type: none"> ● Center of gravity is the point where the three planes intersect. It is the point of exact center where the body freely rotates and the body weight is equal on all sides. Center of gravity can change positions depending on the actions of the body. ● Base of support is the area of contact between the body and the support surface. ● Dynamic balance is maintaining control and balance while moving. 	<ul style="list-style-type: none"> ● Practice stabilizing skills that require balance, maintaining equilibrium and gaining and maintaining postural control. <p>Example: Walking lunge with a plate held overhead when moving through the up position of the lunge then bringing plate to one side in coordination with the downward movement of the lunge.</p>
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Resources:
SHAPE America National Standards and Grade-Level Outcomes; <http://www.yogajournal.com/article/practice-section/plumb-perfect/>;
http://www.heart.org/HEARTORG/HealthyLiving/PhysicalActivity/FitnessBasics/Balance-Exercise-UCM_464001_Article.jsp#.V6eFYP36upe;
<http://www.humankinetics.com/excerpts/excerpts/five-factors-determine-stability-and-mobility>
[https://www.google.com/search?q=biomechanical+principles+\(e.g.,+center+of+gravity,+base+of+support\)&biw=1536&bih=696&tbm=isch&tbo=u&source=univ&sa=X&ved=0ahUKEwjU7-Kf6qzOAhWDbiYKHReiDG0QsAQIKQ&dpr=1.25](https://www.google.com/search?q=biomechanical+principles+(e.g.,+center+of+gravity,+base+of+support)&biw=1536&bih=696&tbm=isch&tbo=u&source=univ&sa=X&ved=0ahUKEwjU7-Kf6qzOAhWDbiYKHReiDG0QsAQIKQ&dpr=1.25)
<http://www.teachpe.com/anatomy/movements.php>;

VA SOL Standard: 8.1 The student will apply and demonstrate movement concepts and skills in modified versions of various game/sport, rhythmic and recreational activities.

ENDURING UNDERSTANDINGS

- Self/peer assessments allow students to detect, analyze, and correct errors in personal movement patterns.
- Feedback motivates, reinforces, and speeds learning.

VDOE Standard(s) Student Friendly Language What will the student know and be able to do?	SUGGESTED/SAMPLE ASSESSMENTS	Terms (Vocabulary) and Content Information	SUGGESTED/SAMPLE ACTIVITIES
<p>8.1 j) Analyze movement performance and utilize feedback to learn or improve the movement skills of self and others.</p> <p>Suggested Learning Targets:</p> <p>I can analyse (specific movement: e.g., long jump, basketball shooting, golf swing) critically and suggest improvements for practice at a higher level in my (selected assessment product: i.e., log, journal or portfolio).</p> <p>I can detect, analyze and correct errors and apply to refine (specific movement i.e. tennis forehand shot) through a video self-assessment.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • Teacher Observation: Students utilizing internal and external feedback. • Reflective self-paced task sheets: Example— Students are given a self-paced task sheet for the improvement of a skill or skill combinations. (e.g., basketball shooting tasks). Students reflect and self-assess how effective the self-paced task was. <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> • Analyze the validity and accuracy of a (specific movement skill i.e. long jump) through a self/peer assessment. <ul style="list-style-type: none"> ○ Practice. ○ Self/peer assessment— Understanding of skill check list, rubric or verbal teacher cues broken down into phases. ○ Correction. ○ Practice at higher level. ○ Re-assess. 	<ul style="list-style-type: none"> • Considerations when incorporating self/peer assessments: <ul style="list-style-type: none"> ○ Explain the expectations and benefits of engaging in a peer review process. ○ Be prepared to give feedback on students' feedback to each other. Display some examples of feedback of varying quality and discuss which kind of feedback is useful and why. ○ Set time limits and guidelines for the feedback process. ○ Listen to group feedback discussions and provide guidance and input when necessary. ○ Student familiarity and ownership of criteria tend to enhance peer assessment validity; therefore, involve students in a discussion of the criteria used. • Movement skill phases may not all fit neatly into three phases and additional phases may be devised or added. Example: The long jump may also be divided into: preliminary movements; run-up; take-off; and landing. 	<ul style="list-style-type: none"> • When analyzing movements, teach how to divide the movement performance into phases: Three phases— <ul style="list-style-type: none"> ○ Preparatory: Movements that prepare such as, backswing in golf or tennis. ○ Execution: <ul style="list-style-type: none"> ▪ Force-producing movements such as, the forward motion of the tennis forehand shot. ▪ Critical instant, the point of contact or the release such as, moment of contact in the tennis serve or the take-off in the long jump. ○ Follow-through: Body movements after the execution where the movement slows down such as, the high leg lift after kicking a goal or the golf club after the ball is struck. • Example of braking down a movement skill into phases: Long Jump— <ul style="list-style-type: none"> ▪ Preparatory: The length and speed of the run to the take-off board. ▪ Execution: Take-off and flight through the air. ▪ Follow-through: The landing.
<p>Resources: SHAPE America National Standards and Grade Level Outcomes; http://sydney.edu.au/education_social_work/groupwork/docs/SelfPeerAssessment.pdf</p>			

VA SOL Standard: 8.2 The student will apply movement principles and concepts and apply knowledge of major body structures to explain how body systems interact and respond to physical activity and movement.

ENDURING UNDERSTANDINGS

- Each of our body systems are interconnected and dependent on each other.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>SUGGESTED/SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED/SAMPLE ACTIVITIES</p>
<p>8.2 a) Explain how body systems interact with one another during physical activity.</p> <p>Suggested Learning Targets:</p> <p>I can explain how the skeletal-muscular systems work together in connection to physical activity through a graphic organizer.</p> <p>I can explain how the respiratory-cardiovascular systems work together in connection to physical activity through a summary paragraph.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> Questioning to check for understanding: Example: When you get excited, what system increases the heart rate? (Answer: Nervous) <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> Choose at least three body systems and explain their connection to physical activity. Example: Skeletal System makes the red blood cells that carry oxygen to all cells. The respiratory system brings in the oxygen that is carried on the red blood cells and carries the CO₂ out of the body which is performed by the circulatory system. The circulatory system needs the respiratory system for gas exchange. The muscles need oxygen to move. 	<ul style="list-style-type: none"> Examples of systems interacting together: <ul style="list-style-type: none"> Cardiovascular system: Exercise improves the strength and efficiency of the heart, which is a muscle and requires exercise. It also improves the circulation. The circulatory system delivers oxygenated blood to all parts of the body. Therefore, all the body's organs benefit from an efficient cardiovascular system. Respiratory system: Exercise increases the efficiency of the lungs which are responsible for oxygenating the blood before it circulates around the body. This enables the bones of the skeletal system and the muscles of the muscular system the ability to do their work. The digestive system provides nutrients to facilitate breathing and glucose plus oxygen produces water, carbon dioxide, and energy. The nervous system uses this energy to enable the brain to think and control all the other systems. Endocrine system: Vigorous exercise increases the release of endorphins, which improve the mood and induce a feeling of calmness. Exercise also regulates insulin in the blood and lessens the incidence of Type-2 diabetes. 	<ul style="list-style-type: none"> Discussions on the connections between systems. Examples: <ul style="list-style-type: none"> The heart, which is part of the circulatory system, does not beat unless the brain, which is part of the nervous system, tells it to. The skeletal system is dependent on the digestive system for increase in size and strength. The muscular system needs the respiratory and circulatory systems to supply energy in the form of oxygen and nutrients. Physical activities that make connections to different systems working together. Physical activities that cause the body to change and record or talk about what body systems cause or have a part in the changes.

Resources:

SHAPE America National Standards and Grade-Level Outcomes; <http://fitness.mercola.com/sites/fitness/archive/2013/09/20/exercise-health-benefits.aspx>; <http://www.livestrong.com/article/302607-how-do-the-digestive-respiratory-systems-work-together/>; <http://edquestscience.com/pdf/LS-CS-3notes.pdf>; <http://kassar-hsc-pdhppe.wikispaces.com/file/view/Preliminary+Core+2+-+Body+in+Motion.pdf>

VA SOL Standard: 8.2 The student will apply movement principles and concepts and apply knowledge of major body structures to explain how body systems interact and respond to physical activity and movement.			
ENDURING UNDERSTANDINGS			
<ul style="list-style-type: none"> When the body is moving or producing movement it obeys the same physical laws that apply to all types of motion. Humans move through a system of levers that cannot be changed but can be utilized more efficiently. 			
VDOE Standard(s) Student Friendly Language What will the student know and be able to do?	SUGGESTED/SAMPLE ASSESSMENTS	Terms (Vocabulary) and Content Information	SUGGESTED/SAMPLE ACTIVITIES
<p>8.2 b) Identify and describe biomechanical principles (e.g., spin, rebound, effects of levers) to understand skillful movements.</p> <p>Suggested Learning Targets:</p> <p>I can describe how a ball will rebound depending on the force used and explain its impact on performance to a partner.</p> <p>I can apply and describe the effects of levers when (specific activity i.e. striking in golf) and explain it through an exit ticket.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> Pick a movement (self/group) and list the biomechanical principles associated with the movement. <p>Example: Striking in golf:</p> <ul style="list-style-type: none"> Newton's Laws: force Levers Momentum Impact Stability <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> Students will list various biomechanical principles and describe how these principles apply to physical movement performance. 	<ul style="list-style-type: none"> Force: Absorption, impact of one or more force, speed of objects and generation of force. Torque: How to generate force. Levers: Rotate about an axis as a result of force being applied to cause its movement against a resistance or weight. In the body: <ul style="list-style-type: none"> Bones represent the bars. Joints are the axis. Muscles contract to apply force. Air Resistance: Impact on an object, shape of the object, impact on the flight. Trajectory/Projection: Changing the flight path, angles, and force applied. 	<ul style="list-style-type: none"> Participate in and discuss activities that demonstrate spin, rebound and effects of levers. <p>Example:</p> <ul style="list-style-type: none"> In throwing, the angular motion of the levers (bones) of the body (trunk, shoulder, elbow and wrist) is used to give linear motion to the ball when it is released. Muscles produce force to start, stop, accelerate, decelerate, and change the direction of motion in running activities. When dribbling a ball with a light force, the rebound will be small but dribbling with a heavy force will cause the rebound to be large.
<p>Resources:</p> <p>SHAPE America National Standards and Grade Level Outcomes; Sports Science Resources Online</p> <p>http://www.profedf.ufpr.br/rodackibiomecanica_arquivos/Books/Introduction%20to%20Sports%20Biomechanics.pdf;</p> <p>http://www.hhp.txstate.edu/hper/faculty/pankey/bioprin/htm/index.html; http://www.slideshare.net/ryanm9/year-11-biomechanics-with-levers-force-summation;</p> <p>http://www.teachpe.com/biomechanics/angular-motion/; http://www.teachpe.com/biomechanics/forces/</p>			

<p>VA SOL Standard: 8.2 The student will apply movement principles and concepts and apply knowledge of major body structures to explain how body systems interact and respond to physical activity and movement.</p> <p>ENDURING UNDERSTANDINGS</p> <ul style="list-style-type: none"> • Offense involves the strategies or players that attempt to score in a game. • Defense involves the strategies or players that prevent the other team from scoring. 			
VDOE Standard(s) Student Friendly Language What will the student know and be able to do?	SUGGESTED/SAMPLE ASSESSMENTS	Terms (Vocabulary) and Content Information	SUGGESTED/SAMPLE ACTIVITIES
<p>8.2 c) Explain how offensive and defensive tactics and strategies are used to gain an advantage offensively and defensively.</p> <p>Suggested Learning Targets:</p> <p>I can serve to open spaces on the (specific activity: e.g., tennis, badminton, volleyball) court and explain its advantage offensively to a partner.</p> <p>I can compare and contrast the use of offensive and defense strategies in (specific activity i.e. basketball) and demonstrate it through a diagram.</p> <p>I can apply appropriate offensive and defensive tactics at the right time and in the right situation and write a reflective paragraph on how I demonstrated this in (specific activity).</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • Peer Assessment: Students use checklists to assess modified games to identify how students are able to apply movement concepts. Example—Defensive strategies (e.g., moving in relationship to others, covering the space/court effectively, and responding to change of pace). • Written: Cognitive knowledge of offensive and defensive strategies and tactics for selected activity(s). <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> • Pick a game/activity and explain the tactics and strategies used to gain an advantage offensively and defensively. 	<ul style="list-style-type: none"> • Strategies and tactics within game play: <ul style="list-style-type: none"> ○ Moving into open space ○ Movement to get open: pick and roll, give and go, screens and fakes ○ Man to man zone defense ○ Defensive positioning ○ Speeding up, slowing down to intercept an object • Offensive Strategy: <ul style="list-style-type: none"> Tactic— ○ Possession of ball/object ○ Attempting to move in the direction of the goal ○ Moving and creating open spaces ○ Attacking the goal • Defensive Strategy: <ul style="list-style-type: none"> Tactic— ○ Staying between the offensive player and the goal ○ Use hands, feet, stick, or body to prevent a pass or scoring attempt ○ Protecting a goal (e.g., net, end zone) ○ Regaining possession of an object 	<ul style="list-style-type: none"> • Groups assigned to different stations with scenarios to create or select strategies/tactics to use. • Modified activities/games where one group stays on defense for a specific time period, while the other group stays on offense. At specific time intervals, the defensive group changes their system, switching back and forth between person-to-person and zone defense systems. Groups switch from offense to defense. Students are questioned on the movement concepts related to the situation. (Specific activity i.e. basketball). • In net game serving, mark the position each opponent would occupy during service reception. Students practice serving to the open spaces. Afterwards discuss with the class the importance of: <ul style="list-style-type: none"> ○ Looking for open spaces on the court (e.g., the best place to serve to) ○ Determining the relationship among players on the opposing team
<p>Resources:</p> <p>SHAPE America National Standards and Grade Level Outcomes; http://files.eric.ed.gov/fulltext/EJ795561.pdf; http://hooptactics.com/Free_Area_Offensive_Basketball_Strategies/; http://www.soccer-training-info.com/soccer_strategy_tactics.asp; http://learntocoachbasketball.com/sign-up/coaching-course/skill-development/level-i-tactical-skills; http://www.tennistips.org/tennis-technique.html; http://www.strength-and-power-for-volleyball.com/volleyball-strategies.html; http://www.usultimate.org/assets/1/Page/Teaching%20Ultimate-beta3.pdf</p>			

VA SOL Standard: 8.2 The student will apply movement principles and concepts and apply knowledge of major body structures to explain how body systems interact and respond to physical activity and movement.

ENDURING UNDERSTANDINGS

- The ability to analyze components of a skill can result in improvement.
- Problem-solving skills related to movement lead to skill acquisition.

VDOE Standard(s) Student Friendly Language What will the student know and be able to do?	SUGGESTED/SAMPLE ASSESSMENTS	Terms (Vocabulary) and Content Information	SUGGESTED/SAMPLE ACTIVITIES
<p>8.2 d) Analyze performance in a variety of selected skills/activities using movement concepts of agility, power, coordination, reaction time, speed, force, motion, rotation, and energy of self and partner.</p> <p>Suggested Learning Targets:</p> <p>I can analyze the components of agility in (specific activity i.e. soccer) in a summary paragraph.</p> <p>I can analyze force in a (specific activity i.e. softball throw) in my (selected assessment product: i.e., log, journal or portfolio).</p>	<p>Assessment for Learning</p> <ul style="list-style-type: none"> • Questioning to check for understanding: Example – <ul style="list-style-type: none"> ○ What does release angle have to do with force? ○ How is force transferred at the point of the take-off board in the running long jump? • Written: Research movement concepts in skills/activities. Example – Research why leaning back creates more throwing force than standing straight and why a 40 degree to 43 degree angle (between 1 and 2 o'clock) would result in more distance than 15 degree to 20 degree angle (between 2 and 3 o'clock). Example answer – The longer the lever, from natural body length or the body movements to the extended backward position, the greater the arc through which it accelerates and thus the greater the speed given to the thrown object. <p>Assessment of Learning</p> <ul style="list-style-type: none"> • Develop a chart that gives a definition of agility, power, coordination, reaction time, speed, force, motion, rotation and energy; and give examples of general physical activities and sport-specific skill activities. Example – Using agility and power: Vocabulary General Activity Sport Specific Agility: Changing Shuttle run test soccer footwork 	<ul style="list-style-type: none"> • Movement performance examples using movement concepts: <ul style="list-style-type: none"> ○ Force: Varies returns in net/wall games ○ Agility: Changing directions to hit a tennis ball ○ Coordination: Using hands and eyes in a basketball dribble is called hand-eye coordination ○ Speed: Relying on speed to gain advantage such as, a basketball player making a fast break to perform a lay-up or a football player out running the defense to receive a pass ○ Power: A combination of speed and muscular strength such as, a volleyball player moving quickly to the net and lifting their bodies high into the air ○ Reaction Time: Reach or respond quickly to what is seen, hear or felt. 	<ul style="list-style-type: none"> • For each physical activity/game performed in class, students will identify the movement concepts of agility, power, coordination, reaction time, speed, force, motion, rotation, and energy that connects with that particular activity or game. *Refer to examples under content information. • Teach the components of training for the different movement concepts. Example – Key components of agility training: <ul style="list-style-type: none"> ○ Body control and awareness ○ Recognition and awareness ○ Starting and first step ○ Acceleration ○ Footwork ○ Change of direction ○ Stopping • Teach the components during game activities. Example – Soccer

	<p>directions rapidly _____ basketball (person- to person defense)</p> <p>Power: Moving body _____ Medicine ball _____ Power lift (as in swiftly while applying _____ toss _____ weightlifting) force of muscles. _____ Running long jump</p>	<p>An example is stealing a base in baseball.</p>	<p>○ Soccer requires effective acceleration, top end speed, deceleration and direction change</p>
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Resources:

SHAPE America National Standards and Grade Level Outcomes; <http://www.humankinetics.com/excerpts/excerpts/the-importance-of-health-fitness-and-wellness/>;
<http://www.livestrong.com/article/138612-exercises-developing-fine-motor-skills/>;
<http://www.humankinetics.com/news-and-excerpts/news-and-excerpts/methods-of-developing-speed-and-agility/>;
<https://prezi.com/mpubrijzokvzh/speed-agility-and-quickness-training/>

VA SOL Standard: 8.2 The student will apply movement principles and concepts and apply knowledge of major body structures to explain how body systems interact and respond to physical activity and movement.			
ENDURING UNDERSTANDINGS <ul style="list-style-type: none"> Feedback provided to others about skills should be concise and should directly relate to the assessment provided. Feedback is only valuable if it is acted upon. 			
VDOE Standard(s) Student Friendly Language What will the student know and be able to do?	SUGGESTED/SAMPLE ASSESSMENTS	Terms (Vocabulary) and Content Information	SUGGESTED/SAMPLE ACTIVITIES
<p>8.2 e) Analyze movement progressions (practice, self or peer assess, correct, practice at a higher level and reassess) of a specific skill, and utilize feedback to improve the movement skills of self and/or others.</p> <p>Suggested Learning Targets:</p> <p>I can analyze the movement progressions of a (specific activity i.e. tennis serve) in my (selected assessment product: i.e., log, journal or portfolio).</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> Self/peer assessments: Students assess each easy to difficult task sequence that is based on different models of progression. Example—Using the whole tennis serving motion, analyze at different distances from the net. <ul style="list-style-type: none"> Eighteen feet in front of the baseline. Twelve feet in front of the baseline. Six feet in front of the baseline. Checklist to record/self-assess individual skill performance. Video: Analyze the critical skill elements of manipulative skill sequences and make suggestions for skill improvement. <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> Students videotaping peers and analyzing the components of a specific skill. Correct and practice (specific activity i.e. tennis serve) then videotape each other again and reassess. Example: Videotaping of a tennis serve. <ul style="list-style-type: none"> Analysis of videotapes relative to the five components of the serving motion: (a) grip and stance, (b) ball toss, (c) racket preparation, (d) arm 	<ul style="list-style-type: none"> Progression: Presenting content in an easy to difficult sequence, is a basic instructional principle that: <ul style="list-style-type: none"> Enhances student success and achievement Enhances learners' efficacy perceptions and motivation Impacts students' feelings of efficacy and competence and facilitates active engagement patterns Observation Strategies: <ul style="list-style-type: none"> Observe from different angles (e.g., side, front and back). This gives a number of different perspectives. If the movement covers some distance or moves in different directions, observation should be from various points. View the movement more than once. First look at the whole movement then focus on the different parts of the movement. 	<ul style="list-style-type: none"> Teach easy to difficult task sequences based on different models of progression by having students at each level practice, self/peer assess, correct, practice at a higher level and reassess. Example: When teaching baseball or softball batting, learners practice the whole swing in a series of tasks where the difficulty is manipulated by the movement of the ball. First hitting a stationary ball, then a slowly moving ball, then balls thrown faster. Teaching sequence of tasks in parts. Students will analyze self/peer each part, correct, practice and reassess. Example: Tennis serve, part progression <ul style="list-style-type: none"> Serving toss Tossing and hitting, beginning with the racket in "back-scratch" position Tossing and hitting, beginning with the racket held near the hip

	<p>extension and (e) follow through.</p> <ul style="list-style-type: none"> ○ Rubric/checklist provided to score each component. ○ Correct and practice the serve then videotape each other again and reassess. ○ Reflect on how this improved their tennis serve and how effective was the process in comparison to the easy-to-difficult task sequence that is based on different models of progression. 	<ul style="list-style-type: none"> ○ Look for the cause of ineffective movement and not the symptoms. Example — If a step back is taken after a landing on a back somersault, do not comment on the landing but instead comment on the reason for the poor landing due to not tucking tightly or opening out too soon. 	<ul style="list-style-type: none"> ○ Whole serving motion
<p>Resources: SHAPE America National Standards and Grade Level Outcomes; http://www.teachpe.com/sports_psychology/teaching.php</p>			

VA SOL Standard: 8.2 The student will apply movement principles and concepts and apply knowledge of major body structures to explain how body systems interact and respond to physical activity and movement.			
ENDURING UNDERSTANDINGS <ul style="list-style-type: none"> Physical activity affects metabolism and all major body systems. Physical activity affects brain chemistry and cognitive functioning contributing to emotional stability, physical health and the ability to learn. By staying active, you challenge your heart, lungs, muscles, tendons, and bones to adapt to the stress of whatever exercise/activity you do and that adaptation will transfer to help you with all physical movement. 			
VDOE Standard(s) Student Friendly Language What will the student know and be able to do?	SUGGESTED/SAMPLE ASSESSMENTS	Terms (Vocabulary) and Content Information	SUGGESTED/SAMPLE ACTIVITIES
<p>8.2 f) Describe effects of exercise/activity on physical movement, body systems and brain development.</p> <p>Suggested Learning Targets:</p> <p>I can describe the effects of (specific activity i.e., weight lifting) on the muscular and skeletal systems to a peer.</p> <p>I can describe the effects of aerobic activity on the (i.e., cardiorespiratory system, muscular system or skeletal system) in a graphic organizer.</p> <p>I can describe the effects of exercise/activity on the brain through an exit ticket.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> Questioning to check for understanding Teacher observation <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> Pick an exercise/activity and describe the effects it has on physical movement, body systems and brain development. 	<ul style="list-style-type: none"> Effects of exercise/activity on the brain: <ul style="list-style-type: none"> Increased blood flow due to physical movement benefits the brain. Immediately, the brain cells will start functioning at a higher level making you feel more alert and awake during exercise and more focused afterward. Exercising also promotes the growth of new brain cells. These new brain cells help boost memory and learning. Effects of exercise/activity on the body systems: <ul style="list-style-type: none"> The body's structures and functions respond and adapt to physical stressors. For example, aerobic activity places a stress on the cardiorespiratory systems and muscular system requiring the lungs to move more air and the heart to pump more blood to be delivered to the working muscles so aerobic activity largely benefits the body's cardiovascular system. Muscle/bone strengthening physical activity programs improve the muscular and skeletal systems. For example, weight lifting programs improve muscular strength and keep bone density from declining. 	<ul style="list-style-type: none"> Make connections between exercise/activity on physical movement. Example — You have a lower risk of functional movement limitations than people who are inactive. Make connections between exercise/activity on the brain. Example — Exercise encourages your brain to work at optimum capacity by causing your nerve cells to multiply, strengthening their interconnections and protecting them from damage. Make connections between exercise/activity on body systems. Example — Heart rate increases and supplies more oxygenated blood to your muscles. The fitter you are, the more efficiently your heart can do this, allowing you to work out longer and harder. This increased efficiency will also reduce your resting heart rate. Your blood pressure will also decrease as a result of new blood vessels forming.
<p>Resources: SHAPE America National Standards and Grade Level Outcomes; http://edquestscience.com/pdf/LS-CS-3notes.pdf; http://kassar_hsc_pdhpe.wikispaces.com/file/view/Preliminary+Core+2+Body+in+Motion.pdf</p>			

VA SOL Standard: 8.2 The student will apply movement principles and concepts and apply knowledge of major body structures to explain how body systems interact and respond to physical activity and movement.

ENDURING UNDERSTANDINGS

- Muscles exist in groupings that work to produce movements by muscle contraction.
- Muscles can only cause bones to move by contracting, which means a muscle can only move a bone in one direction.
- Muscles work in antagonistic pairs.

VDOE Standard(s) Student Friendly Language What will the student know and be able to do?	SUGGESTED/SAMPLE ASSESSMENTS	Terms (Vocabulary) and Content Information	SUGGESTED/SAMPLE ACTIVITIES
<p>8.2 g) Describe how muscles move bones to create paired movement by relaxing and contracting.</p> <p>Suggested Learning Targets:</p> <p>I can describe how muscles pull on bones to create movement in pairs by relaxing and contracting (e.g., hamstrings/quadriceps and biceps/triceps) and explain it to my teacher.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • Oral: Peer discussions on bone and muscle movement. • Questioning to check for understanding. Examples— <ul style="list-style-type: none"> ◦ What muscles work together to move the legs back and forth when running? Answer: Back of the legs, hamstrings. Front of the legs, quadriceps. ◦ What muscles move the arms and shoulders forward and backward? Answer: Pectorals and Trapezius ◦ Why do you use the triceps more than the biceps? Answer: We use our biceps more than our triceps due to lifting against gravity. ◦ Why skeletal muscles are also called voluntary muscles? Answer: They are under conscious control. <p>Assessment of Learning</p>	<ul style="list-style-type: none"> • Bone and muscle vocabulary: <ul style="list-style-type: none"> ◦ Bone: Rigid tissues that can support weight without bending. ◦ Muscle: Tissue that can contract and relax to cause movement. ◦ Tendons: Strong, fibrous, flexible connective tissue that joins muscles to bone. ◦ Ligament: Strong, fibrous, elastic connective tissues that connect bones to each other in a joint. ◦ Flexor: The muscle that contracts to cause a joint to bend. ◦ Extensor: The muscle that contracts to cause the joint straighten. • Groupings of muscles according to actions: <ul style="list-style-type: none"> ◦ Agonist: (Prime movers) Muscles that are associated with motion itself by shortening with contraction to produce a movement. Also referred to as prime movers since they are the muscles that are primarily responsible for generating the movement. ◦ Antagonistic pairs: (Opposing muscles to agonists). One muscle contracts while the other relaxes. Example—The biceps flexes the elbow and the triceps extends it. ◦ Synergist: (Produce motion similar to or in concert with agonist muscles) Muscles that act around a moveable joint to produce motion similar to or in concert with agonist muscles, allowing for a range of movements. Sometimes referred to as neutralizers 	<ul style="list-style-type: none"> • Discussions on paired movements. Examples: <ul style="list-style-type: none"> ◦ Biceps and triceps: Example of an agonist/antagonist pair. <ul style="list-style-type: none"> ▪ During extension the triceps would act as the agonist while the biceps would act as the antagonist. These reverse during flexion. ▪ The lower arm is moved upwards (flexed) when the biceps muscle contracts and the triceps muscle is relaxed. It is moved downwards (extended) when the triceps is contracted and the biceps is relaxed. ▪ When the muscles contract, usually just one bone moves such as when the biceps in the arm contracts, the radius moves but the scapula does not. ◦ Hamstrings and quadriceps: Control the movement of the

	<p>(Summative)</p> <ul style="list-style-type: none"> Choose a paired muscle movement and describe how the muscles move the bones to create the movement by relaxing and contracting. Example — Bicep curl <ul style="list-style-type: none"> The agonist, the prime mover, will contract. This is the biceps. The antagonist which is the triceps, relaxes (lengthens). The synergist, which helps to stabilize the bone that is not moving, is the deltoid. 	<p>because they help cancel out or neutralize, extra motion from the agonists to make sure that the force generated works within the desired plane of motion.</p> <ul style="list-style-type: none"> Muscles can contract in the following ways: <ul style="list-style-type: none"> Isometric contraction: A contraction in which no movement takes place, because the load on the muscle exceeds the tension generated by the contracting muscle. Occurs when a muscle attempts to push or pull an immovable object. Isotonic contraction: A contraction in which movement does take place, because the tension generated by the contracting muscle exceeds the load on the muscle. Occurs when you use your muscles to successfully push or pull an object. Isotonic contractions are further divided into two types: <ul style="list-style-type: none"> Concentric contraction: A contraction in which the muscle decreases in length (shortens) against an opposing load, such as lifting a weight up. Eccentric contraction: A contraction in which the muscle increases in length (lengthens) as it resists a load, such as lowering a weight down in a slow, controlled fashion. During this contraction, the muscles that are shortening serve as the agonists and hence do all of the work. The muscles that are lengthening serve as the antagonists (and do all of the work). Ballistic movements: Movements initiated by muscle activity in one muscle group, continued in a 'coasting' period with no muscle activation and terminated by deceleration by the opposite muscle group or by passive tissue structures, such as ligaments. Many ballistic sports movements can be subdivided biomechanically into three phases. Each of these phases has specific biomechanical functions. Example — Jumping <ul style="list-style-type: none"> Preparation: Lowering the body Action: Raising the body Recovery: Time in the air and controlled landing 	<p>lower leg.</p>
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Resources:

SHAPE America National Standards and Grade-Level Outcomes

http://www.edu.xunta.es/ftpserver/portal/S_EUROPEAS/ED_FISICA2/MUSCLES.htm

<https://www.boundless.com/physiology/textbooks/boundless-anatomy-and-physiology-textbook/the-muscular-system-10/overview-of-the-muscular-system-103/how-skeletal-muscles-produce-movements-566-7388/>

Physical Education Framework for Instruction

Strand: Anatomical Basis of Movement

Grade Level: 8

VA SOL Standard: 8.2 The student will apply movement principles and concepts and apply knowledge of major body structures to explain how body systems interact and respond to physical activity and movement.

ENDURING UNDERSTANDINGS

- The main movements about the three axes (sagittal, frontal and vertical) for a particular joint are flexion and extension about the frontal axis, abduction and adduction about the sagittal axis, and medial and lateral (internal and external) rotation about the vertical (longitudinal) axes.
- Skeletal muscles play many roles in the body such as movement and joint stability.
- Ballistic movement (rapid movement of the limbs), as found in speed, agility, and quickness training, is created by a forced and rapid lengthening of a muscle immediately followed by a shortening of the muscle, creating an elastic “rubber band like” effect of energy release.

VDOE Standard(s) Student Friendly Language What will the student know and be able to do?	SUGGESTED/SAMPLE ASSESSMENTS	Terms (Vocabulary) and Content Information	SUGGESTED/SAMPLE ACTIVITIES
<p>8.2 h) Identify types of joints and associated movements, to include ball and socket (flexion/extension), pivot (rotation of one bone around another) and hinge (flexion/extension).</p> <p>Suggested Learning Targets:</p> <p>I can identify the type of joint and the associated muscle movement in (specific movement: i.e., kicking) and describe it to a peer.</p> <p>8.2 i) Apply knowledge of anatomy to accurately describe movements in relation to type of joint and associated movement/motion, associated bones and muscles and type of muscle contraction.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • Questioning to check for understanding. Example—What enables a joint to be mobile? Answer: Joint mobility is the ability of a joint to move through its natural, effective range of motion and is further characterized as the balance of strength and flexibility regulating contrasting motions around a joint (i.e., flexion and extension). <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> • Choose a joint movement and describe how the muscles cause the movement. Include bones that the muscles attach to and move. Example—Kicking Quadriceps origin of attachment to the stationary bone is the femur. 	<ul style="list-style-type: none"> • Joint Types: <ul style="list-style-type: none"> ◦ Hinge: Movement at the joint is flexion and extension. Examples are elbow and knee ◦ Pivot: Rotation of one bone around another. Example is the top of the neck the atlas and axis bones ◦ Ball and Socket: Movement at the joint is flexion, extension, adduction and abduction, internal and external rotation. Example: shoulder and hip • Flexion: Movement that decreases the joint angle, usually anteriorly in the sagittal plane. (Shoulder, knee, elbow, hip movement) • Extension: Movement that increases the joint angle, usually posteriorly in the sagittal plane. (Shoulder, knee, elbow, hip movement) 	<ul style="list-style-type: none"> • Teach examples of: <ul style="list-style-type: none"> ◦ Flexion, such as tuck jump, front dumbbell raise, bicep curl ◦ Extension, such as straight leg deadlift, triceps press down, military press ◦ Adduction, such as cable crossover pulldown, supine dumbbell flys ◦ Abduction, such as straight arm dumbbell side raise, star jump • Teach how muscles are stabilizers. Examples— <ul style="list-style-type: none"> ◦ Muscles contract to hold another body part immobile while another body part is moving, such as your wrist while doing a bench press or core muscles ◦ A proximal joint (closes to) is stabilized while the distal (farthest away) joint performs the action, such as the shoulder joint being stabilized by flexors/extensors, abductors/adductors, and internal/external rotators, to perform an isolated elbow flexion • Teach examples of joint movements: <ul style="list-style-type: none"> ◦ When a sprinter comes out of the blocks, proper

<p>Suggested Learning Targets:</p> <p>I can identify and explain the role of stabilizing muscles in movement (selected assessment product: i.e., log, journal or portfolio).</p>	<p>Origin of attachment to the moving bone is the tibia. When the quadriceps contract the tibia of the lower leg is pulled forward to straighten the knee joint. The hamstrings lengthen as the knee is strengthened.</p>	<ul style="list-style-type: none"> ● Abduction: Movement away the midline of the body, usually in the frontal plane. (Shoulder, wrist, hip movement) ● Rotation (right or left): Right or left rotation in the transverse plane. (Neck, trunk movement) 	<p>range of motion during hip extension requires strength of the hip extensors, as well as the ability for the hip flexors to lengthen properly to allow for full hip extension. If there is an imbalance of strength and flexibility about the hip, range of motion will be compromised, which will in turn affect force output and speed of movement.</p>
<p>Resources:</p> <p>SHAPE America National Standards and Grade-Level Outcomes; http://www.teachpe.com/gcse_anatomy/joints.php https://www.fix.com/blog/flexibility-mobility-stability/; http://www.exrx.net/Lists/Articulations.html; http://www.mananatomy.com/basic-anatomy/actions-skeletal-muscles</p>			

<p>VA SOL Standard: 8.3 The student will apply self-assessment skills and use technology to create and implement a personal fitness plan to improve or maintain personal fitness.</p> <p>ENDURING UNDERSTANDINGS</p> <ul style="list-style-type: none"> Relevant fitness data helps a good planner know when and where to make adjustments to improve physical fitness. Fitness planning creates consistency and makes sure that individuals are getting the most out of their workouts by targeting all muscle groups as well as getting a good cardio workout. 			
<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>SUGGESTED/SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED/SAMPLE ACTIVITIES</p>
<p>8.3 a) Self-assess level of physical activity and personal fitness on all components of health-related fitness, including body composition and develop a plan, including SMART (specific, measurable, attainable, realistic, timely) goals and action plan strategies that include documentation of activities, mid-year and end-of-year assessments, reflection on progress and timeline for maintenance or improvement.</p> <p>Suggested Learning Targets:</p> <p>I can interpret and use fitness assessment data to determine areas to improve/maintain and create SMART goals for the development of a fitness plan in a fitness log/journal.</p> <p>I can develop a personal fitness plan for all the areas of health-related fitness to reach my SMART goals that includes action steps and appropriate activities, mid-year and end-of-year assessments, conditioning</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> Design Brief for Personal Fitness Plan Example: <ul style="list-style-type: none"> Situation: What are you trying to develop? Problem: What are the concerns? Requirements: What individual requirements must be met to complete the task? Resources: What resources will you use? Evaluation: What is the criteria by which the task will be graded? Peer assessment: Exchange fitness plan goals and evaluate if they are written as a correct SMART goal. Written reflections of fitness data. Example: <ul style="list-style-type: none"> An in-depth valid comparison of the data between two fitness test periods that determines if improvement has occurred and relevant examples of goals for future fitness testing. An analysis of how the experience contributed to student understanding of self, others and/or course concepts of fitness. <p>Assessment of Learning (Summative)</p>	<ul style="list-style-type: none"> Health-related fitness: Muscular Strength, muscular endurance, flexibility, cardiovascular endurance and body composition http://www.teachpe.com/fitness/health.php FITT principle: Used to guide the development of fitness plans that cater for an individual's specific needs. <ul style="list-style-type: none"> http://www.ode.state.or.us/teachlearn/subjects/pe/curriculum/fittprinciple.pdf http://stretchcoach.com/articles/fitt-principle/ SMART Goals http://www.unh.edu/hr/sites/unh.edu.hr/files/pdfs/SMART-Goals.pdf Body Mass Index (BMI) https://www.cdc.gov/healthyweight/assessing/bmi/ Training principles: http://www.teachpe.com/fitness/trainin-g-principles.php 	<ul style="list-style-type: none"> Teach how to assess personal fitness status for each component of fitness and use information to develop individualized physical fitness goals. Participate independently in the implementation of a personal fitness plan inside of school. Complete a self-assessment of health-related fitness and interpret fitness data comparing individual scores to established Virginia Wellness fitness standards and BMI calculations to the CDC protocols and recommendations. Create SMART goals for improvement of physical activities. Analyze and evaluate a personal fitness plan in relation to the FITT principle, specificity, overload, and progression Documentation of activities: http://kidshealth.org/en/teens/exercise-log.html?WT.ac=ctg#catdieting

<p>principles, timeline and reflection on progress.</p>	<ul style="list-style-type: none"> • Develop a personal fitness plan to address all the components of health-related fitness to improve/maintain, including intermediate (quarterly) and long-term SMART goals, action plan, reassessments and modify/alter/change plans as needed. 		
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Resources:

SHAPE America National Standards and Grade-Level Outcomes; — <http://www.askthetrainer.com/5-components-of-physical-fitness/>;
[http://www.humankinetics.com/excerpts/excerpts/the-importance-of-health-fitness-and-wellness](http://www.humankinetics.com/excerpts/excerpts/the-importance-of-health-fitness-and-wellness;); — http://www.teachpe.com/fitness/training_principles.php
<http://www.ode.state.or.us/teachlearn/subjects/pe/curriculum/fittprinciple.pdf>;
http://www.heart.org/HEARTORG/HealthyLiving/PhysicalActivity/FitnessBasics/Types-of-Fitness_UCM_462352_Article.jsp#.V6d9AP36upo;
http://www.heart.org/HEARTORG/HealthyLiving/PhysicalActivity/StayingMotivatedforFitness/Identifying-Your-Fitness-Goals_UCM_462202_Article.jsp#.V6eCrf36upo; — <http://www.doe.virginia.gov/instruction/physed/index.shtml>;
http://www.cdc.gov/healthyweight/assessing/bmi/adult_bmi/english_bmi_calculator/bmi_calculator.html
<http://classroom.kidshealth.org/classroom/6to8/personal/fitness/fitness.pdf>; — http://www.thephysicaleducator.com/resources/infographics/fitness_components/

<p>VA SOL Standard: 8.3 The student will apply self-assessment skills and use technology to create and implement a personal fitness plan to improve or maintain personal fitness.</p> <p>ENDURING UNDERSTANDINGS</p> <ul style="list-style-type: none"> When amounts of physical activity need to be increased to meet personal goals, physical activity should be increased gradually over time because creating a small overload and waiting for the body to adapt and recover reduces the risk of injury. Combining the specificity, overload, and progression principles will ensure you're not only doing the right exercises but also doing them at a resistance, speed and frequency that will force your body to adapt. 			
<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>SUGGESTED/SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED/SAMPLE ACTIVITIES</p>
<p>8.3 b) Define and describe specificity, overload, and progression in relation to improving personal fitness.</p> <p>Suggested Learning Targets:</p> <p>I can apply specificity, overload and progression to my personal program for improving personal fitness in my fitness log/journal.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> Questioning to check for understanding: Examples <ul style="list-style-type: none"> Have included exercises that overload the body when compared to your previous workouts? Have you recently increased the intensity, volume or frequency of these exercises? Are you increasing the intensity, volume or frequency of these exercises progressively so you build upon previous workouts? Assessing knowledge of specificity, overload and progression and how to apply the principles to student's own programs for improving personal fitness. <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> Develop a scenario where an individual uses specificity, overload, and progression in relation to improving their personal fitness. Create starting and long term goals and describe the activities. Example: This individual currently does 150 minutes (2 hours and 30 minutes) a week of moderate-intensity activity. They want to work up to at least the equivalent of 300 minutes (5 hours) of moderate-intensity activity a week. They also want 	<ul style="list-style-type: none"> Specificity of Training: Refers to the type of exercise used to make specific changes in fitness. <ul style="list-style-type: none"> Resistance work (high load, few reps) improves muscle strength. Stretching exercises improve flexibility. Resistance work (light load, many reps) improves muscle endurance. Endurance exercises improve cardiorespiratory endurance. Overload Principle: An overload is an intensity greater than encountered on a regularly daily basis. <ul style="list-style-type: none"> Physiological changes can only occur from exercise when an overload is applied. A small overload is to move from sedentary to fit whereas a greater overload is needed to move to higher levels of fitness. It is recommended to first increase the number of minutes per session (duration) and the number of days per week (frequency) of moderate-intensity activity. Later, if desired, increase 	<ul style="list-style-type: none"> Teach how increasing the intensity, volume or frequency of an exercise will overload your body, forcing it to adapt. Example <ul style="list-style-type: none"> Increase Exercise Intensity: Increase the weight lifted or the speed you move an object or your body through space. Increase Exercise Volume: Increase the number of repetitions, sets or distance you move an object or your body through space. Increase Exercise Frequency: Increase the number of times you complete the same exercise in a week or month. Teach how stressing a body part in a particular way develops that body part for the way it was stressed. Example <ul style="list-style-type: none"> If you exercise by running you will get better at running and if you exercise by bicycling you will get better at bicycling. This happens because whenever you exercise, your body's various systems (muscles, bones, nerves, lungs, and heart) adapt specifically to the

	<p>to shift some of that moderate intensity activity to vigorous intensity activity. The current 150 minutes a week includes:</p> <ul style="list-style-type: none"> ○ Thirty minutes of mowing the grass 1 day a week ○ Thirty minutes of brisk walking 4 days a week ○ Fifteen minutes of muscle-strengthening exercises 2 days a week <p>Increasing frequency and duration: Over a month, this individual adds walking on another weekday and gradually adds 15 minutes of moderate intensity activity on each of the 5 walking days each week. This provides an additional 105 minutes (1 hour and 45 minutes) of moderate intensity activity. Increasing intensity: Over the next month, they decide to replace some walking with jogging. Instead of walking 45 minutes, they walk for 30 minutes and jog for 15 minutes on each weekday, providing the equivalent of 300 minutes a week of moderate-intensity physical activity from walking and jogging.</p> <p>Reaching the goal: After these increases, this individual is doing a total of 180 minutes of moderate intensity activity each week (walking and mowing) and also doing 75 minutes (1 hour and 15 minutes) of vigorous-intensity jogging. One minute of vigorous intensity activity is about the same as 2 minutes of moderate intensity activity, so now they are doing the equivalent of 330 moderate intensity minutes (5 hours and 30 minutes) a week. They have more than met their goal.</p>	<p>the intensity.</p> <ul style="list-style-type: none"> ● Progression: Increasing the frequency, intensity, and duration of activities over a period of time will cause improvement in physical activity. ○ Improvement is rapid at first but will gradually level off. At high levels of activity, it may be necessary to change the type of activity performed. 	<p>stress of the exercise.</p> <ul style="list-style-type: none"> ○ Choose activities to add to your training program that are similar to your goal activity, but also different enough to reduce your risk for injury. For example, if you are a runner, consider water running versus adding an exercise bike workout to your training routine. This activity not only mimics running but also provides resistance to running, which can increase the specific leg strength you need to make running on dry land easier.
<p>Resources: SHAPE America National Standards and Grade Level Outcomes; http://www.teachpe.com/fitness/training_principles.php</p>			

VA SOL Standard: 8.3 The student will apply self-assessment skills and use technology to create and implement a personal fitness plan to improve or maintain personal fitness.

ENDURING UNDERSTANDINGS

- There are a variety of tools that can be used to analyze fitness.
- Selection of a measurement method depends on the purpose of the evaluation and what is being measured.

VDOE Standard(s) Student Friendly Language What will the student know and be able to do?	SUGGESTED/SAMPLE ASSESSMENTS	Terms (Vocabulary) and Content Information	SUGGESTED/SAMPLE ACTIVITIES
<p>8.3 c) Demonstrate use of technology tools to assess, monitor/record, and improve personal fitness.</p> <p>Suggested Learning Targets:</p> <p>I can incorporate technology to enhance knowledge and improve the performance of my personal fitness.</p> <p>I can conduct self or peer assessment of a physical fitness activity using technology tools.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • Online training logs <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> • Pick a technology tool and a fitness activity to monitor for a two week period. Create data by performing a pre-diagnostic test, a one week or mid-test and a two week or post-test. Reflect on the data and how the technology tool enhanced your ability to track improvement in the fitness activity that was being monitored. 	<ul style="list-style-type: none"> • Evaluation tools <ul style="list-style-type: none"> ○ Heart/pulse monitors: Used primarily to assess and monitor exercise intensity. Predict the energy expenditure associated with various durations, intensities and frequencies of physical activity. ○ Pedometers: Tracks distance and pace. ○ Computers: Internet resources such as pictures, videos and proper instruction on hundreds of exercises which can help individuals plan workouts or check their form when following recommended programs on their own. ○ Digital cameras and iPads: Methods of video recording for self/peer assessment. ○ Smartphone applications: Applications (Apps) for phones that track activity. 	<ul style="list-style-type: none"> • Students uses available technology (e.g. pedometers, heart rate monitors) to self-monitor aerobic intensity. • Teach available online tools designed for assessment and monitoring and others that are geared for record keeping and program development. Citing convenience of standardized forms and embedded fitness calculators to quickly determine training levels with less math errors. Visual aids and reports are another plus. • Use technology to record and evaluate activities for fitness improvement. • Use software that is available to all students both in and out of school • Monitoring and evaluation: <ul style="list-style-type: none"> ○ The routine collection and use of data to assess programs in achieving programmed objectives. ○ Collecting special data on a periodic or “as needed” basis to address issues that cannot be examined using routinely collected data such as overall impact.
<p>Resources:</p> <p>SHAPE America National Standards and Grade Level Outcomes http://www.humankinetics.com/excerpts/excerpts/using-technology-to-promote-physical-activity; http://www.shapeamerica.org/standards/pe/upload/Grade-Level-Outcomes-for-K-12-Physical-Education.pdf http://www.livestrong.com/article/95271-normal-pulse-rate-teenager/#ixzz1YV5chxVS;</p>			

VDOE Standard(s) Student Friendly Language What will the student know and be able to do?	SUGGESTED/SAMPLE ASSESSMENTS	Terms (Vocabulary) and Content Information	SUGGESTED/SAMPLE ACTIVITIES
<p>VA SOL Standard: 8.3 The student will apply self-assessment skills and use technology to create and implement a personal fitness plan to improve or maintain personal fitness.</p> <p>ENDURING UNDERSTANDINGS</p> <ul style="list-style-type: none"> Current guidelines for physical activity can be reached by building physical activities into your daily routine. Fitness improvement is based upon appropriate amounts of time set aside to implement physical activity. The use of technology provides daily fitness feedback and tracking and positively impacts behavior. <p>8.3 d) Create and implement an activity plan to meet physical activity guidelines of 60 minutes a day that includes warm-up, cool down, and appropriate intensity levels.</p> <p>Suggested Learning Targets:</p> <p>I can identify ways of increasing physical activity in routine daily activities.</p> <p>I can perform an effective warm-up and cool-down for (selected activity) and demonstrate it to my teacher.</p> <p>I can identify the in-school and community opportunities for activity and list them in an activity log.</p> <p>I can develop, implement, and reflect on the success of a physical activity plan that meets guidelines.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> Questioning to check for understanding Teacher observation: Demonstration of proper warm-up and cool-down activities. Activity Logs Example: <ul style="list-style-type: none"> Log your personal amount of daily moderate to vigorous physical activity for a week. Evaluate the amount of activity. Written: Research where there are local parks, walking trails and recreational centers. <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> Create an activity plan. <ul style="list-style-type: none"> 60 minutes a day of moderate to vigorous physical activity Warm-up and cool-down Appropriate intensity levels Reflection on progress and achievement of goals. 	<ul style="list-style-type: none"> Warm-up/Cool-down: <ul style="list-style-type: none"> http://www.mayoclinic.org/healthy-lifestyle/fitness/in-depth/exercise/art-20045517 http://www.heart.org/HEARTORG/HealthyLiving/PhysicalActivity/FitnessBasics/Warm-Up-Cool-Down_UCM_430168_Article.jsp#.WA_F37frvc Warm-up: An effective warm-up increases both the respiratory rate and the heart rate. A warm-up should consist of light physical activity for 5 to 10 minutes of exercise, such as walking, slow jogging, knee lifts, arm circles or trunk rotations. Low intensity movements that simulate movements to be used in the activity can also be included in the warm-up. A warm-up can consist of a lower intensity form of the exercise about to commence. Cool-down: This is the recovery period from a workout. Similarly, the stretching afterwards helps to lengthen and strengthen your muscles in preparation for the next workout. Purpose of the cool-down includes: <ul style="list-style-type: none"> Bringing the breathing, body temperature and heart rate back to normal slowly. Allowing the blood to properly redistribute itself to the heart. This redistribution helps rid the muscles of lactic acid which can build up around 	<ul style="list-style-type: none"> Teach effective self-monitoring skills that incorporate opportunities for physical activity in and outside of school. Example: http://kidshealth.org/en/teens/easy-exercises.html?WT.ac=ctg#catdieting Teach how to plan and implement daily flexibility, strength, endurance, and aerobic activities. Teach lifetime sports, dance, aquatics or outdoor activities that cause engagement outside of the school day in physical activity. Students design and implement a warm-up/cool-down regimen for a self-selected physical activity. Monitor heart rates during activities that cause students to move through the different intensity levels.

the muscles during an aerobic workout.

- ~~Static stretching: Consists of stretching a muscle (or group of muscles) to its farthest point and then maintaining or holding that position. Static stretching is not considered part of a warm-up routine.~~
- ~~Dynamic stretching: Involves moving parts of your body and gradually increasing reach, speed of movement or both.~~
- ~~Heart rate can be used for gauging exercise intensity due to the relationship between heart rate and oxygen consumption.~~
- ~~Training zones may be characterized by the level of intensity (using a RPE scale) or percentage of maximal heart rate range. *See additional information in 8.5.d~~
- ~~Becoming self-directed in the implementation of activity plan:
 - ~~By demonstrating on-task independence of the plan~~
 - ~~By developing a sound knowledge base for the purpose of the plan~~
 - ~~By developing, carrying out and evaluating the activity plan~~
 - ~~By balancing current and future needs~~
 - ~~By striving against external forces that will inhibit execution of the plan~~~~

Resources:

SHAPE America National Standards and Grade Level Outcomes; <http://classroom.kidshealth.org/classroom/6to8/personal/fitness/fitness.pdf>;
http://www.heart.org/HEARTORG/HealthyLiving/PhysicalActivity/GettingActive/Create-Your-Own-Circuit-Workout-at-Home_UCM_484683_Article.jsp#.V6d6Yv36upe

VA SOL Standard: 8.3 The student will apply self-assessment skills and use technology to create and implement a personal fitness plan to improve or maintain personal fitness.			
ENDURING UNDERSTANDINGS			
<ul style="list-style-type: none"> Heart rate is a useful indicator of the intensity of effort and body's physiological adaptation. Monitoring your heart rate will allow you to track the changes taking place in your cardiovascular system as you move towards aerobic fitness. 			
VDOE Standard(s) Student Friendly Language What will the student know and be able to do?	SUGGESTED/SAMPLE ASSESSMENTS	Terms (Vocabulary) and Content Information	SUGGESTED/SAMPLE ACTIVITIES
<p>8.3 e) Monitor heart rate before, during and after moderate to vigorous physical activity (MVPA).</p> <p>Suggested Learning Targets:</p> <p>I can self-monitor heart rate during exercise and summarize my performance.</p> <p>I can monitor heart rate at different intensity levels and graph this in my (selected assessment product: i.e., log, journal or portfolio).</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> Questioning to check for understanding. Example: What are the problems individuals avoid by monitoring heart rates during physical activity? <ul style="list-style-type: none"> Helps avoid undertraining or working out at a low intensity. Effects are not burning many calories and no increase of strength or cardiovascular endurance. Helps avoid overtraining or working out too hard. Possible effects are dehydration, causing your blood pressure to drop, making you dizzy and putting you at risk for fall injuries and susceptibility to infections and chronic pain. Calculation of target heart rate ranges for appropriate intensity levels. Heart rate logs: Added to 60 minute a day activity plan to show appropriate intensity levels. Written: Describe when/how to take resting heart rate and what it indicates. <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> Evaluate personal heart rates before, during and after activities that develop the components of skill-related fitness. 	<ul style="list-style-type: none"> Resting heart rates: When the body is pumping the lowest amount of blood you need. <ul style="list-style-type: none"> Take resting pulse by placing the tips of the index and middle fingers on their opposite wrist. Count the number of heartbeats in 60 seconds (or count for six seconds and multiply the number by 10). What affects resting pulse? <ul style="list-style-type: none"> A variety of factors can affect your resting pulse such as: reading, the physical size of your heart, body size, activity level, fitness level, temperature, body position, emotions, and medication use. A higher resting pulse than usual can also be a sign of over-training or illness. Target heart rates help to determine fitness levels. By keeping the target heart rate in check a person is able to avoid under or over training. Under training happens when a person's heart rate is too low which results in a low intensity work out. If a person is not working to their body's potential, there is no way they can burn enough calories to result in weight loss nor can they get up the endurance to build strength. Individuals who under train will take significantly longer to see the results they desire. 	<ul style="list-style-type: none"> Record target heart rates while resting and participating in different activities. Teach activities that sustain a maximum target heart rate of 60% to 85% of maximum heart rate for a minimum of 20 minutes. Create activities that cause students to move through the different intensity levels and take target heart rates throughout.

Activity	Time	Skill-Related Fitness Components
Run through hoops or ladders	30-sec.	Agility
Fast weaving through cones	30-sec.	Agility
Balancing on balance board or blocks for 10 seconds at each level: low, medium and high	10-sec. Each level	Static Balance
Go through the motions of a baseball pitch. — Move from a balanced knee-up position, to the dynamic motion of the pitch, to a balanced position at the end of the follow-through.	30-sec.	Dynamic Balance
Throwing a ball against the wall and catching it	30-sec.	Eye-hand Coordination
Tap right toe then left toe on top of a soccer ball. Moving quickly and alternating taps	30-sec.	Eye-hand Coordination
Short sprints, back and forth (About 8 yards)	30-sec.	Speed
Shuttle run between two lines	30-sec.	Speed
Skipping motion with high-knee lifts	30-sec.	Power
Jumps to top of folded mats. Stop down, repeat.	30-sec	Power
Partners in push-up position, bean bag between them. See who can get the bean bag first, repeat.	30-sec	Reaction Time

Resources:

SHAPE America National Standards and Grade-Level Outcomes; — <http://www.cdc.gov/physicalactivity/basics/measuring/hearttrate.htm>;
http://www.heart.org/HEARTORG/Educator/FortheClassroom/MiddleSchoolLessonPlans/Middle-School-Lesson-Plans_UCM_304280_Article.jsp#.WBkH-7frvet;
<http://blog.fitdigits.com/health-through-fitness/resting-heart-rate/>

VA SOL Standard: 8.4 The student will describe and apply a variety of social and safety skills to achieve individual and group goals in a variety of physical activity settings.

ENDURING UNDERSTANDINGS

- Being aware of personal strengths, individual needs and specific health risks, is essential for safely starting a new physical activity.
- People who are physically fit have a lower risk of injury than people who are not and the health benefits of physical activity far outweigh the risks.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>SUGGESTED/SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED/SAMPLE ACTIVITIES</p>
<p>8.4 a) Describe and demonstrate best practices for participating safely in physical activity, exercise and dance (e.g., injury prevention, proper alignment, hydration, use of equipment, implementation of rules, sun protection).</p> <p>Suggested Learning Targets:</p> <p>I can summarize types of equipment, products, procedures and rules that contribute to the safety of (specific activity: e.g., jogging down the road in hot weather, cyclists using helmets, shallow water diving) and demonstrate best practices through a summary paragraph.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • Questioning to check for understanding • Teacher observation <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> • Design and build an obstacle course outdoors. Present through lecture and demonstration how to navigate the course for injury prevention, proper alignment, use of equipment, rules, plus hydration and sun protection for an outdoor activity. 	<ul style="list-style-type: none"> • Guidelines for safe physical activity: <ul style="list-style-type: none"> ○ Understand the risks but be confident that physical activity is safe for most individuals. ○ Choose types of physical activity that are appropriate for your current fitness level and health goals. ○ Increase physical activity gradually over time whenever more activity is necessary to meet health goals. ○ Be protected by using appropriate gear and sports equipment, looking for safe environments, following rules and procedures. Examples—Policies that promote the use of bicycle helmets reduce the risk of head injury among cyclists. Rules against diving into shallow water at swimming pools prevent head and neck injuries. ○ Make good choices about when, where and how to be active reduces possible injuries and adverse events can be prevented. Example—During very hot and humid weather, lessen the chances of dehydration and heat stress by: <ul style="list-style-type: none"> ▪ Exercising in the cool of early morning as opposed to mid-day heat. ▪ Switching to indoor activities (playing basketball in the gym rather than on the playground). ▪ Changing the type of activity (swimming rather than playing soccer). ▪ Lowering the intensity of activity (walking rather than running). ▪ Paying close attention to rest, shade, drinking enough fluids and other ways to minimize effects of heat. ○ If you have chronic conditions or symptoms, consult your health care provider about the types and amounts of activity that is appropriate. 	<ul style="list-style-type: none"> • Groups select a low organized game to teach the class. After “teaching” their game to the class, the teacher has a class discussion using the following questions: <ul style="list-style-type: none"> ○ Did the “teachers” review proper safety rules and procedures? ○ Did participants apply safety rules that ensured a safe and fair playing environment? ○ Were all students encouraged to be part of the game? ○ Was equipment safe? ○ Was the environment free of possible hazards?

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|--|--|--|--|
| | | <ul style="list-style-type: none">• Benefits of water during exercise:
http://www.humankinetics.com/excerpts/excerpts/benefits-of-water-during-exercise | |
|--|--|--|--|

Resources:

SHAPE America National Standards and Grade-Level Outcomes

<http://www.health.harvard.edu/healthbeat/10-tips-for-exercising-safely>; <http://www.earlytorise.com/10-best-practices-for-safe-workouts/>;
<http://www.everydayhealth.com/fitness/basics/tips/how-to-exercise-safely.aspx>; <http://www.cancer.org/healthy/besafeinthesun/index>
http://www.heart.org/HEARTORG/HealthyLiving/PhysicalActivity/FitnessBasics/Warm-Up-Cool-Down_UCM_430168_Article.jsp#.V7G32bf6vcs;
<http://www.cdc.gov/homeandrecreationalsafety/water-safety/waterinjuries-factsheet.html>; <http://kidshealth.org/en/teens/safety-inline.html?WT.ac=ctg#catdieting>;
<http://kidshealth.org/en/teens/safety-golf.html?WT.ac=ctg#catdieting>

VA SOL: 8.4 The student will describe and apply a variety of social and safety skills to achieve individual and group goals in a variety of physical activity settings.			
ENDURING UNDERSTANDING			
<ul style="list-style-type: none"> Values associated with well-being, personal development and social integration include effort, self-management, respect for other people's feelings and rights and caring. 			
VDOE Standard(s) Student Friendly Language What will the student know and be able to do?	SUGGESTED/SAMPLE ASSESSMENTS	Terms (Vocabulary) and Content Information	SUGGESTED/SAMPLE ACTIVITIES
<p>8.4 b) Describe and demonstrate appropriate encouragement and feedback to peers without prompting from the teacher.</p> <p>Suggested Learning Targets:</p> <p>I can use a checklist to provide appropriate feedback to a peer/partner.</p> <p>8.4 c) Identify and demonstrate proper etiquette, respect for others, integrity and teamwork while engaging in physical activity and/or social dance.</p> <p>Suggested Learning Targets:</p> <p>I can organize games and apply safety rules and procedures and demonstrate it to my teacher.</p> <p>I can identify the rules of fair play and behavior and give examples to a peer.</p> <p>I can abide by the decisions of the officials, accept the outcome of the game and show</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> Peer Assessment Example: Give feedback to one another on participation behavior using a checklist or rubric that is student or teacher created. Teacher observation of students working with a variety of partners/peers. Example: What to look for (measure/assess) during activity: <ul style="list-style-type: none"> Are students accepting of all partners? Are students hustling to find partners? Are they mixing themselves up? Written Example: <ul style="list-style-type: none"> Select a sport or game from a posted list and research the rules and etiquette. Present information to class. Reflection/Journal: Writing on ethics in sports and how these issues affect today's youth. Questioning to check for understanding Student reflection on the importance of cooperating with classmates and the importance of supportive behaviors. 	<ul style="list-style-type: none"> Respecting the rights and feelings of others: <ul style="list-style-type: none"> By maintaining self-control By respecting everyone's right to be included By respecting everyone's right to a peaceful conflict resolution Participation and putting forth effort: <ul style="list-style-type: none"> By exploring effort By trying new things By developing a personal definition of success Being sensitive and responsive to the well-being of others: <ul style="list-style-type: none"> By developing prerequisite interpersonal skills By becoming sensitive and compassionate to others By helping others without the need for rewards. Self-efficacy: The belief in one's capabilities to organize and execute the courses of action to produce given attainments. Measures of sportsmanship: <ul style="list-style-type: none"> Be polite, don't show off, tell opponents good game, learn the rules, don't argue with the official, don't make up excuses or blame a teammate, be willing to sit out, play fair, don't cheat, cheer for teammates) 	<ul style="list-style-type: none"> Students create a behavior checklist for participation in physical activities. Partners will exchange their checklist and evaluate each other during a physical activity. Partners will pair/share upon completion of the checklist evaluation. Teacher integrates the teaching of responsibility within physical activities/games by allowing students opportunities to make informed decisions about positive behaviors. Students apply rules and etiquette by acting as an official for modified physical activities/games. Students create dance routines within a given set of parameters while demonstrating responsible social behavior that shows respect for self and others. Class discussions on the importance of fair play and etiquette (e.g., shaking hands with opponents after a game)

<p>appreciation toward participants and demonstrate it to my teacher.</p> <p>I can demonstrate appropriate etiquette in activity settings and give examples to a peer.</p>	<p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> • Checklist: <ul style="list-style-type: none"> Example ___ Working with the team to apply knowledge about a game/activity/dance to outsmart opponents by understanding their moves or showing comprehension of dance elements. ___ Showing commitment to the game/activity/dance. ___ Caring for classmates by showing kind treatment during game/activity/dance. ___ Support and encourage classmates instead of using put-downs during game/activity/dance. ___ Showing control and standing tall when faced with defeat in game/activity or inability to master a dance routine. ___ Owning up to mistakes/fouls that are made during game/activity/dance. ___ Showing humility by refraining from boasting when winning a game/activity or completing a dance routine. 	<ul style="list-style-type: none"> • Measures of responsibility: <ul style="list-style-type: none"> ○ Personally: <ul style="list-style-type: none"> • Willingness to try and experience new things • Can work independently • Can develop and carry out a plan that will enhance personal well-being ○ Socially: <ul style="list-style-type: none"> • Can respect the rights and feelings of others • Is sensitive and responsive to the well-being of others • Attempts to put these actions into practice in and outside of physical education classes 	
<p>Resources: SHAPE America National Standards and Grade Level Outcomes; http://classroom.kidshealth.org/classroom/6to8/personal/growing/empathy.pdf; http://www.teachpe.com/sports_psychology/attitudes.php; http://lessonplanspage.com/peempowereddecisionmaking6-12.htm/; http://classroom.kidshealth.org/classroom/6to8/personal/growing/getting_along.pdf; http://www.pecentral.org/climate/january09article.html</p>			

VA SOL Standard: 8.4 The student will describe and apply a variety of social and safety skills to achieve individual and group goals in a variety of physical activity settings.

ENDURING UNDERSTANDINGS

- Physical activity is an effective means of reducing stress.
- Stress is only harmful when it becomes overwhelming and interrupts the healthy state of equilibrium that your nervous system needs to remain in balance.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>SUGGESTED/SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED/SAMPLE ACTIVITIES</p>
<p>8.4 d) Demonstrate basic movements used in stress-reducing activities (e.g., yoga, Pilates, Tai Chi).</p> <p>Suggested Learning Targets:</p> <p>I can identify the different relaxation techniques that relieve stress and list them in an exit ticket.</p> <p>I can develop a plan to incorporate stress reduction practices into my daily life and record that in my (selected assessment product: i.e., log, journal or portfolio).</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • Teacher observation • Peer coaching: One student helps another learn basic movements. • Peer assessment: Evaluate basic movements used in yoga, Pilates or Tai Chi for accuracy. Then revise and refine. <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> • Demonstrate and explain relaxation techniques. • Develop a plan for incorporating stress reduction practices into your daily life. 	<ul style="list-style-type: none"> • Yoga: The physical practice of stepping the body through a series of poses and postures which help improve strength, flexibility and balance. The practice of yoga relieves muscle tension, lowers blood pressure and decreases cholesterol levels. It is an excellent stress-relieving practice. <ul style="list-style-type: none"> ◦ http://kidshealth.org/en/teens/yoga-home.html?WT.ac=ctg/catdieting ◦ http://kidshealth.org/en/teens/yoga-stress.html?WT.ac=t-ra ◦ http://kidshealth.org/en/teens/meditation.html?WT.ac=t-ra • Tai Chi: Was originally developed in China as a martial-arts style of self-defense. Over time, it has become a form of exercise and a process for personal development. It involves the practice of various postures. Movements are continuous and serve to relax and align the body. <ul style="list-style-type: none"> ◦ http://kidshealth.org/en/teens/tai-Chi.html?WT.ac=ctg/catdieting • Pilates: A series of fluid movements performed in a precise manner, accompanied by specialized breathing techniques and intense mental 	<ul style="list-style-type: none"> • Basic movements used in stress reducing activities such as yoga, Pilates and Tai Chi. <ul style="list-style-type: none"> ◦ Example http://www.pecentral.org/lessonideas/Vi-ewLesson.asp?ID=8790#.WBdeWrfvcs • Relaxation techniques such as: <ul style="list-style-type: none"> ◦ Breathing mediation: Is breathing deeply from the abdomen, getting as much fresh air as possible in your lungs ◦ Progressive muscle relaxation: Relaxing muscles starting at the feet and working up to the face ◦ Body scan meditation: Focuses on the sensations in each part of your body ◦ Mindfulness: The ability to remain aware of how you're feeling right now, your "moment to moment" experience both internal and external ◦ Visualization: or guided imagery, requires you to employ not only your visual sense, but also your sense of taste, touch, smell and sound. When used as a relaxation technique, it involves imagining a scene in which you feel at peace, free to let go of all tension and anxiety.

		<p>concentration.</p> <ul style="list-style-type: none"> • Amount of recommend relaxation practice time: <ul style="list-style-type: none"> ◦ Most stress experts recommend setting aside at least 10 to 20 minutes a day for relaxation practice. If you'd like to get even more stress relief, aim for 30 minutes to an hour. If that sounds like a daunting commitment, remember that many of these techniques can be incorporated into your existing daily schedule such as: practice at your desk over lunch or on the bus during your morning commute. 	
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Resources:
SHAPE America National Standards and Grade Level Outcomes; <http://darebee.com/>; http://www.sparkpe.org/wp-content/uploads/yoga-content-card_hs.pdf
<http://www.webmd.com/balance/stress-management/stress-busting-checklist>;
http://www.uwosh.edu/ccdet/caregiver/Documents/Responding/StressReduction_FacilitatorGuide_022510.pdf

<p>VA SOL Standard: 8.4 The student will describe and apply a variety of social and safety skills to achieve individual and group goals in a variety of physical activity settings.</p> <p>ENDURING UNDERSTANDINGS</p> <ul style="list-style-type: none"> Team building activities are stimulating problem-solving tasks designed to help group members develop their capacity to work effectively together. Group dynamics describes the way members of a group interact with each other. 			
<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>SUGGESTED/SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED/SAMPLE ACTIVITIES</p>
<p>8.4 e) Apply communication skills and strategies that promote team/group dynamics.</p> <p>Suggested Learning Targets:</p> <p>I can organize and work cooperatively with a group to achieve the goals of the group and describe how I showed that in a summary paragraph.</p> <p>I can identify the contributions of members of a group or team and reward members for accomplishing a task or goal and demonstrate that through feedback to peers within my group.</p> <p>I can accept the roles of group members within the structure of a game or activity and demonstrate that to my teacher.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> Teacher observation Teacher questioning for understanding: Example— Students are given statements they agree, disagree or unsure of and include a reason for their answer. <ul style="list-style-type: none"> Everyone has to put up with a certain amount of disrespect in team/group activities. Saying “please” and “thank-you” shows respect for people. Treat people with respect. I’ll talk to you any way I want. Swearing is an acceptable way of communicating. There is no “I” in teamwork. There are occasions when one has to raise one’s voice when talking in a group. Student self-reflection: Example— <ul style="list-style-type: none"> If a classmate says or does something I agree with, I ... When I want to make a point to the group, I ... If a group member ignores my suggestions, I ... If a group member says or does something I disagree with, I ... If I don’t understand the group leaders ideas, I ... Written: List strategies of how to include others when creating groups for physical activities and explain how these strategies improve time wasted and ease 	<ul style="list-style-type: none"> Vocabulary for team building skills to accomplish a common goal: <ul style="list-style-type: none"> Positive interdependence: Team members rely on one another to achieve the goal. If any team member fails to do their part, everyone suffers the consequences. Individual accountability: All students within the group are held accountable for doing their share of the work. Face-to-face interaction: Group members interacting to provide one another with feedback, reasoning, conclusions and encouragement. Group processing: Groups set goals, assess what they are doing well and identify changes they will make to function more effectively in the future. Collaborative Skills include: <ul style="list-style-type: none"> The abilities to contribute to group activities and discussions. Consider the ideas and perspectives of others. Include others in the collaborative process. Stay focused on the task. Provide and receive feedback 	<ul style="list-style-type: none"> Class discussions on the following: <ul style="list-style-type: none"> Effective listening skills: Staying quiet while someone is speaking Effective speaking skills: Changing language and tone to make the message clearer and/or more appealing to the listener Effective non-verbal skills that enhance effective communication: Using appropriate body language such as smiling or affirmative nod of the head. Students evaluate the role of cooperation and positive interactions with others when participating in physical activity.

	<p>confusion.</p> <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> • Written: <ul style="list-style-type: none"> Example— Students will write about the following: <ul style="list-style-type: none"> ○ During an activity/game this school year, have you experienced an incident that made you angry? ○ Describe what happened in the incident. When/where did it happen? ○ What were your thoughts and feelings at the time? ○ Describe your actions and how you handled the situation. ○ What was the result? ○ How would you act now in a similar situation? ○ What communication skills and strategies could have applied to this situation? 	<p>constructively.</p>	
<p>Resources: SHAPE America National Standards and Grade-Level Outcomes; http://kidshealth.org/en/teens/tips-disagree.html</p>			

<p>VA SOL Standard: 8.4 The student will describe and apply a variety of social and safety skills to achieve individual and group goals in a variety of physical activity settings.</p> <p>ENDURING UNDERSTANDINGS</p> <ul style="list-style-type: none"> Personal actions affect more than oneself. When handled in a respectful and positive way, conflict provides an opportunity for growth, ultimately strengthening the bond between people. 			
VDOE Standard(s) Student Friendly Language What will the student know and be able to do?	SUGGESTED/SAMPLE ASSESSMENTS	Terms (Vocabulary) and Content Information	SUGGESTED/SAMPLE ACTIVITIES
<p>8.4 f) Describe and demonstrate conflict-resolution skills.</p> <p>Suggested Learning Targets:</p> <p>I can describe ways to avoid conflict with peers through an exit ticket.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> Student reflection on the importance of cooperating with classmates and the importance of supportive behaviors. <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> Teacher presents staged conflicts in different activities and students use appropriate conflict-resolution techniques to resolve the conflict. 	<ul style="list-style-type: none"> Conflict resolution skills: <ul style="list-style-type: none"> Discuss problem without blame Active listening Identify and clarify issues and needs Brainstorm solutions Choose and apply solution Evaluate solution Constructive ways to address conflict: <ul style="list-style-type: none"> Listen to all opinions before making a judgment Talk it out Have face-to-face conversations with a mediator/teacher present Seek understanding Destructive ways to address conflict: <ul style="list-style-type: none"> Criticize people for their opinions Blame others Say or do hurtful things Content that addresses and emphasizes the role of personal reactions during interactions with others as well as the importance of supportive behavior and social skills 	<ul style="list-style-type: none"> Provide students with a list of opposites (e.g., black/white, heavy/light, excellent/poor) and have them find the word that best describes the half way point between the two opposites (e.g., black/gray/white). Then have a class discussion on the understanding of the term compromise. Teach problem solving techniques to resolve conflicts when necessary in competitive activities. Use cooperative games and team building challenges to emphasize inclusion, safety, conflict resolution and problem-solving. Participate in activities that use resistance, refusal, negotiation, collaboration and conflict resolution skills to maximize personal potential and to build and maintain healthy relationships.
<p>Resources:</p> <p>SHAPE America National Standards and Grade-Level Outcomes; http://classroom.kidshealth.org/classroom/6to8/personal/growing/conflict_resolution.pdf; http://ctb.ku.edu/en/table-of-contents/implement/provide-information-enhance-skills/conflict-resolution/tools</p>			

<p>VA SOL Standard: 8.4 The student will describe and apply a variety of social and safety skills to achieve individual and group goals in a variety of physical activity settings.</p> <p>ENDURING UNDERSTANDINGS</p> <ul style="list-style-type: none"> Working with others and encouraging teamwork will build confidence and support within a group. Being a problem solver isn't just an ability; it's a whole mind set, one that drives people to bring out the best in themselves and to shape the world in a positive way. 			
<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>SUGGESTED/SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED/SAMPLE ACTIVITIES</p>
<p>8.4 g) Apply problem solving skills in cooperative and dynamic physical activities and/or dance settings.</p> <p>Suggested Learning Targets:</p> <p>I can work cooperatively with a group to achieve the goals by using problem solving skills and give examples of how I demonstrated that in an exit ticket.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> Teacher observation Questioning to check for understanding. <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> Students will participate in a cooperative physical activity/or dance then reflect on the problems that arose and how problem solving skills were used. Evaluate the solution used and whether it was successful in solving the problem. 	<ul style="list-style-type: none"> Cooperative learning for problem solving: <ul style="list-style-type: none"> Division of labor among students in the group Face to face interaction between students Assignment of specific roles and duties to students Group processing of a task Positive interdependence in which students all need to do their assigned duties in order for the task to be completed Individual accountability for completing one's own assigned duties The development of social skills as a result of cooperative interaction Provision of group rewards by the teacher Group members responsible for the behavior of all members. If a team member displays inappropriate behavior, it is the duty of fellow members to remind that student to 'check' him/herself. The members attempt to refocus the misbehaving student by offering help and suggestions. Applying problem solving skills: <p>Students take on some of the responsibility for their own learning by taking personal action to solve problems, resolve conflicts, discuss alternatives and focus on thinking as a vital element of the curriculum. Basic functions for problem solving include:</p> <ul style="list-style-type: none"> Seeking information Generating new knowledge Making decisions 	<ul style="list-style-type: none"> Teach the problem solving process <ul style="list-style-type: none"> Identify the problem Analyze the problem. Generate potential solutions Select and plan the solution Implement the solution Evaluate the solution Teach cooperative games Groups create exercise routines or line dances to music and then teach them to the entire class
<p>Resources: SHAPE America National Standards and Grade Level Outcomes: http://www.learningforlife.org/exploring-resources/99-720/x09.pdf</p>			

VA SOL Standard: 8.4 The student will describe and apply a variety of social and safety skills to achieve individual and group goals in a variety of physical activity settings.

ENDURING UNDERSTANDINGS

- Even performing the simplest of the embedded social and communication skills involves some type of motor skills (e.g., smiling when greeted, pointing to a choice).
- Participating in physical activities helps to achieve the development of motor skills that will maximize participation today and the motor skills that will increase independence in the future.
- Positive relationships play a crucial role in well-being, thus opportunities for social interaction through physical activity in the community could vastly improve the well-being of individuals as well as the community as a whole.

VDOE Standard(s) Student Friendly Language What will the student know and be able to do?	SUGGESTED/SAMPLE ASSESSMENTS	Terms (Vocabulary) and Content Information	SUGGESTED/SAMPLE ACTIVITIES
<p>8.4 h) Analyze and compare social and emotional benefits of participation in a variety of activities.</p> <p>Suggested Learning Targets:</p> <p>I can analyze and compare social and emotional benefits of (specific activity i.e. a walking group) through a graphic organizer.</p> <p>8.4 i) Identify opportunities for social interaction through physical activity in the community.</p> <p>Suggested Learning Targets:</p> <p>I can identify opportunities for social interaction in the community through (specific</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • Questioning to check for understanding: Example — What are the social opportunities and emotional benefits of walking groups? Answer: Walking does not require any special skills or equipment and it can be done almost anywhere and with little cost. Group-based walking programs have been conducted with many different types of groups such as, older adults, women, new mothers and people from non-English speaking backgrounds, as well as low income populations. It shows promising results with respect to fostering social capital like social networks and support, cooperation, community involvement, promoting physical activity and the creation of a sense of purpose and belonging. • Research to learn physical activities 	<ul style="list-style-type: none"> • Social and emotional benefits of participation in a variety of physical activities: <ul style="list-style-type: none"> ○ Improves your mental health and mood ○ Reduces the risk of depression and anxiety ○ Develops higher self-esteem and body image ○ Helps develop basic motor skills needed for day-to-day life ○ Effective in promoting mutual understanding and empathy among young people • Benefits of team activities: <ul style="list-style-type: none"> ○ Builds character social skills like teamwork, cooperation and leadership ○ Ability to handle winning and losing while being a good sport ○ Helps develop discipline ○ Helps set goals and then work to achieve these goals ○ Moral behavior is acquired through social interaction that occurs through games and physical activity conducted in a collective. Whether or not the game or physical activity 	<ul style="list-style-type: none"> • Lessons about the role of physical activity as a means for group membership and positive social interaction and the importance of this type of interaction throughout history and in different cultures. • Make connections between an activity and the emotional benefits and social interaction. Example — It is found that group-based walking substantially increased social capital that includes sense of connectedness, collective efficacy, social engagement and acceptance of other groups.

<p>activity i.e. hiking, biking, walking or rock climbing.) and give examples to a peer.</p>	<p>appropriate to your area that encourage social interaction. Examples: Skiing, hiking, biking, walking tracks or rock climbing.</p> <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> • Pick three community activities and analyze the social and emotional benefits of participation in the activities. 	<p>has a positive impact on character building in an individual is highly dependent on the context of the program and the values promoted and developed.</p>	
<p>Resources: SHAPE America National Standards and Grade Level Outcomes; http://www.helpguide.org/articles/exercise_fitness/emotional_benefits_of_exercise.htm http://www.thecommunityguide.org/pa/behavioral-social/community.html; http://ijbnpa.biomedcentral.com/articles/10.1186/1479-5868-4-54</p>			

VA SOL Standard: 8.5 The student will explain the relationship of caloric intake, caloric expenditure and body composition.			
ENDURING UNDERSTANDINGS			
<ul style="list-style-type: none"> • Diet-related chronic diseases are the most common cause of death in the world and present a great burden for society. • The imbalance between declining energy expenditure due to physical inactivity and high energy in the diet is the main determinant of the obesity epidemic. 			
VDOE Standard(s) Student Friendly Language What will the student know and be able to do?	SUGGESTED/SAMPLE ASSESSMENTS	Terms (Vocabulary) and Content Information	SUGGESTED/SAMPLE ACTIVITIES
<p>8.5 a) Describe the relationship between poor caloric intake and health risk factors.</p> <p>Suggested Learning Targets:</p> <p>I can describe the health problems of too low a caloric intake and demonstrate it in my (selected assessment product: i.e., journal or portfolio).</p> <p>I can describe the disease associated with too high a caloric intake and demonstrate it in my (selected assessment product: i.e., journal or portfolio).</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • Questioning to check for understanding • Teacher observation <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> • Choose three diseases that are linked to too high a caloric intake and describe the relationships. 	<ul style="list-style-type: none"> • Health Risk Factors for Poor Caloric Intake: <ul style="list-style-type: none"> ○ Obesity: The imbalance between declining energy expenditure due to physical inactivity and high energy in the diet (excess calories whether from sugar, starches, or fat) is the main determinant of the obesity epidemic. Increasing physical activity, plus reducing intakes of foods high in fat and foods and drinks high in sugars, can prevent unhealthy weight gain. ○ Diabetes: Excess weight gain, overweight and obesity and physical inactivity account for the high rates of type 2 diabetes in the world. Diabetes leads to increased risk of heart disease, kidney disease, stroke and infections. Increased physical activity and maintaining a healthy weight play an important role in the prevention and treatment of diabetes. ○ Cardiovascular diseases: Cardiovascular diseases are the major killers worldwide. Included are heart disease and stroke. They are due to unbalanced diets and physical inactivity. Prevention and treatment includes eating less saturated and trans fats and sufficient amounts of (n-3 and n-6) polyunsaturated fats, fruits and vegetables and less salt, as well as by physical activity and controlling weight. ○ Cancer: Maintaining a healthy weight will reduce the risk for cancers of the esophagus, colorectal, breast, endometrium and kidney. Adequate intake of fruit and vegetables should further reduce risk for oral cavity, esophagus, stomach and colorectal cancer. ○ Osteoporosis and bone fractures: Adequate intake of calcium (500 mg per day or more) and of vitamin D helps to reduce fracture risk. Sun exposure and physical activity also strengthen bones and muscles. 	<ul style="list-style-type: none"> • Discuss the health problems of too low of a caloric intake: Example— <ul style="list-style-type: none"> ○ Reduced muscle mass because your body searches for sources of energy to keep the vital organs functioning ○ Metabolic rate will drop and compound muscle mass loss ○ Become sluggish and often highly irritable ○ Binge dieting causes vital organs to stop functioning properly • Discuss the health problems of too high of a caloric intake: Example— <ul style="list-style-type: none"> ○ Body stores excess calories in fat cells ○ *See content information on diseases due to high-calorie intake
<p>Resources:</p> <p>SHAPE America National Standards and Grade Level Outcomes; http://kidshealth.org/en/kids/calorie.html; http://kidshealth.org/en/teens/emotional_eating.html?WT.ac=ctg#catdieting; http://kidshealth.org/en/teens/food_journal.html?WT.ac=ctg;</p>			

VA SOL Standard: 8.5 The student will explain the relationship of caloric intake, caloric expenditure and body composition.

ENDURING UNDERSTANDINGS

- Physical activity is a key determinant of energy expenditure and thus fundamental to energy balance and weight control.
- People of the same height and weight may need different amounts of energy or calories to maintain their weight, depending on their body composition.
- Many factors influence body composition, including gender, age, diet, activity level and genes.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>SUGGESTED/SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED/SAMPLE ACTIVITIES</p>																		
<p>8.5 b) Explain the role of energy balance in weight management and body composition.</p> <p>Suggested Learning Targets:</p> <p>I can explain the relationship between caloric intake and physical activity through a graphic organizer.</p> <p>I can explain the effects of nutrition and participation in physical activity on weight control, self-concept and physical performance through reflective writing in my fitness journal/portfolio.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • Questioning to check for understanding <ul style="list-style-type: none"> ○ Journals: <ul style="list-style-type: none"> ○ Gathering and organizing information on the role of energy balance in weight management and body composition. ○ Reflecting on personal weight for maintaining or improving. <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> • Develop a plan of improvement for weight management and body composition using specificity, overload and progression. Example – <ul style="list-style-type: none"> ○ Overload <ul style="list-style-type: none"> ▪ Frequency: daily aerobic exercise ▪ Intensity: low ▪ Time: approximately one hour ○ Progression <ul style="list-style-type: none"> ▪ Begin daily ▪ Begin a low intensity aerobic intensity and work up to a longer duration ▪ Begin low intensity aerobic exercise for 30 minutes and work up to 60 minutes ○ Specificity <ul style="list-style-type: none"> ▪ Increase aerobic exercise and decrease caloric intake 	<ul style="list-style-type: none"> • Body Fat Ranges <table border="1" data-bbox="1045 532 1520 911"> <thead> <tr> <th></th> <th>Men</th> <th>Women</th> </tr> </thead> <tbody> <tr> <td>Exceptionally Lean</td> <td>6–10%</td> <td>10–15%</td> </tr> <tr> <td>Very Lean</td> <td>11–14%</td> <td>16–19%</td> </tr> <tr> <td>Lean</td> <td>15–18%</td> <td>20–25%</td> </tr> <tr> <td>Moderate</td> <td>19–24%</td> <td>26–29%</td> </tr> <tr> <td>Obese</td> <td>25%+</td> <td>30%+</td> </tr> </tbody> </table> <ul style="list-style-type: none"> • Calories are units of energy and are found in our food and drinks. It's important to consume enough calories so that our bodies have the energy they need to grow and function. When we consume more calories than we burn, they are stored in our bodies as fat and this can lead to a variety of health problems. The number of calories that each person needs varies based on factors like age, height, weight and how much we exercise. 		Men	Women	Exceptionally Lean	6–10%	10–15%	Very Lean	11–14%	16–19%	Lean	15–18%	20–25%	Moderate	19–24%	26–29%	Obese	25%+	30%+	<ul style="list-style-type: none"> • Make connections between activities and the Rate of Exertion Scale in relationship to weight management and body composition. • Make connections to activity level and calorie intake. Example – <ul style="list-style-type: none"> ○ You gain weight when the calories you burn, including those burned during physical activity, are less than the calories you eat or drink. ○ Give expended calories in different activities such as; <ul style="list-style-type: none"> Jogging 30 min. around 300; Hiking 30 min. around 200; Walking 30 min. around 125 ○ http://kidshealth.org/en/teens/weight-tips.html?WT.ac=ctg#catdieting
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		<ul style="list-style-type: none">• The total amount of caloric expenditure associated with physical activity is determined by the amount of muscle mass producing bodily movements and the intensity, duration and frequency of muscular contractions.	
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Resources:

SHAPE America National Standards and Grade-Level Outcomes; <http://teenshealth.org/en/teens/fat-calories.html#>
<http://kidshealth.org/en/teens/detox-diets.html?WT.ac=ctg#catdieting>; <http://kidshealth.org/en/teens/bmi.html?WT.ac=ctg#catdieting>
<http://kidshealth.org/en/teens/healthy-weight-plan.html?WT.ac=ctg#catdieting>; <http://kidshealth.org/en/kids/fat-thin.html>; <http://www.calorieking.com/>

VA SOL Standard: 8.5 The student will explain the relationship of caloric intake, caloric expenditure and body composition.

ENDURING UNDERSTANDING

- Body composition analysis is an important part of your fitness assessment because it shows how much fat you carry on your body in relation to your muscle mass.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>SUGGESTED/SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED/SAMPLE ACTIVITIES</p>
<p>8.5 c) Describe types of body composition measures and demonstrate appropriate use of one measure.</p> <p>Suggested Learning Targets:</p> <p>I can use a skin caliper to determine body composition and demonstrate that to a peer.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> Questioning to check for understanding. Example—Name different ways of measuring body composition. <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> Describe one body composition measure and demonstrate appropriate use. Example— Skinfold measurement: Folds of your skin are measured with calipers in as few as 3 to as many as 9 areas of your body. Skinfold measurements are made by grasping the skin and underlying tissue, shaking it to exclude any muscle and pinching it between the jaws of the caliper. Then a calculation is used to derive a body fat percentage based on the sum of the measurements. 	<ul style="list-style-type: none"> Ways body composition is measured: <ul style="list-style-type: none"> Underwater Weighing: The most accurate method for measuring body composition. Underwater weighing involves submerging a person in a tank of water and having him/her expel the air out of his/her lungs. This method is not easy to administer and can be very expensive. Error of underwater weighing is 2 to 2.5%. Skinfold Measurements: Measure the subcutaneous fat folds around specific body parts (triceps, waist, thigh and back) with skin calipers. The accuracy of the skinfold test depends upon the person performing it, the integrity of the skin caliper and the kind of formula one uses to calculate percentage of body fat. These, in turn, increase chances for error, which is 3 to 3.5%, but could be as high as 5%. Bioelectrical Impedance: A simple, non-invasive technique that uses electrical conductivity to estimate lean body mass. This test is dependent upon hydration status because muscle holds most of the water in the body; so, the more muscle, the better the conduction. The error of bioelectrical impedance is 3 to 3.5%. NIR (Near Infrared Interactance: Uses a fiber optic probe to measure subcutaneous fat and muscle at the biceps. A relatively new method that has questionable validity. MRI/CT Scan: Creates a visual display of specific body areas, showing deep fat with the comparison to bone. This technique is expensive and has not been proven to be better than underwater 	<ul style="list-style-type: none"> Introduce the different ways to measure body composition. Students use teacher given types of available measurements for body composition for use of before and after results of an activity plan.

		<p>weighing.</p> <ul style="list-style-type: none">◦ Circumferences taken of various body parts with a soft measuring tape: Common circumferences taken are the neck, chest, arms, forearms, waist, hip, thighs and calves. There are equations which allow you to estimate body fat percentage using circumferences.◦ Body composition can also be assessed with a "before and after picture." Show as much skin as possible to see if the training program gave the results wanted.	
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Resources:
SHAPE America National Standards and Grade Level Outcomes; <http://www.nhlbi.nih.gov/health/educational/wecan/healthy-weight-basics/balance.htm>;
<http://goaskalice.columbia.edu/what-relationship-between-body-composition-and-caloric-need>;

VA SOL Standard: 8.5 The student will explain the relationship of caloric intake, caloric expenditure and body composition.

ENDURING UNDERSTANDINGS

- Using the RPE scale helps you to recognize your body's signs of exertion and to modify your normal workout intensity.
- Rating of perceived exertion (RPE) is a subjective rating system for exercise intensity based on general fatigue and helps individuals focus on the feelings of exertion.
- The RPE scale serves as an indicator of your heart rate.

VDOE Standard(s) Student Friendly Language What will the student know and be able to do?	SUGGESTED/SAMPLE ASSESSMENTS	Terms (Vocabulary) and Content Information	SUGGESTED/SAMPLE ACTIVITIES									
<p>8.5 d) Explain a Rate of Perceived Exertion (RPE) scale and how it relates to energy expenditure.</p> <p>Suggested Learning Targets:</p> <p>I can explain an RPE scale and how it relates to weight loss through my fitness journal/portfolio.</p> <p>8.5 e) Describe how an RPE scale can be used to adjust workout intensity during physical activity.</p> <p>Suggested Learning Targets:</p> <p>I can describe how I use an RPE scale to adjust physical activity and reflect upon that in my fitness journal/portfolio.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> Questioning to check for understanding. Example— Have students use a line on the gym floor as a Rate of Perceived Exertion (RPE) scale and establish which end of the line is “0” and which end of the line is “10”. Call out different physical activities and have students stand on the line based on where they would place the activity on the RPE scale. Have students defend their decisions based in a class discussion. Question how each activity relates to energy expenditure. <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> Choose a physical activity and describe how you would use an RPE scale to adjust workout intensity. Example— Based on the physical sensations experienced during activity such as: <ul style="list-style-type: none"> Increased heart rate. Increased respiration/breathing rate. Increased sweating. 	<ul style="list-style-type: none"> The RPE scale is used to measure the intensity of your exercise. The numbers below relate to phrases used to rate how easy or difficult you find an activity. Example—0 (nothing at all) would be how you feel when sitting in a chair; 10 (very, very heavy) is how you feel at the end of a very difficult activity. <ul style="list-style-type: none"> 0— Nothing at all 0.5— Just noticeable 1— Very light 2— Light 3— Moderate 4— Somewhat heavy 5— Heavy 6 7— Very heavy 8 9 10— Very, very heavy 	<ul style="list-style-type: none"> Use the RPE scale as an adjunct method to heart rate monitoring during exercise. Discuss how the ratings of physical effort and feelings correspond with heart rate and people can learn to exercise at a desired level of intensity based on their subjective feelings of exertion. Teach the physical cues of intensity levels: <table border="1" data-bbox="1444 867 2018 1360"> <thead> <tr> <th>Level of Intensity</th> <th>RPE</th> <th>Physical Cues</th> </tr> </thead> <tbody> <tr> <td>Light</td> <td>Easy</td> <td>Does not induce sweating unless it's a hot, humid day. There is no noticeable change in breathing patterns.</td> </tr> <tr> <td>Moderate</td> <td>Somewhat hard</td> <td>Will break a sweat after performing the activity for about 10 min. Breathing becomes deeper and more frequent. You can carry on a conversation but not sing.</td> </tr> </tbody> </table>	Level of Intensity	RPE	Physical Cues	Light	Easy	Does not induce sweating unless it's a hot, humid day. There is no noticeable change in breathing patterns.	Moderate	Somewhat hard	Will break a sweat after performing the activity for about 10 min. Breathing becomes deeper and more frequent. You can carry on a conversation but not sing.
Level of Intensity	RPE	Physical Cues										
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	<ul style="list-style-type: none"> ○ Muscle fatigue. 	<ul style="list-style-type: none"> ● All activity whether done at a light, moderate or high level of intensity expends energy and therefore is helpful for weight loss. The more intense the exercise and/or the longer the duration of exercise, the greater the energy expended per minute and the greater the impact on weight loss. 	High	Hard	<p>Will break a sweat after 3-5 minutes. Breathing is deep and rapid. You can only talk in short phrases.</p> <p>Duncan GE, Sydeman SJ, Perri MG, Limacher MC, Martin AD. Can sedentary adults accurately recall the intensity of their physical activity? Prev Med. 2001 Jul;33(1):18-26</p>
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Resources:

SHAPE America National Standards and Grade Level Outcomes; http://www.weightwatchers.com/util/art/index_art.aspx?tabnum=1&art_id=20971;
<http://www.cdc.gov/physicalactivity/basics/measuring/index.html>

VA SOL Standard: 8.5 The student will explain the relationship of caloric intake, caloric expenditure and body composition.

ENDURING UNDERSTANDING

- Both the warm-up and cool-down are aimed at enhancing flexibility, minimizing discomfort, and preventing injury.

VDOE Standard(s) Student Friendly Language What will the student know and be able to do?	SUGGESTED/SAMPLE ASSESSMENTS	Terms (Vocabulary) and Content Information	SUGGESTED/SAMPLE ACTIVITIES
<p>8.5 f) Describe the body's physiological responses to warm-ups and cool-downs.</p> <p>Suggested Learning Targets:</p> <p>I can describe the effects of warm-ups on the body through an exit ticket.</p> <p>I can describe the effects of cool-downs on the body to a peer.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> Questioning to check for understanding Teacher observation <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> Choose a physical activity and develop a warm-up and cool-down that relates. Describe the physiological responses and the importance of the warm-ups and cool-downs for that physical activity. 	<ul style="list-style-type: none"> Effects of Warmups: <ul style="list-style-type: none"> Dilates capillaries and raises the pulse rate which enables more blood and oxygen to be available for the muscles Raises body temperature which enhances the rate of ATP conversion Prepares muscles to operate over its full range Reduces the risk of injury Produces hormones like epinephrine, endorphins, growth hormone and testosterone, all of which increase the energy available for your workout Effects of Cool Downs: <ul style="list-style-type: none"> Reducing to lighter exercises will help with the removal of lactic acid Prevents blood pooling that causes dizziness Stretching improves flexibility Slow down the heart rate Slows down the blood flow Slows down nervous system activity Helps minimize muscle fatigue and soreness 	<ul style="list-style-type: none"> Teaching dynamic warm-ups, which involve moving joints repetitively within a full range of motion. Then discussing the benefits of warm-ups. Choose warm-up exercises that connect to the activity and movements that students will be doing for the day. <ul style="list-style-type: none"> Discuss how activity-specific warm-ups are designed to properly prepare the body for physical activity and sharpen mental focus for the activity at hand.

Resources:

SHAPE America National Standards and Grade Level Outcomes; <http://kidshealth.org/en/teens/stretching.html?WT.ac=ctg#catdieting>;
<http://www.fitnesshealth101.com/fitness/weight-training/beginners/warm-up>;

VA SOL Standard: 8.5 The student will explain the relationship of caloric intake, caloric expenditure and body composition.

ENDURING UNDERSTANDINGS

- Aerobic exercise decreases fat mass, while strength training increases lean body mass, also helping to maintain optimal body composition.
- Cardiorespiratory exercises are continuous, dynamic exercise, which utilizes large muscle masses, requiring aerobic metabolic pathways to sustain the activity.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>SUGGESTED/SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED/SAMPLE ACTIVITIES</p>																																								
<p>8.5 g) Identify activities that use the anaerobic and aerobic energy systems.</p> <p>Suggested Learning Targets:</p> <p>I can identify an activity that uses oxygen and tell a partner.</p> <p>I can identify an activity that does not use oxygen and tell a peer.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • Questioning to check for understanding • Oral: Peer discussion Example Think about several physical activities that use the anaerobic and aerobic energy systems. <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> • Explain the anaerobic and aerobic energy systems through the progression of an all-out sprint, to a slower jog, to an eventual walk. Identify another movement progression that moves through both the anaerobic and aerobic energy systems. 	<ul style="list-style-type: none"> • Anaerobic exercise is typically used by athletes in non-endurance sports to build power and by body builders to build muscle mass. Examples of anaerobic exercise: <ul style="list-style-type: none"> ○ Weight lifting ○ Sprinting and jumping ○ Any exercise that consists of short exertion, high-intensity movement • Aerobic exercise includes any type of exercise but typically those performed at moderate levels of intensity for extended periods of time that maintain an increased heart rate. Examples of aerobic exercise: <ul style="list-style-type: none"> ○ Walking ○ Running ○ Swimming ○ Cycling • One of the systems will be the dominant source of energy during a particular type of exercise but both exercise energy systems are active at all times. It is simply the relative amount of energy that each system is providing that will change with varying exercise intensity and duration. 	<ul style="list-style-type: none"> • Perform activities that use the anaerobic and aerobic energy systems. Example: Discuss anaerobic and aerobic energy system contributions in track running events after students perform each event. <table border="1" data-bbox="1381 630 2022 1105"> <thead> <tr> <th></th> <th>Males</th> <th>-Males</th> <th>Females</th> <th>Females</th> </tr> <tr> <th>Event</th> <th>Aerobic Energy</th> <th>Anaerobic Energy</th> <th>Aerobic Energy</th> <th>Anaerobic Energy</th> </tr> </thead> <tbody> <tr> <td>100 m</td> <td>21%</td> <td>79%</td> <td>25%</td> <td>75%</td> </tr> <tr> <td>200 m</td> <td>28%</td> <td>72%</td> <td>33%</td> <td>67%</td> </tr> <tr> <td>400 m</td> <td>41%</td> <td>59%</td> <td>45%</td> <td>55%</td> </tr> <tr> <td>800 m</td> <td>60%</td> <td>40%</td> <td>70%</td> <td>30%</td> </tr> <tr> <td>1500 m</td> <td>77%</td> <td>23%</td> <td>86%</td> <td>14%</td> </tr> <tr> <td>3000 m</td> <td>86%</td> <td>14%</td> <td>94%</td> <td>6%</td> </tr> </tbody> </table> <p><i>Duffield R, Dawson B, Goodman C. Energy system contribution to 100-m and 200-m track running events. J Sci Med Sport. 2004 Sep; 7(3):302-13.</i> <i>Duffield R, Dawson B, Goodman C. Energy system contribution to 400-metre and 800-metre track running. J Sports Sci. 2005 Mar; 23(3):299-307.</i> <i>Duffield R, Dawson B, Goodman C. Energy system contribution to 1500- and 3000-metre track running. J Sports Sci. 2005 Oct; 23(10):993-1002.</i></p>		Males	-Males	Females	Females	Event	Aerobic Energy	Anaerobic Energy	Aerobic Energy	Anaerobic Energy	100 m	21%	79%	25%	75%	200 m	28%	72%	33%	67%	400 m	41%	59%	45%	55%	800 m	60%	40%	70%	30%	1500 m	77%	23%	86%	14%	3000 m	86%	14%	94%	6%
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VA SOL Standard: 8.5 The student will explain the relationship of caloric intake, caloric expenditure and body composition.

ENDURING UNDERSTANDING

- Personalized meal plans should be based on your age, sex, height, weight and physical activity level.

VDOE Standard(s) Student Friendly Language What will the student know and be able to do?	SUGGESTED/SAMPLE ASSESSMENTS	Terms (Vocabulary) and Content Information	SUGGESTED/SAMPLE ACTIVITIES
<p>8.5 h) Create a one-week meal plan, including snacks and physical activity, based on Recommended Dietary Allowances (RDA), portions, macronutrients, vitamins, minerals, hydration, sugar and salt.</p> <p>Suggested Learning Targets:</p> <p>I can create a balanced healthy meal and demonstrate it in my fitness journal/portfolio</p> <p>I can identify what is a healthy snack and tell it to my teacher.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> Questioning to check for understanding Written: Research what is the Recommended Dietary Allowances (RDA), portions, macronutrients, vitamins, minerals, hydration, sugar and salt for healthy eating. <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> Creation of the one-week meal plan that includes snacks and physical activity, based on Recommended Dietary Allowances (RDA), portions, macronutrients, vitamins, minerals, hydration, sugar and salt. 	<ul style="list-style-type: none"> Ranges of nutrient intake goals: <ul style="list-style-type: none"> Total fat intake should represent 15 to 30% of total dietary energy intake. Intake of free sugars, such as those found in soft drinks and many processed foods, should amount to less than 10% of total energy intake. An intake of at least 400g of fruits and vegetables per day is recommended. Combined with a consumption of wholegrain cereals to provide an adequate amount of fiber. Reduction of salt intake helps reduce blood pressure, a major cause of cardiovascular diseases. Diet Suggestions: <ul style="list-style-type: none"> Eat less high-calorie foods, especially foods high in saturated or trans fats and sugar. Be physically active, prefer unsaturated fat and use less salt. Enjoy fruits, vegetables and legumes; and select foods of plant and marine origin. Calories (kcal) in a gram of: <ul style="list-style-type: none"> Protein — one gram equals 4 kcal Carbohydrate — one gram equals 4 kcal Fat — one gram equals 9 kcal 	<ul style="list-style-type: none"> Have students bring in empty containers as examples of different foods that are based on the Recommended Dietary Allowances (RDA), macronutrients, vitamins, minerals, sugar, and salt. Scatter the empty containers around the gym area. Place students in groups and conduct a relay race to get the different examples for groups to create a healthy meal. Discuss each group's meal and have other groups give suggestions on better choices. Discussions on healthy snacks
<p>Resources:</p> <p>SHAPE America National Standards and Grade-Level Outcomes: http://www.choosemyplate.gov/supertracker-tools/daily-food-plans.html; http://classroom.kidshealth.org/classroom/6to8/personal/nutrition/healthy-snacking.pdf;</p>			

VA SOL Standard: 9.1 The student will perform all basic movement skills and demonstrate movement and biomechanical principles in a variety of activities that may include outdoor pursuits, fitness activities, dance and rhythmic activities, aquatics, individual performance activities and games and sports (net/wall, striking/fielding and goal/target(s)).

ESSENTIAL UNDERSTANDINGS

- Achieving physical literacy includes movement experiences that build competent and confident movers through acquisition, performance and refinement of movement skills in a variety of activities.
- Movement competence is defined as the development of sufficient skill and ability to ensure successful performance in a variety of physical activities.

Note: Society for Health and Physical Educators (SHAPE America) National Physical Education Standards Document 2014 recommends exclusion of invasion and fielding/striking games for high school outcomes because these activities require team participation and are less suited for lifelong participation.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>
<p>9.1 a) Demonstrate proficiency and refinement in locomotor, non-locomotor and manipulative skills through appropriate activities (e.g., outdoor pursuits, fitness activities, dance and rhythmic activities, aquatics, individual performance activities, games and sports [net/wall, striking/fielding and goal/target]).</p> <p>Suggested Learning Targets:</p> <p>I can recognize the advanced skills for (selected activity) and demonstrate them using a checklist.</p> <p>I can create a dance/rhythmic sequence that includes various tempos including changes in speed, direction and flow and</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • Written: Pre-test cognitive knowledge for skills needed to be successful in activity(s) selected. • Performance: Pre-test skill performance of mature movement forms and skill combinations. • Self/Peer assessments: Assessing skill levels in the combination of specialized movement forms for selected activities (e.g., negotiating obstacles when cycling, combining movements in dance for fitness activities). • Teachers Observation with feedback of skills while participating in modified activities. 	<ul style="list-style-type: none"> • Activity-specific vocabulary • Self/Peer Feedback: <ul style="list-style-type: none"> ○ Improves motor skills by providing error detection and motivation. ○ Is based on the critical elements for each skill. ○ Two corrections at the most should be identified for feedback ○ Should be specific and meaningful. 	<ul style="list-style-type: none"> • Outdoor pursuits such as hiking, backpacking, kayaking, fishing orienteering, geocaching, traversing or climbing, mountain biking, adventure activities or ropes courses. Example: Disc Golf http://www.sparkpe.org/wp-content/uploads/clap-catch-hs.pdf http://www.sparkpe.org/wp-content/uploads/c-catch-hs.pdf http://www.sparkpe.org/wp-content/uploads/forehand-throw-card-hs.pdf http://www.sparkpe.org/wp-content/uploads/backhand-throw-card-hs.pdf • Fitness activities such as yoga, Pilates, resistance training, spinning, running,

demonstrate this through a (self/group) presentation.
I can perform with proficiency the skills needed for (selected activity) and demonstrate it through a peer assessment.

- Skill Checklist: for advanced skills.
 - Skill Rubric: for activity application.
- Assessment of Learning (Summative)**
- Written: Post cognitive tests for comprehension of skills needed to be successful in activity(s) selected.
 - Performance: Skill rubric

Sample Performance Rubric

- 4 (Beyond what was taught)**
Displays consistent and correct performance of all elements during unpredictable situations; includes smooth transitions between skills/movements; includes advanced strategies as appropriate.
- 3 (What was explicitly taught)**
Performs all critical elements (mature movement skills and patterns) appropriately and consistently during unpredictable situations and adapts movements to changing situations.
- 2 (Identify basic elements)**
Performs critical elements (mature movements skills and patterns) in isolation.
- 1 (With help/prompts/cues)**
With teacher cues, student can demonstrate some/most of the critical elements in isolation.

- fitness walking, fitness swimming, kickboxing, cardio kick, Zumba or exergaming.
- Dance and rhythmic activities such as creative movement, ballet, modern, ethnic or folk, hip hop, Latin, line, ballroom, social or square.
- Aquatics such as swimming, diving and water polo.
- Individual performance activities such as figure skating, track and field, multisport events, in-line skating, self-defense and cycling.
- Net/wall and goal/target activities such as tennis, badminton, pickle ball, racquet ball, archery and golf.
- Manipulation of activity skills/components, such as rules, activity space and movement within the activity space to create practice scenarios that develop understanding and the application of movement skills for intelligent play.
- Opportunities to develop movement competencies necessary to successfully apply the movement solutions for the selected activities.
- Self/Peer assessing opportunities for the purpose of:
 - Increasing the quantity of feedback.
 - Promoting learning motivation.
 - Supporting the development of self-regulated learning, critical thinking and reciprocal learning.

Resources:

SHAPE America National Standards and Grade Level Outcomes; <http://www.pecentral.org/lessonideas/searchresults.asp?category=53>;
www.ndya.org/uploads/Coaches_Manual_2009_Revised_Ch_6.docx; <http://www.sparkpe.org/wp-content/uploads/yoga-basic-training.pdf>;
http://www.sparkpe.org/wp-content/uploads/yoga-content-card_hs.pdf; <http://kidshealth.org/en/teens/tai-Chi.html?WT.ac=ctg#catdieting>;
<http://kidshealth.org/en/teens/yoga-home.html?WT.ac=ctg#catdieting>

<p>VA SOL Standard: 9.1 The student will perform all basic movement skills and demonstrate movement and biomechanical principles in a variety of activities that may include outdoor pursuits, fitness activities, dance and rhythmic activities, aquatics, individual performance activities and games and sports (net/wall, striking/fielding and goal/target(s)).</p> <p>ESSENTIAL UNDERSTANDING</p> <ul style="list-style-type: none"> Achieving physical literacy includes movement experiences that build competent and confident movers through acquisition, performance and refinement of movement skills in a variety of activities. 			
<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>
<p>9.1 b) Design, implement, evaluate and modify a practice plan for a self-selected skill, to include the motor learning process of analysis of performance; application of principles of movement and training; goal setting; and improvement of personal skills through practice, correction, practicing at a higher level and reassessment.</p> <p>Suggested Learning Targets:</p> <p>I can assess my skill ability for (selected activity) and set a goal(s) for improvement through a video analysis.</p> <p>I can create a plan to meet my goals in skill improvement for (selected skill), document activities, reassess and reflect on my progress using a practice plan rubric.</p> <p>I can do a final assessment and reflection to improve one or more advanced skills for (selected activity) in my (selected assessment product: i.e., log, journal or portfolio).</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> Practice plan elements such as: <ul style="list-style-type: none"> Analysis of performance, goal setting, training plan, practice logs, reassessment, plan revisions, final assessment, reflection on goal progress and achievement Self and/or peer assessments Video analysis Example https://www.youtube.com/watch?v=Rv9.onxrvxmg <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> Practice plan that includes all elements <p style="text-align: center;">Sample Rubric</p> <p>4 (Beyond what was taught) Plan provides rationale for goal and practice/training plan, addresses potential and actual roadblocks and how to address/how they were addressed</p>	<ul style="list-style-type: none"> Review developing SMART goals: SMART (specific, measurable, attainable, realistic, timely) goals: <ul style="list-style-type: none"> Specific: A specific goal has a much greater chance of being accomplished than a general goal. Measurable: Establish concrete criteria for measuring progress toward the attainment of each goal you set. Attainable: When you identify goals that are most important to you, you begin to figure out ways you can make them come true. You develop the attitudes, abilities, skills and financial capacity to reach them. Realistic: To be realistic, a goal must represent an objective toward which you are both willing and able to work. Timely: A goal should be grounded within a time frame. Movement skill phases: Not all fit neatly into three phases and additional phases may be devised or added. Example: The long jump may also be divided into: preliminary movements; run-up; take-off and landing. 	<ul style="list-style-type: none"> Self-selected student activity (activity list recommendations—see 9.1.a.) Teach evaluation skills such as: <ul style="list-style-type: none"> The ability to evaluate the validity of claims. The relevance of different types and sources of evidence for different types of claims or questions. The sufficiency of evidence to draw a conclusion. Application of criteria to the judgment of a skill such as strengths and weaknesses, judging when success has occurred or recognizing when a change in approach is needed and make adjustments. Identification of possible errors and biases in claims or conclusions. When analyzing movements, teach how to divide the movement performance into phases such as: <ul style="list-style-type: none"> Preparatory: Movements that prepare such as: backswing in golf or tennis. Execution: <ul style="list-style-type: none"> Force-producing movements

	<p>and/or identifies short and long-term goals.</p> <p>3 <i>(What was explicitly taught)</i> Plan includes: SMART goal based on analysis of performance, practice/training plan (action steps) designed to meet goal, logs of practice activities, reassessment, reflection on goal progress, plan revisions as appropriate, final assessment and reflection on goal achievement.</p> <p>2 <i>(Identify basic elements)</i> Plan includes basic elements of SMART goal, practice plan of activities, reassessment and final assessment.</p> <p>1 <i>(With help/prompts/cues)</i> With teacher cues, student can create a SMART goal and identify activities to meet the goal.</p>	<p>• Types and methods of skill practice: http://www.teachpe.com/sports_psychology/teaching.php</p>	<p>such as: the forward motion of the tennis forehand shot.</p> <ul style="list-style-type: none"> ▪ Critical instant, the point of contact or the release such as: moment of contact in the tennis serve or the take-off in the long jump. ○ Follow-through: Body movements after the execution where the movement slows down such as, the high leg lift after kicking a goal or the golf club after the ball is struck. ○ Example of braking down a movement skill into phases: Long Jump— <ul style="list-style-type: none"> ▪ Preparatory: The length and speed of the run to the take-off board. ▪ Execution: Take-off and flight through the air. ▪ Follow-through: The landing.
<p>Resources: SHAPE America National Standards and Grade-Level Outcomes: American Alliance for Health, Physical Education, Recreation and Dance Grade-Level Outcomes for K-12 Physical Education http://www.humanmotion.nl/uploads/categories/1408619352-thefunctionalmovementscreenFMSPB.pdf; http://www.humankinetics.com/excerpts/excerpts/the-importance-of-health-fitness-and-wellness</p>			

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ESSENTIAL UNDERSTANDING

- When the body is moving or producing movement it obeys the same physical laws that apply to all types of motion.
- Humans move through a system of levers that cannot be changed but can be utilized more efficiently.

VDOE Standard(s) Student Friendly Language What will the student know and be able to do?	SUGGESTED / SAMPLE ASSESSMENTS	Terms (Vocabulary) and Content Information	SUGGESTED / SAMPLE ACTIVITIES
<p>9.1 c) Apply the concepts and principles of levers, force, motion and rotation in a variety of activities.</p> <p>Suggested Learning Targets:</p> <p>I can apply the concept of levers when (specific activity i.e. using a racquet to serve a tennis ball) to impact performance and explain it to a peer.</p> <p>I can apply the concept of force when (specific activity i.e. serving a tennis ball) and explain its impact on performance to a partner.</p> <p>I can apply the concept of motion and rotation when (specific activity i.e. topspin on a tennis ball in tennis) and explain its impact on performance through an exit ticket.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> Individual or group investigation of an advanced skill and use/application of levers, force, motion and rotation (as appropriate for the skill/activity). <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> Demonstration and explanation of the use and impact of levers, force, motion and rotation in a variety of activities. 	<ul style="list-style-type: none"> Levers: a rigid rod or bar to which a force may be applied to overcome a resistance or weight. In the body: <ul style="list-style-type: none"> Bones represent a lever. Joints are the axis. Muscles contract to apply force to move. Speed is increased by applying force through a shorter distance than the resistance is moved. This requires a proportional increase of force. Example—When a tennis racquet is swung the end of the racquet moves faster than the hands, but greater force is needed to swing the racquet than is needed to move the hands alone. A longer handled implement needs more force applied to increase speed of the implement. Force: Strength or energy exerted; cause of motion such as force needed to strike for distance and/or accuracy. Absorption, impact of one or more force, speed of objects and generation of force. Torque: How to generate force—a twisting force that tends to cause rotation or turns things. Motion—Newton's Laws: <ul style="list-style-type: none"> First Law—Object at rest stays at rest unless acted upon by a force; object in a state of uniform motion tends to remain in motion unless an external force is applied. <ul style="list-style-type: none"> Tennis serve—tennis ball does not leave the hand unless force is applied to toss it upwards; the tossed ball 	<ul style="list-style-type: none"> Activities that demonstrate the concepts and principles: <ul style="list-style-type: none"> Levers and force: use of short and long handled implements in tennis, golf, ping pong, pickle ball. Class discussions on the difference in using long and short handled instruments—which provides more power or more accuracy—compare ping pong paddle with tennis racquet, golf putter to a driver. Motion and rotation: different types of spin and resulting actions. Example: How force can be used to create topspin, backspin and sidespin. Class instruction/discussion on the impact of knowledge of levers, force, motion and rotation to achieve advanced skills in selected activities. Example: Force <ul style="list-style-type: none"> Using force to stop and start movement of the body.

I can analyze an advanced skill to explain the use of levers, force, motion and rotation and evaluate the application in my journal.

- moves upward until either gravity (force) or a racquet strike (force) is applied to change the direction of the tossed ball.
- Second Law— There is a relationship between an object's mass, acceleration and the force applied—a force causes only a *change in velocity* (an acceleration); it does not maintain the velocity of the object.
 - The speed of a served tennis ball will vary according to the amount of force applied to the ball with the racquet and according to the weight of the ball (on a humid day, the ball absorbs moisture and will need additional force to achieve the desired speed/acceleration of a tennis ball compared with a tennis ball used on a dry/low humidity day). Professional tennis players achieve service speeds of 120–150 mph.
- Third Law— For every action there is an equal and opposite reaction.
 - Force that the ball exerts on the racket is equal and opposite of the force that the racket exerts on the ball.
- Newton's Law of Rotation: Applying a motion to produce spin on a tennis ball, bowling ball, ping pong and the resulting movement.
 - Backspin on a tennis ball (strike below the center of the mass) keeps the ball's trajectory low, tends to move the ball right to left and stays low when it bounces.
 - Topspin on a tennis ball (strike above the center of the mass—racquet moves from low to high—windshield wiper motion) rotates ball forward in the air, increasing speed of the ball causing it to dip towards the ground, this decreases the distance traveled (hits the ground sooner) and increases its speed as it hits the ground, travels faster and low to the ground.

- Using force to manipulate an object.
- Generating and absorbing the force of an object.
- Using force to increase speed or distance.
- Using force to create spin.
- Using force to alter the outcome.

Resources:

SHAPE America National Standards and Grade Level Outcomes; Sports Science Resources Online

http://www.profedf.ufpr.br/rodackibiomecanica_arquivos/Books/Introduction%20to%20Sports%20Biomechanics.pdf;

<http://www.hhp.txstate.edu/hper/faculty/pankey/bioprin/htm/index.html>!; <http://www.slideshare.net/ryanm9/year-11-biomechanics-with-levers-force-summation>;

<http://www.teachpe.com/biomechanics/angular-motion/>; <http://www.teachpe.com/biomechanics/forces/>

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<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>
<p>9.1 d) Apply physiological principles of warm-up, cool-down, overload, specificity and progression.</p> <p>Suggested Learning Targets:</p> <p>I can perform a proper warm-up and cool-down for (selected activity) and demonstrate it to my teacher.</p> <p>I can apply (overload, specificity, or progression) to improve skill performance and demonstrate it to my partner.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> Assess student's knowledge of warm-up, cool-down, overload, specificity and progression. Teacher Observation: Demonstration of proper warm-up and cool-down activities. Self/Peer/Teacher Assessment: Demonstration of activities that demonstrate overload, specificity and progression. <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> Demonstration of student-selected / student-created 	<ul style="list-style-type: none"> Warm up: <ul style="list-style-type: none"> To increase your breathing and heart rate. To increase the energy-releasing reactions in the muscles. To promote blood flow to the muscles, supply them with more oxygen and to remove waste products. Prepares your muscles for stretching. Cool down: <ul style="list-style-type: none"> To help your heart rate and breathing move towards resting levels. To help avoid fainting or dizziness. To help remove waste products from your muscles, such as lactic acid. To help prepare muscles for the next exercise session. Principle of specificity: Only those body parts, muscles or systems involved in a workout will be the ones to experience training. Specificity may apply to muscle groups, energy systems or specific movements and activities. Examples- <ul style="list-style-type: none"> Weight training for the upper body will improve arm, shoulder and back strength but 	<ul style="list-style-type: none"> Specific lessons on the application of principles of training and examples for students to perform for warm-up, cool-down, overload, specificity and progression. Class instruction/discussion on the physiological principles of warm-up, cool-down, overload, specificity and progression to improve performance. Example: <ul style="list-style-type: none"> Warm-ups: Stretching is not warming up. Cold muscles do not stretch well. Warming up the core should occur before stretching to reduce injury. When a muscle is tight, range of motion can be compromised. Lack of range of motion causes changes in movement patterns that limit quality of performance and ultimately create injury risk. A tight muscle is a weak muscle. An overstretched or long muscle is also a weak muscle. This is known as the length-tension relationship. This rule says that a muscle must be at mid-length (or on a slight stretch) to generate optimal force. Training for maintaining lifelong movement skills.

	<p>warm-up and cool-down techniques.</p> <ul style="list-style-type: none"> ● Demonstration of student-selected / student-created activities that include correct application of overload, specificity and progression to improve performance. 	<p>activities in the lower body such as squats or lunges will not improve upper body.</p> <ul style="list-style-type: none"> ○ A swimmer that swims several times a week will gain cardiorespiratory endurance but may lack in flexibility benefits. ○ If a baseball pitcher wants to work specifically on his accuracy he will target this skill by trying to hit a specific target. If he wants to work on his speed he will target the throwing phase of the pitch. <ul style="list-style-type: none"> ● Principle of overload: A person must work (load) the body in a higher manner than normal in order to improve fitness. <ul style="list-style-type: none"> ○ For improved cardiorespiratory endurance: It would mean walking faster and farther or more times a week than normal. ○ For improved muscular strength and endurance: It means contracting the muscles for a longer period of time or more frequently during the week or adding weight to the number of repetitions performed. ○ For improved flexibility: It would require stretching more often, holding stretches for longer periods of time or stretching beyond the usual point of flexion or extension. ● Principle of progression: The increase in exercise to make it more demanding once the body has adapted to the exercise being done before to continue improvements. <ul style="list-style-type: none"> ○ When overload is no longer sufficient, adjustments must be made for fitness level improvement. Training status will benefit by gradually increasing the load that the body is working against. Incorrect overload may bring injury and demotivation due to over-zealous targets. ○ Changes to frequency, intensity or amount of time in the exercise program. 	<ul style="list-style-type: none"> ○ Specificity: Training in which engagement is directed specifically at improving movement abilities in life means choosing the right combination of physical fitness components to help improve movement activities. For example: Strength training results in increases in strength for the muscles being exercised but does little to improve cardiorespiratory endurance. Training can also be specific to the activity of interest. For example: Optimal running performance is best achieved when the muscles involved in running are trained for the movements required. It does not necessarily follow that a good swimmer is a good runner. Specificity also requires that one consider the speed of motion, the number of limbs moving, the direction in which they are moving and the range over which the movement occurs. ○ Overload: If a person works often (frequency) enough, hard (intensity) enough and long (duration) enough to load the body above its resting level, physical fitness will improve. If this is done regularly over a period of time, the body will gradually adapt to the increase in demands. The term overload does not refer to the idea that one needs to overexert or exert at high intensities to obtain gains in fitness; it simply means that one needs to load the body more than it is usually accustomed to. ○ Progression: Increasing the frequency, intensity and/or duration of an activity over periods of time is necessary for continued improvement in physical fitness. Improvements in physical fitness are realized fairly rapidly at the onset of an exercise or training program. The rate of improvement will gradually slow down and level off (adaptation) if an overload is present (meaning that the load is increasing and that there is progress). At high levels of physical fitness it may even be necessary to change the type(s) of exercise(s) being performed.
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Resources:

SHAPE America National Standards and Grade-Level Outcomes; http://www.teachpe.com/fitness/training_principles.php

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ESSENTIAL UNDERSTANDINGS

- Sports biomechanics uses the scientific methods of mechanics to study the effects of various forces on an individual or object.
- Balance is both a static and dynamic process that makes it possible for the body to maintain its center of gravity over its base of support.
- Core muscles provide the foundation for movement throughout your entire body and are incorporated into almost every movement of the human body acting as a stabilizer to help gain greater balance.

<p>VDOE Standard(s) Student Friendly Language -What will the student know and be able to do?</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>
<p>9.1 e) Apply biomechanical principles of balance, energy and types of muscle contractions to a variety of activities.</p> <p>Suggested Learning Targets:</p> <p>I can apply the concept of balance when (specific activity i.e. using a racquet to serve a tennis ball) and explain its impact on performance to a peer.</p> <p>I can apply the concept of energy when (specific activity i.e. court movements in tennis) and explain its impact on performance to my teacher.</p> <p>I can demonstrate muscle contractions in (specific activity) and describe it through an exit ticket.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> ● Assess student understanding of the biomechanical principles of balance, energy and types of muscle contractions. ● Oral: <ul style="list-style-type: none"> ○ Describe the use of balance in selected activities. Example: Tennis serve ○ Describe the use of energy in selected activities. Example: Tennis play – movement to the ball and when hitting the ball. ○ Describe the types of muscle contractions used in selected activities. Example: Tennis backhand. ● Written/Oral: Describe paired muscle movements. Example: Bicep curl 	<ul style="list-style-type: none"> ● Balance: The ability to maintain the body's center of gravity within the limits of stability as determined by the base of support. <ul style="list-style-type: none"> ○ Center of gravity is the point at which all of the body's mass and weight are equally balanced or equally distributed in all directions (in the body it is slightly higher than the waist). ○ An individual's limits of stability is the distance outside of his/her base of support that he/she can go without losing control of the center of gravity. ○ Base of support – The surface supporting the body and points of contact with that surface (when standing – the position of the feet on the ground). ○ The lower the center of gravity to the base of support, the greater the stability. ○ The nearer the center of gravity to the center of the base of support, the more stable the body. ○ Stability is increased with the number of points of contact (two feet vs. one foot) ○ Dynamic activities can also be described as those that cause the center of gravity to move in response to muscular activity. ● Movement is stabilized by balance (center of gravity and center of support, muscle actions) and planes of movement (sagittal plane – flexion and extension; frontal plane – adduction and abduction; transverse 	<ul style="list-style-type: none"> ● Discussions on the biomechanical principles of a physical activity. Example: <ul style="list-style-type: none"> ○ Sprinting on the tennis court is produced by a rotary motion of the limbs as they pivot at an individual's joints and the individual's center of gravity rises and falls during each stride. ○ In anticipation of an oncoming force, stability may be increased by enlarging the size of the base of support in the direction of the anticipated force. ● Perform activities on different playing surfaces and the changes needed for balance and energy. Example: Tennis on asphalt, grass and clay/dirt. ● Activities that demonstrate the differences between static and dynamic balance. <ul style="list-style-type: none"> ○ Static balance means that the athlete is not moving, such as

	<ul style="list-style-type: none"> ○ The agonist, the prime mover which is the biceps, will contract. ○ The antagonist which is the triceps, relaxes (lengthens). ○ The synergist, which helps to stabilize the bone that is not moving, is the deltoid. <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> ● Demonstrate and explain the principles of balance, energy and types of muscle contractions for selected activity such as different types of tennis serves include the effects of different heights of individuals and different body movements that effect balance for the type of serve, different types of racquets (amount of energy needed to use), different serves and the amount of energy needed to execute and different muscle contractions needed to execute. 	<p>plane — internal and external rotation; multi-plane movements).</p> <ul style="list-style-type: none"> ● The muscles traditionally referred to as “the core,” provide a working surface for our extremities to push off of, which is crucial for any kind of movement. The core is where we generate, absorb and transfer forces to and from our extremities. Strengthening core muscles will improve stability of the lumbar spine which is beneficial for improving balance. ● Energy— The ability to do work, work is moving something against a force such as gravity; we use energy for everything we do. ● Muscle contractions— <ul style="list-style-type: none"> ○ Flexion: Movement that decreases the joint angle, usually anteriorly in the sagittal plane. (Shoulder, knee, elbow, hip movement) ○ Extension: Movement that increases the joint angle, usually posteriorly in the sagittal plane. (Shoulder, knee, elbow, hip movement) ○ Abduction: Movement away the midline of the body, usually in the frontal plane. (Shoulder, wrist, hip movement) ○ Rotation (right or left): Right or left rotation in the transverse plane. (Neck, trunk movement) ● Groupings of muscles according to actions: <ul style="list-style-type: none"> ○ Agonist: Referred to as prime movers since they are the muscles that are primarily responsible for generating the movement. ○ Antagonistic pairs: Opposing muscles to agonists. One muscle contracts while the other relaxes. Example— The biceps flexes the elbow and the triceps extends it. ○ Synergist: Muscles that act around a moveable joint to produce motion similar to or in concert with agonist muscles, allowing for a range of movements. 	<p>performing a handstand.</p> <ul style="list-style-type: none"> ○ Dynamic balance means that the athlete maintains equilibrium while moving, such as in slalom ski events. Other Examples: In-line skating, landing after a rebound in basketball. ● Activities that demonstrate different muscle contractions. Examples: <ul style="list-style-type: none"> ○ Biceps and triceps: Example of an agonist/antagonist pair: <ul style="list-style-type: none"> ▪ During extension the triceps would act as the agonist while the biceps would act as the antagonist. These reverse during flexion. ▪ The lower arm is moved upwards (flexed) when the biceps muscle contracts and the triceps muscle is relaxed. It is moved downwards (extended) when the triceps is contracted and the biceps is relaxed. ○ Hamstrings and quadriceps: Control the movement of the lower leg. ● Discussions on the structure and function of the muscular system as they relate to physical performance and stabilization of movement. <ul style="list-style-type: none"> ○ Muscles pull on bones to cause movement. ○ Muscles work in pairs. ○ Muscles work by contracting and relaxing.
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Resources:

SHAPE America National Standards and Grade Level Outcomes; — <http://www.mananatomy.com/basic-anatomy/actions-skeletal-muscles;>
[http://www.yogajournal.com/article/practice-section/plumb-perfect/;](http://www.yogajournal.com/article/practice-section/plumb-perfect/) — <http://www.teachpe.com/anatomy/movements.php>

[http://www.heart.org/HEARTORG/HealthyLiving/PhysicalActivity/FitnessBasics/Balance-Exercise_UCM_464001_Article.jsp#.V6eFYP36upo;](http://www.heart.org/HEARTORG/HealthyLiving/PhysicalActivity/FitnessBasics/Balance-Exercise_UCM_464001_Article.jsp#.V6eFYP36upo)
<http://www.humankinetics.com/excerpts/excerpts/five-factors-determine-stability-and-mobility>

VA SOL Standard: 9.1 The student will perform all basic movement skills and demonstrate movement and biomechanical principles in a variety of activities that may include outdoor pursuits, fitness activities, dance and rhythmic activities, aquatics, individual performance activities and games and sports (net/wall, striking/fielding and goal/target(s)).

ESSENTIAL UNDERSTANDINGS

- Perceived competence and enjoyment in physical activities are cited as being essential influences on young people's physical activity participation.
- Beliefs about one's competency in fitness activities are formed by information gathered from the environment and significant others such as peer comparisons or teacher feedback.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>
<p>9.1 f) Demonstrate competency in one or more specialized skills in health-related fitness activities.</p> <p>Suggested Learning Targets:</p> <p>I can demonstrate the specialized skill (selected skill) and explain how it improves my health related fitness to a peer.</p> <p>I can perform with competency the specialized skill (selected skill) and demonstrate it using a (checklist/peer assessment).</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> ● Identify simple and more complex health-related fitness activities such as stretching and yoga, running and hurdles, dumbbells and kettle bells, walking and race walking and cycling at different terrains. ● Self/Peer Assessment: Evaluation of specialized skill performance. Examples of assessment pieces: <ul style="list-style-type: none"> ○ Performer appears to be in complete control of their actions. ○ Actions are refined and precise. ○ Actions seem effortless, energy is not wasted. ○ Dynamics of the action, degree of power/touch or speed are adapted to each situation. ○ Even complicated actions appear simple. ○ Skills can be linked into complex combinations with ease. ○ The correct action is always selected for the situation. ○ The action is applied at the correct time. 	<ul style="list-style-type: none"> ● Health-related fitness: <ul style="list-style-type: none"> ○ Muscular Strength: The ability of a muscle or a group of muscles, to exert force for a brief period of time. A person's strength can be expressed as absolute strength (the actual weight lifted) or as relative strength (the weight lifted, divided by the person's body weight). ○ Muscular Endurance: The ability of a muscle or a group of muscles, to sustain repeated contractions or to continue applying force against a fixed object. The person's endurance is expressed as the number of repetitions completed without stopping for a set period of time (often one minute). ○ Flexibility: The ability to move joints through their full range of motion. A person's flexibility is usually expressed in how far a joint can be moved or the degrees through which a joint can be moved. ○ Cardiovascular Endurance: The ability of the cardiovascular system (heart, blood, blood vessels) and respiratory system (lungs, air passages) to deliver oxygen and other nutrients to the working muscles and to remove wastes. 	<ul style="list-style-type: none"> ● Specialized health-related fitness activities, may include activities that address multiple health-related fitness components such as: <ul style="list-style-type: none"> ○ Track and field activities (hurdles, shot put). ○ Mind/body activities (flexibility and strength). ○ Swimming (strength and endurance). ○ Mountain biking. ○ Resistance and cardio activities. ● Teacher think aloud or demonstration of a self/peer assessment. Examples: <ul style="list-style-type: none"> ○ Position yourself to see the critical components of the skill(s). Use multiple vantage points. ○ Observe performance several times to identify consistent performance problems. ○ Use the whole-part-whole observation method. ○ Be sure to focus both on the performer and any implements. ○ Evaluate the overall effectiveness of the movement.

	<ul style="list-style-type: none"> ○ Actions are adapted with flair and creativity to overcome opponents. ○ The performer can carry out skills automatically without having to think them through. ○ There is a high success rate of the outcome of their actions. <ul style="list-style-type: none"> ● Teacher feedback to performance of specialized skills. <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> ● Checklist: Demonstrate specialized skill with competence (adequate ability). ● Peer Assessment: Peer assessments can be used as assessments of learning when the assessment is focused on the ability of the peer assessor to make an assessment and provide appropriate feedback/justification; not focused on how the student being observed performed. 	<ul style="list-style-type: none"> ○ Body Composition: Refers to the makeup of the body in terms of lean mass (muscle, bone, vital tissue and organs) and fat mass. Good body composition has strong bones, adequate skeletal muscle size, a strong heart and a low amount of fat mass. Regular physical activity and exercise will help decrease body fat and increase or maintain muscle mass, increase bone mass and improve heart function. Although body composition entails muscle, bone and fat, it is often expressed only as percentage of body fat. _____ <ul style="list-style-type: none"> ● Self/peer assessments: <ul style="list-style-type: none"> ○ Fully train students on how to assess other students (how to use a skill assessment rubric or checklist). ○ Require assessors to justify their judgments. ○ Create an environment that feels safe for interpersonal risk taking so that students will feel more confident in evaluating. ○ Emphasize the main focus in the assessment should be useful feedback. ○ Model appropriate, constructive criticism and descriptive feedback. ○ Small feedback groups so that feedback can be explained and discussed with the receiver. ○ Encourage students to be as supportive as possible in critiquing the work of others. ○ Stress benefits of being a peer assessor, such as it helps them evaluate their own work and become more self-directed learners. ○ Train students how to interpret feedback so that they can make appropriate connections between the feedback received and the quality of their work. 	<ul style="list-style-type: none"> ○ Use a performance checklist to guide your efforts.
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Resources:

SHAPE America National Standards and Grade-Level Outcomes; <http://www.teachpe.com/fitness/health.php>;

http://sydney.edu.au/education_social_work/groupwork/docs/SelfPeerAssessment.pdf

VA SOL Standard: 9.2 The student will explain the structures and functions of the body and how they relate to and are affected by human movement.			
ESSENTIAL UNDERSTANDING			
● Each of our body systems is interconnected and dependent on each other.			
VDOE Standard(s) Student Friendly Language What will the student know and be able to do?	SUGGESTED / SAMPLE ASSESSMENTS	Terms (Vocabulary) and Content Information	SUGGESTED / SAMPLE ACTIVITIES
<p>9.2 a)— Explain and apply selected scientific principles, to include physiological (warm-up, cool-down, overload, specificity and progression) and biomechanical (levers, types of muscle contractions and force) that aid in the improvement of movement skills.</p> <p>Suggested Learning Targets:</p> <p>I can create and implement an activity plan that includes correct warm-up and cool-down techniques and explain how they improve performance in a summary paragraph.</p> <p>I can create and implement an activity plan that includes correct application of overload, specificity and progression and demonstrate it within a written activity plan.</p> <p>I can demonstrate advanced skills and explain results of the skill performance (success or need for</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> ● Activity plan elements as plans are being developed and implemented. ● Demonstration and analysis of an advanced skill of self or partner (video analysis recommended) – explain results of the advanced skill performed (success or need for improvement) in relation to levers, types of muscle contractions and force. ● Self/Peer Assessment: Analysis of advanced skill of self or partner. <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> ● Demonstration of advanced skill with analysis of performance in relation to balance, energy and types of muscle contractions. ● Activity plan that includes: <ul style="list-style-type: none"> ○ Correct warm-up and cool-down techniques. 	<ul style="list-style-type: none"> ● Additional information in 9.1.c. and 9.1.e. ● Principle of specificity: See 9.1.d ● Principle of overload: See 9.1.d ● Principle of progression: See 9.1.d ● Warm-up: See 9.1.d for additional information. — The importance of a structured warm-up routine should not be underestimated in relation to preventing injury, having optimal performance and maximizing enjoyment. An effective warm-up increases both the respiratory rate and the heart rate. This helps increase the body's core temperature, while also increasing the body's muscle temperature through an increase in the delivery of oxygen and nutrients to the working muscles. Increasing muscle temperature helps make the muscles loose, supple and pliable. Warm-up activities are also important because they provide the participant with an opportunity to prepare mentally for the upcoming exercise session. A warm-up should consist of light physical activity for 5 to 10 minutes of exercise, such as walking, slow jogging, knee lifts, arm circles or trunk rotations. Low-intensity movements that simulate movements to be used in the activity can also be included in the warm-up. Static stretching, per se, is not considered part of a warm-up routine. A 	<ul style="list-style-type: none"> ● Activity plan may build upon plan for 9.1.b. or be an extension of that plan during a different quarter or unit of instruction. ● Apply selected scientific principles Example: Force <ul style="list-style-type: none"> ○ Application of force to control distance of an object in a target sport (specific activity i.e., golf putt). ○ Examples of class discussions: <ul style="list-style-type: none"> ▪ Objects will spin in the direction the force is applied. ▪ The weight of a body segment or the entire body times the speed of acceleration determines the force. Example: In throwing a ball, the force applied to the ball is equal to the weight of the arm times the speed of acceleration of the arm. Example: Levers <ul style="list-style-type: none"> ○ In throwing, the angular motion of the levers (bones) of the body (trunk, shoulder, elbow and wrist) is used to give linear motion to the ball when it is released ○ Skeletal muscles work together with bones and joints to form lever systems. The muscle acts as the effort force; the joint acts as the fulcrum; the bone that the muscle moves acts as the lever; and the object being moved acts as the load.

<p>improvement) in relation to levers, force and types of muscle contractions within my journal using a rubric.</p>	<ul style="list-style-type: none"> ○ Correct application of overload, specificity and progression to improve performance. <p>Sample Rubric for Activity Plan:</p> <p>4 (<i>Beyond what was taught</i>) Plan provides rationale for activities and selected daily training activities, addresses potential and actual roadblocks and how to address/how they were addressed and/or addresses modifications needed as plan progresses.</p> <p>3 (<i>What was explicitly taught</i>) Plan includes: activities to improve performance; activity plan over several weeks (may be longer) that includes correct and explicit application of overload, specificity and progression; specific daily activities training plan—daily training plan includes correct warm-up and cool-down techniques.</p> <p>2 (<i>Identify basic elements</i>) Plan includes activities, one warm up and cool down and may include some elements of specificity, overload and progression.</p> <p>1 (<i>With help/prompts/cues</i>) With teacher cues, student can list activities to improve performance, list warm up and cool down used in class and/or provide an example of activities that address elements of specificity, overload and progression.</p>	<p>warm-up can consist of a lower intensity form of the exercise about to commence.</p> <ul style="list-style-type: none"> ● Force: The effect that one object has on another. <ul style="list-style-type: none"> ○ Production of Force—Produced by the actions of muscles. The stronger the muscles, the more force the body can produce. ○ Application of Force—The force of an object is most effective when it is applied in the direction that the object is to travel. ○ Absorption of Force—The impact of a force should be gradually reduced (“give with the force”) and spread over a large surface. ● Relationship between warm-ups and generating optimal force: When a muscle is tight, range of motion can be compromised. Lack of range of motion causes changes in movement patterns that limit quality of performance and ultimately create injury risk. A tight muscle is a weak muscle. An overstretched or long muscle is also a weak muscle. This conundrum is known as the length-tension relationship. This rule says that a muscle must be at mid-length (or on a slight stretch) to generate optimal force. ● Levers: Rotate about an axis as a result of force being applied to cause its movement against a resistance or weight. In the body: <ul style="list-style-type: none"> ○ Bones represent the bars. ○ Joints are the axis. ○ Muscles contract to apply force. 	<ul style="list-style-type: none"> ● Video student performance of advanced skills to instruct and to analyze student knowledge. ● Discussions on the effects of warm ups and cool-downs for improvement of movement skills. Warm-up effects: <ul style="list-style-type: none"> ○ Dilates capillaries and raises the pulse rate which enables more blood and oxygen to be available for the muscles. ○ Raises body temperature which enhances the rate of ATP conversion. ○ Prepares muscles to operate over its full range. ○ Reduces the risk of injury. ○ Produces hormones like epinephrine, endorphins, growth hormone and testosterone, all of which increase the energy available for your workout. ● Effects of cool-downs: <ul style="list-style-type: none"> ○ Reducing to lighter exercises will help with the removal of lactic acid. ○ Prevents blood pooling that causes dizziness. ○ Stretching improves flexibility. ○ Slow down the heart rate. ○ Slows down the blood flow. ○ Slows down nervous system activity. ○ Helps minimize muscle fatigue and soreness.
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Resources:
SHAPE America National Standards and Grade-Level Outcomes; http://www.teachpe.com/fitness/training_principles.php
http://www.heart.org/HEARTORG/HealthyLiving/PhysicalActivity/FitnessBasics/Warm-Up-Cool-Down_UCM_430168_Article.jsp#.V7G32bf6vcs;
http://www.teachpe.com/alevel_muscles.php; <http://www.teachpe.com/anatomy/movements.php>;
[https://www.google.com/search?q=biomechanical+principles+\(e.g.,+center+of+gravity,+base+of+support\)&biw=1536&bih=696&tbn=isch&tbo=u&source=univ&sa=X&ved=0ahUKEwjU7-Kf6qzOAhWDbiYKHReiDG0QsAQIKQ&dpr=1.25](https://www.google.com/search?q=biomechanical+principles+(e.g.,+center+of+gravity,+base+of+support)&biw=1536&bih=696&tbn=isch&tbo=u&source=univ&sa=X&ved=0ahUKEwjU7-Kf6qzOAhWDbiYKHReiDG0QsAQIKQ&dpr=1.25);
<http://www.teachpe.com/biomechanics/forces/>; <http://www.mananatomy.com/basic-anatomy/actions-skeletal-muscles>

VA SOL Standard: 9.2 The student will explain the structures and functions of the body and how they relate to and are affected by human movement.

ESSENTIAL UNDERSTANDINGS

- When the body is moving or producing movement it obeys the same physical laws that apply to all types of motion.
- Humans move through a system of levers that cannot be changed but can be utilized more efficiently.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>
<p>9.2 b) Analyze and evaluate proficient and efficient movement in relation to how movement is directed, to include the type of muscle action that directs a movement (concentric, eccentric and isometric), the direction the body part moves relative to its joints (abduction, adduction, flexion and extension) and planes of movement.</p> <p>Suggested Learning Targets:</p> <p>I can demonstrate efficiency of movement in (selected advanced skill) with proficiency/mastery using a checklist.</p> <p>I can explain how efficiency of movement was achieved through muscle actions, muscle contractions and planes of movement and demonstrate it through a graphic organizer.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • Pick a movement (self/group) and list the biomechanical principles associated with the movement. Example—Golf swing: <ul style="list-style-type: none"> ○ Concentric movements in the backswing, eccentric in downward swing. ○ Abduction and adduction of arm movements. ○ Frontal plane with arm movements, sagittal with elbow movements, transverse with shoulder and hip rotations. ○ Impact. ○ Stability. <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> • Explain how movement efficiency is achieved for a selected activity/skill in terms of the type of muscle action (concentric, eccentric and isometric), direction the body parts move relative to the joints used (abduction, adduction, flexion and extension) and in what planes of movement the action occurred. 	<ul style="list-style-type: none"> • Muscle action <ul style="list-style-type: none"> ○ Concentric contraction (positive contraction): Contraction that shortens the muscle as it acts against a resistive force (biceps curl—bicep muscles shorten as the weight is pulled toward the body). ○ Eccentric contraction (negative contraction): Contraction that lengthens the muscle as it produces force (lowering the weight during biceps curl lengthens the bicep muscles as the weight is lowered back to a resting position—force is produced by the biceps to allow for a controlled return to a resting position as opposed to allowing gravity to pull the weight down) ○ How much time is spent in each phase (concentric and eccentric contractions) will affect results. Concentrating on eccentric contractions at higher weights is referred to as negative training. ○ Isometric muscle contraction without appreciable shortening or change in distance between its origin and insertion. • Movement of body part in relation to its joints: See additional information in 9.1.e. <ul style="list-style-type: none"> ○ Abduction: Muscle contraction without appreciable shortening or change in distance between its origin and insertion. ○ Adduction: Movement of a body part toward the median plane (of the body, in 	<ul style="list-style-type: none"> • Provide video of basic and advanced skills—compare and contrast basic and advanced skills in terms of efficiency and proficiency of movement. • Use video and/or demonstration of advanced skills to discuss how movement is directed, to include the type of muscle action that directs a movement (concentric, eccentric and isometric), the direction the body part moves relative to its joints (abduction, adduction, flexion and extension) and planes of movement. Examples of planes of movement: <ul style="list-style-type: none"> ○ Movements that involve forward and backward motion are referred to as sagittal plane movements. When a forward roll is executed, the entire body moves parallel to the sagittal plane. ○ Marching, bowling and cycling are all sagittal plane movements. ○ Jumping jacks, side stepping and sidekicks in soccer require frontal plane movement at certain body joints. ○ A cartwheel is an example of total-body frontal plane movement. ○ A total-body transverse plane movement include a twist executed

the case of limbs; of the hand or foot, in the case of digits).

- Flexion: Bending movement around a joint in a limb (such as knee or elbow) that decreases the angle between the bones of the limb at the joint.
- Extension: An unbending movement around a joint in a limb that increases the angle between the bones of the limb at the joint.

● Planes of movement

- Sagittal plane: Vertical plane passing from the rear (posterior) to the front (anterior), dividing the body into left and right halves. It is also known as the anteroposterior plane. Most sport and exercise movements that are almost two-dimensional, such as running, long jumping, biking and rowing, take place in this plane.
- Frontal plane: Vertical and passes from left to right, dividing the body into posterior and anterior halves (front and back). When moving along this plane, we are moving toward or away from the midline. Adduction and abduction are movements along this plane.
- Transverse plane: Divides the body into top (superior) and bottom (inferior) halves. Any time we rotate a joint we are moving along the transverse plane.

- Efficient movement: Exemplified by technique and fitness in running, quickness and effort in tennis, speed and control in a golf swing.

by a diver, airborne gymnast and a dancer's pirouette.

— Example of planes and the direction the body part moves relative to its joints:

— Running — Occurs in three planes.

- Sagittal: Flexion and extension are the movements. Flexion occurs in the legs at the beginning of swing phase of running, when the limb is moving forwards. Extension occurs in the stance limb, reaching its full extension.
- Frontal: Abduction and adduction are the movements. Observing the waistline, abduction is movement away from the middle line of the body and adduction is movement towards the middle line. Frontal plane movement is also seen in the rear foot when the shoe strikes the ground this is termed ankle inversion and eversion.
- Transverse: Rotation occurs in this plane between the pelvis, ribcage and shoulders.

Examples of the direction the body part moves relative to its joints:

- Flexion, such as tuck jump, front dumbbell raise, bicep curl.
- Extension, such as straight leg deadlift, triceps press down, military press.
- Adduction, such as cable crossover pulldown, supine dumbbell fly.
- Abduction, such as straight arm dumbbell side raise, star jump.

Resources:

SHAPE America National Standards and Grade Level Outcomes; <http://www.teachpe.com/anatomy/movements.php>;
<http://www.teachpe.com/anatomy-physiology/anatomy-physiology-resources/>; <http://www.teachpe.com/biomechanics/>;
<http://www.teachpe.com/biomechanics/angular-motion/>; <http://www.teachpe.com/index-quiz.php>; <http://www.aw-bc.com/info/hopson/assets/pdf/chapter5.pdf>

VA SOL Standard: 9.2 The student will explain the structures and functions of the body and how they relate to and are affected by human movement.

ESSENTIAL UNDERSTANDINGS

- Multiple body systems are involved in producing energy during physical activity.
- Physical activity is needed to improve efficiency of the heart, keep blood vessels more elastic and to increase the number of capillaries that bring oxygen to muscles.
- If you don't use you lose (body tissue, efficiency, capacity)

VDOE Standard(s) Student Friendly Language What will the student know and be able to do?	SUGGESTED / SAMPLE ASSESSMENTS	Terms (Vocabulary) and Content Information	SUGGESTED / SAMPLE ACTIVITIES
<p>9.2 c) Apply the concepts and principles of the body's metabolic response to short and long term physical activity.</p> <p>Suggested Learning Targets:</p> <p>I can apply and explain how the body makes energy to move in activity of short duration and activity of long duration in a summary paragraph.</p> <p>I can apply the principles of metabolic response while (short term activity such as long jumping) and while (long term activity such as running hurdles) and demonstrate it to a peer.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • Written: Student knowledge of how body systems function to move the body (basics of cardiovascular, respiratory, digestive system). • Research body system responses to activity. <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> • Student selects a short duration and long duration activity and explains how the body uses/produces energy during the activities. 	<ul style="list-style-type: none"> • Metabolic response: A metabolic response is any reaction by the body to a specific influence or impact. Metabolism is a general term describing the organic process in any cellular structure. <ul style="list-style-type: none"> ○ A metabolic response can occur with respect to individual cells, a gland, an organ or a process such as the cardiovascular system. ○ Metabolism is often understood in terms of the metabolic rate, which is the amount of energy expended by the body in a given period. ○ Metabolism is also a variable in the assessment of human performance. ○ Metabolic function is subject to such individual factors as age, heredity, gender, level of physical fitness and others. The body may exhibit a metabolic response to any type of external factor or change. ○ Changes in the physical intensity of athletic activity, either by training practices or competitive schedule, will generate a metabolic response. This response is particularly evident when assessing the nature of muscle composition in an athlete. When an athlete seeks to improve endurance ability, the training program will correspondingly focus on endurance exercise. The muscle groups involved in the generation of power in the exercise, each with a set pattern of distribution between fast twitch and slow twitch fibers, will respond by making a slight adaptation 	<ul style="list-style-type: none"> • Anaerobic and aerobic activities to explain and discuss how the body produced energy to move. • May be instructed in connection with 9.2.e. • Visuals in the form of charts.

		<p>in which more fast-twitch fibers are utilized for the muscle.</p> <ul style="list-style-type: none"> ● Meeting the demands of working muscles involves nearly every system in the body. <ul style="list-style-type: none"> ○ Cardiovascular system ramps up heartbeat to move blood to the muscles. ○ The respiratory system replenishes that blood with oxygen when lungs fill with air. ○ The digestive system shuts down to preserve energy for where it's most needed. ○ The skin processes heat from ongoing chemical and metabolic reactions that might otherwise build up to dangerous levels. ● Mitochondria, the "powerhouses" of cells, transform food, in the form of stored carbohydrates and fats, into chemical energy, in the form of more ATP. To do this, they require oxygen. See 9.2.e. 	
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Resources:

SHAPE America National Standards and Grade-Level Outcomes; NOVA PBS Learning Media—How the body responds to exercise;
<http://www.pbslearningmedia.org/resource/00r08.sci.life.reg.exercise/how-the-body-responds-to-exercise/>;
<http://www.fags.org/sports-science/Je-Mo/Metabolic-Response.html>; <https://www.cdc.gov/nccdphp/sgr/pdf/chap3.pdf>

VA SOL Standard: 9.2 The student will explain the structures and functions of the body and how they relate to and are affected by human movement.

ESSENTIAL UNDERSTANDINGS

- The principle of specificity, overload and progression (SOP) are interrelated to the principle of frequency, intensity, time and type of exercise (FITT).
- In order to improve fitness or skill performance, the body must be overloaded in a safe and progressive manner.

VDOE Standard(s) Student Friendly Language What will the student know and be able to do?	SUGGESTED / SAMPLE ASSESSMENTS	Terms (Vocabulary) and Content Information	SUGGESTED / SAMPLE ACTIVITIES
<p>9.2 d) Explain the body's response to the principles of specificity, overload and progression (SOP) in relation to frequency, intensity, time and type of exercise (FITT).</p> <p>Suggested Learning Targets:</p> <p>I can explain how to improve (selected activity or advanced skill) in relation to specificity, overload and progression (SOP) and in relation to frequency, intensity, time and type of exercise (FITT) using a graphic organizer.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • Written: Assess background knowledge of terms and applications (descriptions) for SOP and FITT. • Oral: <ul style="list-style-type: none"> ○ Share the principles of specificity, overload and progression (SOP). ○ Explain SOP in relation to frequency, intensity, time and type of exercise (FITT). <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> • Student selects an activity or advanced skill to improve and describes how they would use SOP and FITT to make improvements (should include acknowledgement of under and over-exercise). 	<ul style="list-style-type: none"> • Overload: See additional information in 9.1.d — To improve fitness, one must load the body in a higher manner than normal (longer duration of activity, more frequency, higher weight, more often)—the body responds by increasing muscular contractions, strengthening and improving efficiency of body responses, increasing the number of capillaries to bring oxygenated blood to muscle cells. Caution must be taken not to overload to the point of exertion which may lead to injury. • Specificity: See additional information in 9.1.d — Only those muscles or muscle groups used will benefit from the activity a person engages in (ex. Upper body strength does not improve by walking, jogging or running). • Progression: See additional information in 9.1.d — Rate of which overload is applied; caution when overload is done too rapidly or too sporadically. This is where there is a connection to FITT. • FITT is related and interconnected to the principles of SOP; frequency may impact progression, intensity is connected to overload and progression, time is related to overload and 	<ul style="list-style-type: none"> • Look for opportunities to combine with skill improvement planning or fitness improvement planning (9.1.b, 9.2.a, 9.3.a). • Instruction on how increasing the intensity, volume or frequency of an exercise will overload your body, forcing it to adapt. Examples <ul style="list-style-type: none"> ○ Increase Exercise Intensity: Increase the weight lifted or the speed you move an object or your body through space. ○ Increase Exercise Volume: Increase the number of repetitions, sets or distance you move an object or your body through space. ○ Increase Exercise Frequency: Increase the number of times you complete the same exercise in a week or month. • Instruction on the body's response to the principles of SOP. <ul style="list-style-type: none"> ○ Specificity of Training: <ul style="list-style-type: none"> ▪ Resistance work (high load, few reps) improves muscle strength. ▪ Stretching exercises improves flexibility. ▪ Resistance work (light load, many reps) improves muscle endurance. ▪ Endurance exercises improve cardiorespiratory endurance. ○ Overload Principle: <ul style="list-style-type: none"> ▪ Physiological changes, moving to higher levels of fitness. ○ Progression: Increasing the frequency, intensity and duration of activities over a period of time

		progression, type is related to specificity.	will cause improvement in physical activity.
Resources: SHAPE America National Standards and Grade Level Outcomes; http://www.ode.state.or.us/teachlearn/subjects/pe/curriculum/fittprinciple.pdf ; http://stretchcoach.com/articles/fitt-principle/ ; http://www.teachpe.com/fitness/training_principles.php ;			

VA SOL Standard: 9.2 The student will explain the structures and functions of the body and how they relate to and are affected by human movement.

ESSENTIAL UNDERSTANDINGS

- Two respiration systems are used by the body for energy and the systems are dependent upon the duration of the activity.
- Body systems are interconnected and dependent upon one another.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>
<p>9.2 e) Explain the anaerobic respiration (ATP-PC and Lactic Acid System) and aerobic respiration systems used for energy during activity.</p> <p>Suggested Learning Targets:</p> <p>I can explain how the body makes energy to move in activity of short duration (less than 2 minutes) using the anaerobic respiration (ATP-PC and Lactic Acid System) by telling a peer.</p> <p>I can explain how the body makes energy to move in activity of long duration (more than 2 minutes) using the aerobic respiration systems through an exit ticket.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • Written: Student knowledge of terms: aerobic and anaerobic and associated activities. • Students research a question such as — is a 400 meter run an anaerobic or aerobic activity? <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> • Student selects a short duration and long duration activity and explains how the body uses/produces energy during the activities. 	<ul style="list-style-type: none"> • Anaerobic: Without oxygen; the body relies on anaerobic processes for the first couple of minutes of activity; produces fast bursts of energy for short, powerful bursts. • Aerobic: With oxygen; aerobic system produces the largest amounts of energy, at the lowest intensity; used for long term, steady paced exercise and day-to-day activities. • Anaerobic respiration is comprised of two systems <ul style="list-style-type: none"> ○ ATP-PC: immediate and limited energy source, ATP is stored in small amounts in muscles; essential at the onset of activity and short term high intensity activities (sprinting, weight lifting, throwing a ball), 1-30 seconds. ○ Lactic Acid System: (aka Anaerobic Glycolysis); Lactic acid is thought to interfere with muscle contraction due to disrupting the binding of calcium to troponin; acidity also stimulates free nerve endings within the muscle, causing pain; due to lactic acid production, this energy system can only be predominant for up to 2 minutes. • Aerobic respiration: (aka Aerobic Glycolysis): Breakdown of carbohydrates to produce ATP; slow, uses either carbohydrates or fat (carbohydrates and fats are only burned in presence of oxygen); needs oxygen to produce ATP; sustained energy; longer duration, lower intensity after anaerobic systems 	<ul style="list-style-type: none"> • Instruct these concepts in connection to 9.2.c. • Use “ATP-PC images” in a search engine online to find charts to help explain concepts. • Use a variety of activities to explain the anaerobic and aerobic systems. • Introduce ATP Example: When you exercise, your muscles act something like electric motors. Your muscles take in a source of energy and they use it to generate force. An electric motor uses electricity to supply its energy. Your muscles are biochemical motors and they use a chemical called adenosine triphosphate (ATP) for their energy source. During the process of "burning" ATP, your muscles need three things: <ul style="list-style-type: none"> ○ They need oxygen, because chemical reactions require ATP and oxygen is consumed to produce ATP. ○ They need to eliminate metabolic wastes (carbon dioxide, lactic acid) that the chemical reactions generate. ○ They need to get rid of heat. Just like an electric motor, a working muscle

		<p>have fatigued; long-term steady paced exercise and day-to-day activities; produced large amounts of energy at the lowest intensity.</p> <ul style="list-style-type: none"> • During exercise muscles continually contract and relax. This requires energy. The energy comes mainly from fat and carbohydrates mixed with oxygen. The body has to move a large amount of oxygenated blood from the lungs to tiny muscle cells. The capacity to do this relies on how well the heart is beating, how well the vessels expand that carry the oxygenated blood, how elastic the blood vessels are, how many capillaries there are to carry the oxygenated blood (VO₂max is a measure of the body's ability to extract and utilize oxygen during exercise). 	<p>generates heat that it needs to get rid of.</p>
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Resources:

SHAPE America National Standards and Grade Level Outcomes; NOVA PBS Learning Media — How the body responds to exercise
<http://www.pbslearningmedia.org/resource/00r08.sci.life.reg.exercise/how-the-body-responds-to-exercise/>;
http://www.teachpe.com/physiology/energy_systems.php; — http://www.teachpe.com/anatomy/aerobic_respiration.php

VA SOL Standard: 9.2 The student will explain the structures and functions of the body and how they relate to and are affected by human movement.

ESSENTIAL UNDERSTANDINGS

- Feedback is important to master advanced skills.
- Feedback is useful when it is focused on the goal of the skill and is specific, objective and provided in terms understood by the recipient of the feedback.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>
<p>9.2 f) Analyze movement performance and utilize feedback to learn or to improve the movement skills of self and others.</p> <p>Suggested Learning Targets:</p> <p>I can evaluate my performance of (advanced skill) and use feedback from the teacher and/or others to learn or improve performance of the skill through reflective writing and teacher observation.</p> <p>I can analyze the performance of a peer and provide appropriate and meaningful feedback to help them learn or improve the skill using a peer assessment checklist.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • Assess student background knowledge of how to provide feedback. • Provide students with a basic skill and have them analyze for the component elements to be successful. • Apply their analysis of a skill to practice evaluating a peer. <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> • Self or peer assessment of performance with feedback of an advanced skill (using student-generated or generic video that all students may use for assessment). Example: Tennis serve. Analysis of videotapes relative to the five components of the serving motion: (a) grip and stance, (b) ball toss, (c) racket preparation, (d) arm extension and (e) follow through. Rubric/checklist provided to score each component. Students correct 	<ul style="list-style-type: none"> • Helpful feedback is goal-referenced; tangible and transparent; actionable; user-friendly (specific and personalized); timely; ongoing; and consistent. <p>Effective feedback is concrete, specific and useful; it provides actionable information. Thus, "Good job!" and "You did that wrong" are not feedback at all. Learners don't know what was "good" or "wrong" about what they did. See 9.1.f for additional information.</p> <ul style="list-style-type: none"> • Learners may need to receive feedback on what they did, not advice about what to do when first learning a task. • Too much feedback is also counterproductive; better to help the performer concentrate on only one or two key elements of performance. • When analyzing movements, divide the movement performance into three phases: <ul style="list-style-type: none"> ○ Preparatory: Movements that prepare such as, backswing in golf or tennis. ○ Execution: 	<ul style="list-style-type: none"> • May be combined during instruction of activities for 9.1.a. • Opportunities should be provided for teacher modeling and student practice of how to provide specific feedback with reasoning/justification, conclusions and encouragement. See 9.1.f for additional information. Examples: <ul style="list-style-type: none"> ○ Be descriptive rather than evaluative (e.g., "Did you know you are not stepping with the opposite foot when you throw the ball?" rather than "It was really bad the way you threw that ball.") ○ Own the feedback— Use 'I' statements. (e.g., "I noticed", "I saw", "I heard") ○ Use positive language that suggests that any problems are time limited, situation specific and capable of solution. (e.g., Just at the moment you don't....; in this instance you seemed; you haven't yet worked out a way of..... next time you might want to.....) • Provide rubrics or list(s) of skill cues to help students provide accurate and specific feedback. • Use of student video (personal devices) to evaluate performance is recommended.

	<p>and practice the serve then videotape each other again and reassess.</p>	<ul style="list-style-type: none"> - Force-producing movements such as, the forward motion of the tennis forehand shot. - Critical instant, the point of contact or the release such as, moment of contact in the tennis serve or the take-off in the long jump. o Follow-through: Body movements after the execution where the movement slows down such as, the high leg lift after kicking a goal or the golf club after the ball is struck. Example of braking down a movement skill into phases: Long Jump – <ul style="list-style-type: none"> - Preparatory: The length and speed of the run to the take-off board. - Execution: Take-off and flight through the air. - Follow-through: The landing. o Movement skill phases may not all fit neatly into three phases and additional phases may be devised or added. Example: The long jump may also be divided into: preliminary movements; run-up; take-off and landing. 	<ul style="list-style-type: none"> • Utilize video clips of performances of advanced skills available online for instructional and/or assessment purposes. • Discuss how to analyze the sequence of tasks in parts. Students will analyze self/peer “each part”, correct, practice and reassess. Example: Tennis serve, part progression – <ol style="list-style-type: none"> 1. Serving toss. 2. Tossing and hitting, beginning with the racket in “back scratch” position. 3. Tossing and hitting, beginning with the racket held near the hip. 4. Whole serving motion. • Discuss observation strategies: <ul style="list-style-type: none"> o Observe from different angles (e.g., side, front and back). This gives a number of different perspectives. If the movement covers some distance or moves in different directions, observation should be from various points. o View the movement more than once. First look at the whole movement then focus on the different parts of the movement. o Look for the cause of ineffective movement and not the symptoms. Example – If a step back is taken after a landing on a back somersault, do not comment on the landing but instead comment on the reason for the poor landing due to not tucking tightly or opening out too soon.
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Resources:

SHAPE America National Standards and Grade-Level Outcomes; — http://sydney.edu.au/education_social_work/groupwork/docs/SelfPeerAssessment.pdf; http://www.ascd.org/publications/educational_leadership/sept12/vol70/num01/Seven-Keys-to-Effective-Feedback.aspx (ASCD article is geared towards teachers but provides good background explanation for feedback)

VA SOL Standard: 9.3 The student will evaluate current fitness behaviors and demonstrate achievement and maintenance of a health-enhancing level of personal fitness by designing, implementing, self-assessing and modifying a personal fitness program.

ESSENTIAL UNDERSTANDING

- Physical literacy includes the ability to plan, implement, evaluate and modify a personal, goal-driven fitness plan that enables students to achieve and maintain the level of fitness needed to meet their personal goals for various work-related, sport and leisure activities.

VDOE Standard(s) Student Friendly Language What will the student know and be able to do?	SUGGESTED / SAMPLE ASSESSMENTS	Terms (Vocabulary) and Content Information	SUGGESTED / SAMPLE ACTIVITIES
<p>9.3 a) Demonstrate program planning skills by assessing and analyzing personal fitness levels, setting goals, devising strategies, making timelines for a personal physical fitness plan and evaluating the components and progress of the personal fitness plan.</p> <p>Suggested Learning Targets:</p> <p>I will evaluate my personal fitness levels and analyze the results to determine areas to improve/maintain and demonstrate it through a fitness data analysis summary.</p> <p>I can create specific, measurable, attainable, realistic and timely personal fitness goals based on fitness assessment data results and write them in a fitness log/journal.</p>	<p>Assessment of Learning (Formative)</p> <ul style="list-style-type: none"> Written: Examining the individual plan elements as the plan is developed. Example of a design brief: <ul style="list-style-type: none"> Situation: What are you trying to develop? Problem: What are the concerns? Requirements: What individual requirements must be met to complete the task? Resources: What resources will you use? Evaluation: What is the criteria by which the task will be graded? <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> Personal Fitness Plan Elements to include: <ul style="list-style-type: none"> Baseline assessment. Analysis of baseline data. SMART goal statements to improve or maintain fitness 	<ul style="list-style-type: none"> Review Health-Related Fitness Components. *(Refer to 9.1.f for additional information) <ul style="list-style-type: none"> Cardiorespiratory endurance: Is the ability of the cardiovascular system (heart, blood, blood vessels) and respiratory system (lungs, air passages) to deliver oxygen and other nutrients to the working muscles and to remove wastes. Tests that involve running (e.g., 20 m shuttle run test), cycling and swimming can be used to measure this fitness component. Activities vary in intensity level: <ul style="list-style-type: none"> Light activities are physical activities that involve large muscle groups. While engaging in light activities, people begin to notice their breathing, but they can still talk fairly easily. Moderate activities are physical activities that cause breathing and heart rate to increase. People engaging in moderate activities can hear themselves breathe, but they can still talk. Vigorous activities are physical activities that cause breathing and heart rate to increase to a higher level, making it difficult to talk. Muscular strength is the ability of a muscle or a group of muscles, to exert force for a brief period of time. Strength of different muscles can be measured by having a person perform weightlifting exercises and determining the maximum amount of weight the person can lift. A person's strength can be expressed as absolute strength (the actual weight lifted) or as relative strength (the weight lifted, divided by the person's body weight). 	<ul style="list-style-type: none"> Students complete a self-assessment of health-related fitness and interpret fitness data comparing individual scores to established Virginia Wellness (Fitnessgram®) fitness standards and BMI calculations to the CDC protocols and recommendations. Create SMART goals for improvement of physical activities. http://www.unh.edu/hr/sites/unh.edu/hr/files/pdfs/SMART-Goals.pdf Additional resources may include pedometers, accelerometers, personal fitness tracking devices, heart rate, appropriate apps, BMI calculations, activity logs and fitness and activity planning. Class instruction/discussion on roadblocks/barriers to developing a personal fitness plan: http://www.heart.org/HEARTORG/HealthyLiving/PhysicalActivity/StayingMotivatedforFitness/Breaking-Down-Barriers-to-

<p>I can create a written fitness plan to reach my SMART goals that includes action steps and appropriate activities, demonstrates the principals of SOP and FITT, includes a timeline and addresses challenges.</p> <p>I can document implementation of an individualized fitness program in my (selected assessment product: i.e., fitness log, journal and portfolio).</p> <p>I can reassess and reflect on progress at midyear and end of year in my (selected assessment product: i.e., fitness log, journal and portfolio).</p>	<p>levels for each component of fitness.</p> <ul style="list-style-type: none"> ○ Action plan to meet goals with short (quarterly) and long term (school year) goals. ○ Activity logs. ○ Reassessment (for each short term goal; ex. quarterly). ○ Reflection. ○ Modifications as needed (includes identifying roadblocks and strategies to address roadblocks). ○ Final assessment and reflection of goal achievement. 	<ul style="list-style-type: none"> ○ Muscular endurance is the ability of a muscle or a group of muscles, to sustain repeated contractions or to continue applying force against a fixed object. Push-ups and curl-ups are often used to test muscular endurance. The person's endurance is expressed as the number of repetitions completed without stopping for a set period of time (often one minute). ○ Flexibility is the ability to move joints through their full range of motion. The sit and reach test is a good measure of flexibility of the lower back and the backs of the upper legs (hamstrings). A person's flexibility is usually expressed in how far a joint can be moved or the degrees through which a joint can be moved. ○ Body composition refers to the makeup of the body in terms of lean mass (muscle, bone, vital tissue and organs) and fat mass. Good body composition has strong bones, adequate skeletal muscle size, a strong heart and a low amount of fat mass. Regular physical activity and exercise will help decrease body fat and increase or maintain muscle mass, increase bone mass and improve heart function. Although body composition entails muscle, bone and fat, it is often expressed only as percentage of body fat. Many types of tools can be used to assess body composition, including skinfold calipers, bioelectrical impedance analyzers (found in many weigh scales), body mass index (BMI), underwater weighing and dual energy X-ray absorptiometry. Improving in these four health related fitness areas will increase lean body mass (stronger bones and muscle) and decrease fat mass and therefore significantly affect body composition. Improvements will also reduce risk of disease and improve work capacity. 	<p>Fitness UCM 462208 Article.jsp #.V6eGEf36upe</p> <p>Example discussion questions: How do family values, beliefs and availability influence a comprehensive personal fitness plan outside of school and what are some possible solutions.</p> <ul style="list-style-type: none"> ● Participate independently in the implementation of a personal fitness plan inside of school. <p>*Note: It is an inappropriate practice to grade students on fitness test results.</p>
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Resources:
 SHAPE America National Standards and Grade Level Outcomes; [http://www.thephysicaleducator.com/resources/infographics/fitness_components/;](http://www.thephysicaleducator.com/resources/infographics/fitness_components/)
[http://www.cdc.gov/physicalactivity/basics/adding_pa/index.htm;](http://www.cdc.gov/physicalactivity/basics/adding_pa/index.htm) http://kidshealth.org/en/teens/exercise_log.html
[https://www.adultfitnessstest.org/testInstructions/aerobicFitness/index.php;](https://www.adultfitnessstest.org/testInstructions/aerobicFitness/index.php) https://www.acefitness.org/acefit/fitness_programs_core_workout.aspx?workoutid=17;
[https://www.adultfitnessstest.org/testInstructions/muscularStrengthAndEndurance/interpretImprove.php;](https://www.adultfitnessstest.org/testInstructions/muscularStrengthAndEndurance/interpretImprove.php) http://kidshealth.org/en/teens/easy_exercises.html
[http://www.heart.org/HEARTORG/Conditions/More/CardiacRehab/Develop-a-Physical-Activity-Plan-for-You_UCM_307380_Article.jsp#.V8Npu_36s5u;](http://www.heart.org/HEARTORG/Conditions/More/CardiacRehab/Develop-a-Physical-Activity-Plan-for-You_UCM_307380_Article.jsp#.V8Npu_36s5u)

http://www.heart.org/HEARTORG/HealthyLiving/PhysicalActivity/StayingMotivatedforFitness/Identifying-Your-Fitness-Goals_UCM_462202_Article.jsp#.V8NnnP36s5t; <https://www.betterhealth.vic.gov.au/health/healthyliving/physical-activity-overcoming-the-barriers>

VA SOL Standard: 9.3 The student will evaluate current fitness behaviors and demonstrate achievement and maintenance of a health-enhancing level of personal fitness by designing, implementing, self-assessing and modifying a personal fitness program.

ESSENTIAL UNDERSTANDING

- To improve fitness, the body must be overloaded in a safe and progressive manner.
- The risk of injury can be reduced by performing appropriate amounts of activity and setting appropriate personal goals.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>
<p>9.3 b) Apply the FITT (frequency, intensity, time, type) principle and other principles of training such as overload, specificity and progression, in accordance with personal goals to the personal fitness plan.</p> <p>Suggested Learning Targets:</p> <p>I can demonstrate the FITT and SOP principles for improvement of my personal fitness through my written personal fitness plan.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • Review understanding of 9.2.d. • Students review personal fitness plan action steps for use of SOP and FITT principles. <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> • Fitness plan action steps include explicit use of SOP and FITT principles to achieve personal fitness goals. 	<ul style="list-style-type: none"> • Review principles of training such as specificity, overload and progression. *Additional information found in 9.1.d, 9.2.a and 9.2.d. • Review FITT principle. <ul style="list-style-type: none"> ○ Frequency: How often; commonly measured in days per week. For each component of health-related fitness, a safe frequency is three to five times a week. ○ Intensity: How hard; commonly measured in intensity levels. Intensity can be measured in different ways, depending on the connected health-related component. For example, monitoring heart rate is one way to gauge intensity during aerobic endurance activities. ○ Time: How long; commonly measured in minutes/hours. Time varies depending on the health-related fitness component targeted. For example, flexibility or stretching may take 10-30 seconds for each stretch, while the minimum time for performing aerobic activity is 15 minutes of continuous activity. ○ Type: What kind; measured in specific health-related component of fitness. For example, an individual wishing to increase arm strength must exercise the triceps and biceps, while an individual wishing to increase aerobic endurance 	<ul style="list-style-type: none"> • Instruct in conjunction with or after 9.3.a. (may be an additional component of the personal fitness plan following instruction of concepts in 9.2.d.) • Give examples of the FITT principle to improve the different components of fitness. Example: Muscular strength and endurance <ul style="list-style-type: none"> ○ Using the FITT principle to improve Muscular Endurance: <ul style="list-style-type: none"> ▪ Frequency: 3 to 5 days per week. ▪ Intensity: Lighter weights; more repetitions (1-3 sets of 10-20 reps). ▪ Time: 6 seconds per lift. ▪ Type of activity: Free weight, weight training, medicine ball, own body weight. ○ Using the FITT principle to improve Muscular Strength: <ul style="list-style-type: none"> ▪ Frequency: 3 to 4 days per week ▪ Intensity: Heavier weights; less repetition (1-3 sets of 8-10 reps) ▪ Time: 6 seconds per lift. ▪ Type of activity: Free weight, weight training, medicine ball, own body weight. • Give examples of SOP principles to exercise workouts for improvement of a component of fitness. Example: Cardiorespiratory endurance

		<p>needs to jog, run, swim or perform some other aerobically challenging activity.</p>	<ul style="list-style-type: none"> ○ Overloading for cardiorespiratory endurance <ul style="list-style-type: none"> ▪ Frequency – minimum of 3 days/week ▪ Intensity – exercising in target heart-rate zone ▪ Time – minimum of 15 minutes ○ Progression for cardiorespiratory endurance <ul style="list-style-type: none"> ▪ Begin at a frequency of 3 days/week and work up to no more than 6 days/week. ▪ Begin at an intensity near target heart rate threshold and work up to 80% of target heart rate. ▪ Begin at 15 minutes and work up to 60 minutes. ○ Specificity for cardiorespiratory endurance <ul style="list-style-type: none"> ▪ Perform aerobic (with oxygen) activities for at least fifteen minutes without developing an oxygen debt. ▪ Aerobic activities include, but are not limited to brisk walking, jogging, bicycling and swimming.
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Resources:

SHAPE America National Standards and Grade-Level Outcomes; http://www.teachpe.com/fitness/training_principles.php;
<http://www.ode.state.or.us/teachlearn/subjects/pe/curriculum/fittprinciple.pdf>

VA SOL Standard: 9.3 The student will evaluate current fitness behaviors and demonstrate achievement and maintenance of a health-enhancing level of personal fitness by designing, implementing, self-assessing and modifying a personal fitness program.

ESSENTIAL UNDERSTANDINGS

- Exercise programs range in scope and effectiveness and are not appropriate for all people to meet all goals.
- Exercise programs need to be selected based on personal goals, availability of resources to implement, knowledge of safety concerns and knowledge of correct techniques.

VDOE Standard(s) Student Friendly Language What will the student know and be able to do?	SUGGESTED / SAMPLE ASSESSMENTS	Terms (Vocabulary) and Content Information	SUGGESTED / SAMPLE ACTIVITIES
<p>9.3 c) Explain the characteristics, including scientific principles and concepts, of safe and appropriate muscular-stretching, muscular-strengthening and cardiorespiratory exercise programs to improve the health-related components of fitness.</p> <p>Suggested Learning Targets:</p> <p>I can describe the appropriate and inappropriate uses of (selected exercise program such as: static, ballistic, dynamic and Proprioceptive Neuromuscular Facilitation) stretching to improve flexibility and explain it to a peer.</p> <p>I can compare the appropriate and inappropriate uses of different types of strength/resistance training to improve muscular strength</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> Vocabulary assessments. Descriptions of each type of muscular-stretching, muscular-strengthening and cardiorespiratory exercise programs. <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> Fitness plan action steps include explicit and appropriate use of muscular-stretching, muscular-strengthening and cardiorespiratory exercise programs 	<ul style="list-style-type: none"> Muscular stretching: Be sure to raise the body's internal temperature through light physical activity before engaging in stretching activities. <ul style="list-style-type: none"> Active stretch— Person stretching applies the force of the stretch Passive— Resistance by a chair, towel, machine or a partner provides the force of the stretch carries some risk. Static— Slow and constant with end position held, caution is exercised with proper technique. Ballistic— Bouncing type movement; not recommended for health-related fitness Dynamic— Flexibility during sport-specific movements, avoids bouncing, such as a track sprinter performing long walking strides for a warmup focus on hip extension. Reflex-assisted— such as plyometric: Higher injury risk, not recommended for health-related fitness. Proprioceptive Neuromuscular Facilitation (PNF)— Technique that combines passive and isometric stretching; a muscle group is passively stretched, then contracts isometrically against resistance while in the stretched position and then is passively stretched again through the resulting increased range of motion; use of a partner 	<ul style="list-style-type: none"> Instruct in conjunction with or after 9.3.b. (may be an additional component of the personal fitness plan following instruction of concepts in 9.2.d. and 9.3.b.) Teach safety considerations in cardiorespiratory exercise programs: <ul style="list-style-type: none"> Know how to calculate target heart rate zone. Know how to monitor intensity (e.g., talk test, rate of perceived exertion, heart rate monitors). When increasing the intensity (speed, incline and/or resistance) or duration of exercise, keep in mind the 10 percent rule (e.g., if a person is running continuously for 10 minutes per session in week 1, then in week 2 the maximum increase recommended would be to run continuously for 11 minutes per session). Include a variety of activities to avoid overuse injuries or to prevent boredom. Include a cardiorespiratory cool-down. To prevent post-exercise peril (e.g., dizziness, light-headedness, fainting), gradually reduce the heart rate, breathing rate and body temperature before moving on to resistance training or flexibility training. This could be accomplished by simply walking slowly for 5 to 10 minutes.

and explain it in a graphic organizer.

I can explain the appropriate and inappropriate uses of long, slow distance training, pace/tempo training and interval training to improve anaerobic and aerobic capacity in my journal.

to provide resistance against the isometric contraction and then later to passively take the joint through its increased range of motion. May be done without a partner, such as using a towel; muscles need to be warmed up first.

- Muscular strengthening
 - Strength training or resistance training— Systematic program of exercises designed to increase an individual's ability to resist or exert force.
 - Free weights, weight machines, resistance bands, plyometric exercise, callisthenic exercises, Pilates, yoga, martial arts, circuit training (large muscles before small muscles, alternate push and pull, alternate upper body and lower body), pyramid training and negative training.
 - Safety— Clothing, footwear, equipment, spotters, technique.
- Cardiorespiratory exercise
 - FITT principle; heart rate— VO_2 max; RPE
 - Recovery time between workouts should include sufficient rest, rehydration and restoring fuel sources.
 - Long, slow distance training— About 80% of maximum heart rate (70% VO_2 max), person is able to talk and exercise without respiratory distress.
 - Pace/tempo training— Steady or threshold training for 20-30 minutes; intermittent pace/tempo training— intensity is same as steady threshold but shorter intervals of time with brief recovery periods.
 - Interval training— Intensity close to VO_2 max; workout intervals between 3 and 5 minutes; rest intervals at equal/equivalent time; 1:1; stressful and should be performed sparingly; benefits increased VO_2 max and anaerobic metabolism.

- Teach safety considerations in muscular strengthening exercise programs:
 - Include a general warm-up prior to training.
 - Wear appropriate clothes and protective equipment. For example, gloves reduce the risk of blisters. Solid running shoes provide a stable base from which to exercise.
 - Always secure weight plates with safety collars.
 - Don't hold the breath while lifting weights. In general, breathe out on the exertion or when tightening the muscle and breathe in when lowering the weight or returning to the start position.
 - Never completely straighten a joint.
 - Work big muscle groups before small ones.
 - Perform multi-joint exercises before single-joint exercises.
 - Train the core area last.
 - Never work the same muscle or muscle group two days in a row.
 - When in a situation where a "spotter" may be required, check with the physical education instructor or weight room supervisor regarding safety and proper technique.
 - Always control the speed of the lifting and lowering. It is recommended that one repetition should take approximately 4 to 7 seconds to complete. Avoid jerky motion.
- Teach safety considerations in muscular stretching programs:
 - A stretch should feel like a gentle pull and should not be painful.
 - Avoid bouncing.
 - Work towards holding a stretch for 30 seconds.
 - Remember to breathe normally.
 - Be sure to stretch tight postural muscles (e.g., chest) as well as the muscle focused on in the workout.

Resources:

SHAPE America National Standards and Grade-Level Outcomes; Essentials of Strength Training and Conditioning (Human Kinetics);
http://web.mit.edu/tkd/stretch/stretching_4.html; <http://kidshealth.org/en/teens/strength-training.html>; http://www.teachpe.com/strengthening/free_weights.php;
<http://www.teachpe.com/stretching/stretches.php>

VA SOL Standard: 9.3 The student will evaluate current fitness behaviors and demonstrate achievement and maintenance of a health-enhancing level of personal fitness by designing, implementing, self-assessing and modifying a personal fitness program.

ESSENTIAL UNDERSTANDINGS

- Heart rate is a useful indicator of the intensity of effort and body's physiological adaptation.
- Monitoring your heart rate will allow you to track the changes taking place in your cardiovascular system as you move towards aerobic fitness.
- Selection of a measurement method depends on the purpose of the evaluation, the nature of the study and the resources available.

VDOE Standard(s) Student Friendly Language What will the student know and be able to do?	SUGGESTED / SAMPLE ASSESSMENTS	Terms (Vocabulary) and Content Information	SUGGESTED / SAMPLE ACTIVITIES
<p>9.3 d) Explain the relationship between heart rate, training zones and exercise intensity, to include measures (e.g., heart rate monitors, pedometers, accelerometers) and appropriate training zones to meet exercise and personal fitness goals.</p> <p>Suggested Learning Targets:</p> <p>I can explain the impact of heart rate, training zones and exercise intensity on meeting personal exercise and fitness goals and write it in my fitness journal.</p> <p>I can conduct a self-assessment of a physical fitness activity using a (selected measures—pedometer, accelerometer and heart rate monitor) to track my exercise intensity and give my conclusions to a peer.</p> <p>I can self-monitor my heart rate during exercise and</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> Vocabulary assessment. Practice use of selected measures—pedometer, accelerometer, heart rate monitor, other available technology such as fitness watches. <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> Calculation of target heart rate ranges for appropriate intensity levels. Demonstration of measures and analysis of results of measures for heart rate, training zones and exercise intensity. Fitness plan documents includes activity logs that detail results of measures used 	<ul style="list-style-type: none"> Heart rate is most frequently used for gauging exercise intensity due to the relationship between heart rate and oxygen consumption (VO_{2max} is a measure of the body's ability to extract and utilize oxygen during exercise); see 9.2.e. Training zones may be characterized by the level of intensity (using a RPE scale) or percentage of maximal heart rate range. Rate of perceived exertion (RPE): Scale(s) selection such as: <ul style="list-style-type: none"> 0-10 scale—With 0 (nothing at all) would be how you feel when sitting in a chair and 10 (very, very heavy) is how you feel at the end of a very difficult activity. Borg Scale (CDC) <ul style="list-style-type: none"> 6 No exertion at all 7 Extremely light (7.5) 8 9 Very light 10 11 Light 12 13 Somewhat hard 14 15 Hard (heavy) 16 17 Very hard 18 	<ul style="list-style-type: none"> Monitor heart rates for comparison to workout intensity. Use percentage of maximal heart rate method (target heart rate range method) <ul style="list-style-type: none"> $APMHR = 220 - \text{age}$ Target heart rate (THR) = $(APMHR \times \text{exercise intensity})$ Ex: 20-year old wants to work at an intensity level of 70-85% of maximal heart rate; to find Target Heart Rate Range (THRR) find $APMHR = 220 - 20 = 200 \text{ bpm}$ <ul style="list-style-type: none"> Low THRR = $200 \times .70 = 140 \text{ bpm}$ High THRR = $200 \times .85 = 170 \text{ bpm}$ Create activities that cause students to move through the different intensity levels and take target heart rates throughout. Record Pedometer Steps In or Out of Class: Information... <ul style="list-style-type: none"> 30 minutes/day of MVPA <ul style="list-style-type: none"> 8,000 steps/day for 30 min. of MVPA for adults.

<p>summarize my performance to my teacher.</p> <p>I can incorporate technology to enhance knowledge, improve performance and provide feedback for self-assessing and application for the development of my written personal fitness plan.</p>		<p>19 Extremely hard 20 Maximal exertion</p> <ul style="list-style-type: none"> ● Intensity Levels (such as) <ul style="list-style-type: none"> ○ Intensity Level 1— Not moving (seated) ○ Intensity Level 2— Slow (walking) ○ Intensity Level 3— Medium (skipping, galloping) ○ Intensity Level 4— Fast (jogging/ running) ○ Intensity Level 5— Very fast (sprinting) ● Measures <p>Note: Teachers may want to connect with their school nurses, public health nurses or nurse training programs in their school or in their area to support instruction of blood pressure.</p> <ul style="list-style-type: none"> ○ Heart rate monitors— wireless chest strap that sends continuous data to a monitor (watch) worn on the wrist; pulse monitors may be worn on the wrist that require you to put your finger on a certain spot to take your pulse; may have indicators worn on shoes or have GPS capability to map routes or distance; fitness trackers provide multiple target zones, calorie counters, speed/distance, ○ Pedometers— tracks steps taken by indicating each time the wearer's hips move or some models can track foot movement ○ Accelerometers— measure acceleration; able to capture intensity of physical activity; able to distinguish between walking and running; can separate human movement from mechanical vibration such as riding in a car 	<ul style="list-style-type: none"> ● Step target for MVPA for all kids: 12,000/day ○ 150 minutes/week of MVPA translates to 7,000 steps/day (or 49,000 steps/week). ○ Accumulating 8,000 steps/day is a good proxy for 30 minutes of daily MVPA, while accumulating 7,000 steps/day is consistent with obtaining 150 minutes of weekly MVPA. (MVPA: moderate to vigorous physical activity) ● Using the RPE scale on a regular basis to recognize the body's signs of exertion and to modify normal workout intensity. <ul style="list-style-type: none"> ○ Once you feel that you are exercising "somewhat hard," you can increase or decrease your efforts depending on how you feel and the intensity you require.
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Resources:

Resources: SHAPE America National Standards and Grade-Level Outcomes; <http://www.doe.virginia.gov/instruction/physed/index.shtml>;
<http://www.humankinetics.com/excerpts/excerpts/using-technology-to-promote-physical-activity>;
<http://www.livestrong.com/article/95271-normal-pulse-rate-teenager/#ixzz1YV5chxVS>; <http://www.cdc.gov/physicalactivity/basics/measuring/index.html>

VA SOL Standard: 9.3 The student will evaluate current fitness behaviors and demonstrate achievement and maintenance of a health-enhancing level of personal fitness by designing, implementing, self-assessing and modifying a personal fitness program.

ESSENTIAL UNDERSTANDINGS

- Resistance training is any exercise that causes the muscles to contract against an external resistance with the expectation of increases in strength, tone, mass and/or endurance.

VDOE Standard(s) Student Friendly Language What will the student know and be able to do?	SUGGESTED / SAMPLE ASSESSMENTS	Terms (Vocabulary) and Content Information	SUGGESTED / SAMPLE ACTIVITIES
<p>9.3 e) Demonstrate appropriate techniques for resistance training activities, machines and/or free weights.</p> <p>Suggested Learning Targets:</p> <p>I can perform safe techniques for (selected resistance training activity) and demonstrate it to my teacher.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> Review knowledge of 9.3.c. Identify examples/types of resistance activities. Identify examples/types of strength and stretching activities. <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> Demonstration of appropriate techniques for resistance training activities. Written or physical demonstration of types of strength and stretching exercises. 	<ul style="list-style-type: none"> Isometric, concentric, eccentric—see 9.2.b. Static, proprioceptive neuromuscular facilitation, dynamic—see 9.3.c. Appropriate techniques will be determined by activities selected. Muscular endurance vs. muscular strength. <ul style="list-style-type: none"> Sets and Reps: Circuit training stations. Weight training circuits use large muscle groups first and require 10 to 20 repetitions per station vs. strength training programs that require up to five sets of one to eight repetitions. Rest Intervals: Circuit training targets muscular endurance by employing short rest periods, of 20 to 30 seconds, between stations or sets vs. strength training that requires maximal effort lifting during each set. Therefore, strength training programs use rest periods of two to five minutes between sets. Longer rest periods enable full muscular recovery while shorter periods do not. 	<ul style="list-style-type: none"> Build on 9.3.c instruction. Appropriate techniques for resistance training activities, whether using resistance bands, free weights, apps or media (videos) should match student interest, fitness level, activity level, experience and should provide student choice; caution should be exercised when implementing any new techniques. Example: http://greatist.com/fitness/50-bodyweight-exercises-you-can-do-anywhere Students may investigate available online tools/apps designed for personal fitness development; any media and apps used with students should be reviewed for safe and appropriate activities for all students.

Resources:

http://www.teachpe.com/strengthening/body_weight.php; <http://kidshealth.org/en/teens/strength-training.html>; <https://www.acsm.org/docs/brochures/resistance-training.pdf>

VA SOL Standard: 9.3 The student will evaluate current fitness behaviors and demonstrate achievement and maintenance of a health-enhancing level of personal fitness by designing, implementing, self-assessing and modifying a personal fitness program.

ESSENTIAL UNDERSTANDINGS

- Heart rate is a useful indicator of the intensity of effort and body's physiological adaptation.
- Monitoring your heart rate will allow you to track the changes taking place in your cardiovascular system as you move towards aerobic fitness.

VDOE Standard(s) Student Friendly Language What will the student know and be able to do?	SUGGESTED / SAMPLE ASSESSMENTS	Terms (Vocabulary) and Content Information	SUGGESTED / SAMPLE ACTIVITIES
<p>9.3 f) Calculate resting heart rate, target heart rate and blood pressure.</p> <p>Suggested Learning Targets:</p> <p>I can take/calculate my resting heart rate and target heart rate and record it in my fitness journal.</p> <p>I can explain blood pressure results for myself or others through an exit ticket.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> Heart rate calculations (resting, target heart rate ranges). Calculation of target heart rate ranges for appropriate intensity levels. <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> Explain the purpose of blood pressure measures and what the numbers indicate. 	<ul style="list-style-type: none"> Blood pressure: Measure of the force of blood pushing against blood vessel walls; high blood pressure indicates that the heart is working harder to get blood out to the body; normal is less than 120 over 80 (120/80); measured with a blood pressure cuff (sphygmomanometer) — rubber cuff and a gauge — works by inflating a cuff around the upper arm to temporarily stop the flow of blood in an artery, as air is slowly released from the cuff, the device records the pressure at which blood begins to flow again. Blood pressure is recorded as two measurements: <ul style="list-style-type: none"> The first number is the systolic pressure. Systolic pressure represents the peak blood pressure that occurs when the heart contracts. The second number is the diastolic pressure. Diastolic pressure represents the lowest blood pressure that occurs when the heart relaxes between beats. Resting heart rate: Normally ranges from 60–100 beats/min. Target heart rates help to determine appropriate intensity levels for exercise. By keeping the target heart rate in check a person is able to avoid under or over-training and able to avoid overexertion. Exercise programs may be characterized by the level of intensity or percentage of maximal heart rate range. 	<ul style="list-style-type: none"> Resting heart rate: Take resting pulse by placing the tips of the index and middle fingers on their opposite wrist. Count the number of heartbeats in 60 seconds (or count for six seconds and multiply the number by 10). Record target heart rates while resting and participating in different activities. Connect with school nurses, EMTs, public health nurses, or nurse training programs in school or in the area to support instruction of blood pressure or perform individual student blood pressures.

Resources:

SHAPE America National Standards and Grade-Level Outcomes;

http://www.heart.org/HEARTORG/Conditions/HighBloodPressure/AboutHighBloodPressure/Blood-Pressure-vs-Heart-Rate_UCM_301804_Article.jsp#.V6d-B_36upe;

http://www.heart.org/HEARTORG/Conditions/HighBloodPressure/WhyBloodPressureMatters/Why-Blood-Pressure-Matters_UCM_002051_Article.jsp#.V6d-QP36upe;

http://www.heart.org/HEARTORG/Conditions/HighBloodPressure/AboutHighBloodPressure/Understanding-Blood-Pressure%20Readings_UCM_301764_Article.jsp#.V8Ycqf36s5t;

http://www.heart.org/HEARTORG/Conditions/HighBloodPressure/PreventionTreatmentofHighBloodPressure/Prevention-Treatment-of-High-Blood-Pressure_UCM_002054_Article.jsp#.V6d-wf36upe

http://www.heart.org/HEARTORG/Conditions/HighBloodPressure/AboutHighBloodPressure/Understanding-Blood-Pressure-Readings_UCM_301764_Article.jsp#.V9W4a_36s5s

VA SOL Standard: 9.3 The student will evaluate current fitness behaviors and demonstrate achievement and maintenance of a health-enhancing level of personal fitness by designing, implementing, self-assessing and modifying a personal fitness program.

ESSENTIAL UNDERSTANDINGS

- Exercise programs range in scope and effectiveness and are not appropriate for all people to meet all goals.
- Exercise programs need to be selected based on personal goals, availability of resources to implement, knowledge of safety concerns and knowledge of correct techniques.

VDOE Standard(s) Student Friendly Language What will the student know and be able to do?	SUGGESTED / SAMPLE ASSESSMENTS	Terms (Vocabulary) and Content Information	SUGGESTED / SAMPLE ACTIVITIES
<p>9.3.g) Identify types of strength exercises (isometric, concentric, eccentric) and stretching exercises (static, proprioceptive neuromuscular facilitation, dynamic) for personal fitness development (e.g., strength, endurance, range of motion).</p> <p>Suggested Learning Targets:</p> <p>I can provide examples of strength and stretching exercises and tell how they can improve/maintain my fitness to a peer.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • Review knowledge of 9.3.c. • Oral: <ul style="list-style-type: none"> ○ Identify examples/types of resistance activities. ○ Identify examples/types of strength and stretching activities. <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> • Teacher observation: Demonstration of appropriate techniques for resistance-training activities. • Written or physical demonstration of types of strength and stretching exercises. 	<ul style="list-style-type: none"> • Isometric, concentric, eccentric— see 9.2.b. • Static, proprioceptive neuromuscular facilitation, dynamic— see 9.3.c. • Appropriate techniques will be determined by activities selected. 	<ul style="list-style-type: none"> • Build on 9.3.c. instruction. • Appropriate techniques for resistance-training activities. Activities, whether using resistance bands, free weights, apps or media (videos) should match student interest, fitness level, activity level, experience and should provide student choice; caution should be exercised when implementing any new techniques. • Students may investigate available online tools / apps designed for personal fitness development; any media and apps used with students should be reviewed for safe and appropriate activities for all students. • Display strength exercises Example: <ul style="list-style-type: none"> ○ http://www.sparkpe.org/wp-content/uploads/basic-training-chest-card_hs.pdf

Resources:

SHAPE America National Standards and Grade Level Outcomes;

Reliable Internet resources such as recognized associations (NASM), medically-based or .gov sites

http://www.sparkpe.org/wp-content/uploads/basic-training-chest-card_hs.pdf; — <http://kidshealth.org/en/teens/strength-training-vid.html?WT.ac=ctg#catdieting>;

<http://greatist.com/fitness/50-bodyweight-exercises-you-can-do-anywhere>; — <http://www.fitnesshealth101.com/fitness/weight-training/strength-training>;

<https://quizlet.com/57485876/2-weight-training-flash-cards/>

<p>VA SOL Standard: 9.3 The student will evaluate current fitness behaviors and demonstrate achievement and maintenance of a health-enhancing level of personal fitness by designing, implementing, self-assessing and modifying a personal fitness program.</p> <p>ESSENTIAL UNDERSTANDING</p> <ul style="list-style-type: none"> Exercise programs range in scope and effectiveness and are not appropriate for all people to meet all goals. Exercise is physical activity that is planned, structured, and repetitive for the purpose of conditioning any part of the body. 			
<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>
<p>9.3 h) Define and describe terms and activities associated with fitness, to include set, repetition, isometric, isotonic, isokinetic, core, upper body and lower body exercises.</p> <p>Suggested Learning Targets:</p> <p>I can define and provide examples for (selected term: set, repetition, isometric, isotonic, isokinetic, core, upper body and lower body exercises) and tell it to a peer.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> Assess student knowledge of vocabulary—set, repetition, isometric, isotonic, isokinetic, core, upper body exercises and lower body exercises. <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> Define and describe terms. Provide/identify examples of each term. 	<ul style="list-style-type: none"> Set: A group of consecutive reps for any exercise. Repetition (rep): One completion of an activity or exercise. Isometric: Muscle contraction against resistance, without appreciable shortening or change in length of muscle fibers and with marked increase in muscle tone; strength gains only occur at the joints used. Isotonic: Muscular contraction in the absence of significant resistance, with marked shortening of muscle fibers and without great increase in muscle tone. Isokinetic: Exercises that use equipment to provide resistance to movement at a given speed; movements with constant external resistance. Core: Term refers to the muscles that are the central part of the body; muscles of the upper and lower torso, around the spine and pelvic muscles (back, side, pelvic and buttock muscles); include rectus abdominis, transversus abdominis, obliques, trapezius, latissimus dorsi, spinal erector, gluteus maximus, pectoralis major and deltoid; provides stability, able to flex, side 	<ul style="list-style-type: none"> Terms and examples should be provided in a variety of settings. Display examples of upper and lower body exercises Example: https://wellness.ucr.edu/Stretches%20for%20Lower%20and%20Upper%20Body.pdf

		<p>bend and rotate the trunk; protect abdominal organs.</p> <ul style="list-style-type: none">● Upper body exercises would train the following muscle groups to some degree:<ul style="list-style-type: none">○ Chest○ Back○ Shoulders○ Biceps○ Triceps ● Lower body exercises would train the following muscle groups to some degree:<ul style="list-style-type: none">○ Quads○ Hamstrings○ Calves○ Lower Back○ Abs	
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Resources:
SHAPE America National Standards and Grade Level Outcomes;
<http://www.health.harvard.edu/blog/build-your-core-muscles-for-a-healthier-more-active-future-201212285698>;
<http://www2.gsu.edu/~wwwfit/lowerbod.html>; ~~<https://www.nscs.com/Education/Articles/The-Often-Forgotten-Exercises-Isometric-Training/>~~

VA SOL Standard: 9.4 The student will explain and demonstrate the skills needed to be safe, responsible and respectful in all physical activity settings.

ESSENTIAL UNDERSTANDINGS

- Social development includes respecting the rights and feelings of others and being sensitive and responsive to the well being of others.
- Learning and practicing social development skills in an educational environment with a goal of putting these skills and actions into practice in and outside of physical education classes.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>
<p>9.4 a) Identify and demonstrate proper etiquette, respect for others, integrity and teamwork while engaging in a variety of activities.</p> <p>Suggested Learning Targets:</p> <p>I can demonstrate appropriate etiquette in activity settings and give examples to a peer.</p> <p>I can show how to accept decisions of activity officials, accept the outcome of the activity and show appreciation toward participants when participating in (selected activity) and demonstrate it through a checklist.</p> <p>9.4 b) Explain the impact of sports and activities in developing respect for the unique characteristics, differences and abilities of peers.</p> <p>Suggested Learning Targets:</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • Teacher observation: Demonstrates knowledge of etiquette while engaging in an activity. • Research/investigate the role of sports/activities in promoting inclusion (people with different abilities, unique characteristics). • Self/Peer Checklist: Example — <ul style="list-style-type: none"> — Working with the team to apply knowledge about a game/activity/dance to outsmart opponents by understanding their moves or showing comprehension of dance elements. — Showing commitment to the game/activity/dance. — Caring for classmates by showing kind treatment during game/activity/dance. — Support and encourage classmates instead of using put downs during game/activity/dance. 	<ul style="list-style-type: none"> • Etiquette — Proper acceptable actions, behavior or conduct within an activity. Elements: <ul style="list-style-type: none"> ○ Be kind ○ Be courteous ○ Be respectful • Respecting the rights and feelings of others: <ul style="list-style-type: none"> ○ By maintaining self-control. ○ By respecting everyone's right to be included. ○ By respecting everyone's right to a peaceful conflict resolution. • Participation and putting forth effort: <ul style="list-style-type: none"> ○ By exploring effort. ○ By trying new things. ○ By developing a personal definition of success. • Being sensitive and responsive to the well-being of others. <ul style="list-style-type: none"> ○ By developing prerequisite interpersonal skills. ○ By becoming sensitive and compassionate to others. ○ By helping others without the need for rewards. • Measures of sportsmanship: 	<ul style="list-style-type: none"> • Use a variety of activities and opportunities for students to experience examples and non-examples for proper etiquette, respect for others, integrity and teamwork. • Provide students an opportunity to investigate the impact of sports on inclusion and respect for differences. • Students apply rules and etiquette by acting as an official for activities.

<p>I can explain how unique abilities of others influence the experience of participating in and/or the success of (selected activity) through an exit ticket.</p> <p>I can show how to support others by respecting abilities and strengths of others and demonstrate it through encouraging feedback to peers for teacher observation.</p>	<p>— Showing control and standing tall when faced with defeat in game/activity or inability to master a dance routine.</p> <p>— Owning up to mistakes/fouls that are made during game/activity/dance.</p> <p>— Showing humility by refraining from boasting when winning a game/activity or completing a dance routine.</p> <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> ● Written: Proper etiquette, respect for others, integrity and teamwork. ● Written: Impact of sports and activities in developing respect for the unique characteristics, differences and abilities of peers. ● Performance: Demonstration of proper etiquette, respect for others, integrity and teamwork. 	<ul style="list-style-type: none"> ○ Be polite; don't show off; congratulate and thank opponents; learn the rules; don't argue with the official; don't make up excuses or blame a teammate; be willing to sit out; play fair; don't cheat; cheer for teammates; and acknowledge the good play of opponents. 	
<p>Resources: SHAPE America National Standards and Grade Level Outcomes; http://www.teachpe.com/sports_psychology/attitudes.php; http://www.doe.virginia.gov/instruction/physed/index.shtml; http://lessonplanspage.com/peoempowereddecisionmaking612.htm/;</p>			

VA SOL: 9.4 The student will explain and demonstrate the skills needed to be safe, responsible and respectful in all physical activity settings.

ESSENTIAL UNDERSTANDINGS

- Conflict is normal and inevitable, occurring in a variety of settings throughout all life experiences.
- There are healthy and unhealthy ways to resolve conflict.
- When handled in a respectful and positive way, conflict provides an opportunity for growth, ultimately strengthening the bond between people.

VDOE Standard(s) Student Friendly Language What will the student know and be able to do?	SUGGESTED / SAMPLE ASSESSMENTS	Terms (Vocabulary) and Content Information	SUGGESTED / SAMPLE ACTIVITIES
<p>9.4 c) Apply conflict-resolution skills in physical activity settings.</p> <p>Suggested Learning Targets:</p> <p>I can show healthy and effective ways to avoid and address conflict with peers and demonstrate it to my teacher.</p> <p>I can create guidelines to resolve conflict during (selected activity) and tell them to a peer.</p> <p>I can perform cooperation skills in (selected activity) and demonstrate it through a self-reflection summary paragraph.</p> <p>I can demonstrate positive strategies to resolve problems and conflict when faced with a group challenge and demonstrate it through a peer assessment.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> ● Written: Knowledge of conflict resolution skills. ● Peer Assessment: Example— Give feedback to a peer on their ability to avoid or address conflict using a teacher-created checklist or rubric. ● Teacher observation ● Written reflection: Example— <ul style="list-style-type: none"> ○ During an activity/game, have you ever experienced an incident that made you angry? ○ Describe what happened in the incident. When/where did it happen? ○ What were your thoughts and feelings at the time? ○ Describe your actions and how you handled the situation. ○ What was the result? ○ Now that you have had time to think about it, how would you act now in a similar situation? 	<ul style="list-style-type: none"> ● Conflict resolution skills: <ul style="list-style-type: none"> ○ Discuss problem without blame. ○ Active listening. ○ Identify and clarify issues and needs. ○ Brainstorm solutions. ○ Choose and apply solution. ○ Evaluate solution. ● Constructive ways to address conflict: <ul style="list-style-type: none"> ○ Listen to all opinions before making a judgment. ○ Talk it out. ○ Have face-to-face conversations with a mediator/teacher present. ○ Seek understanding. ● Destructive ways to address conflict: <ul style="list-style-type: none"> ○ Criticize people for their opinions. ○ Blame others. ○ Say or do hurtful things. ● Cooperative is described as: <ul style="list-style-type: none"> ○ following rules ○ encouraging others ○ complimenting others ○ controlling temper ○ wanting everyone to play well and 	<ul style="list-style-type: none"> ● Student creation of a behavior self-checklist for addressing personal conflict when participating in selected physical activities. ● Instruction should include role plays to practice conflict resolution skills. Example: Present a case scenario that exemplifies a conflict between two people in a physical activity setting. Clearly identify the opposing opinions. Divide the class into two equal groups, each group representing one side of the conflict exemplified in the case scenario. Each group discusses the issue from its assigned perspective, using the following questions as a guide: <ul style="list-style-type: none"> ○ How does your group see the conflict? ○ What is the source of the conflict? ○ What would the group be willing to do to resolve the conflict? ○ What would the group hope to achieve from a resolution? ● Student creation of guidelines for resolving conflicts in activity settings that may include: <ul style="list-style-type: none"> ○ Positive strategies such as offering suggestions/assistance, leading/following others ○ Providing possible solutions when faced with a group challenge ○ Helping and encouraging others, avoiding negative talk and providing support to

	<ul style="list-style-type: none"> ○ What communication skills and strategies would you have applied to this situation? <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> ● Written: application of conflict resolution skills in a variety of physical activity settings (scenario-based assessment). ● Performance: demonstration of use of healthy and effective conflict resolution skills. 	<ul style="list-style-type: none"> ○ succeed ○ working together toward a common goal ○ helping classmates ○ playing under control ○ sharing ○ showing concern for classmates' feelings 	<p>classmates</p>
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Resources:
 SHAPE America National Standards and Grade Level Outcomes; — http://classroom.kidshealth.org/classroom/6to8/personal/growing/conflict_resolution.pdf;
http://classroom.kidshealth.org/classroom/6to8/personal/growing/getting_along.pdf;
<http://www.pecentral.org/lessonideas/ViewLesson.asp?ID=859#.V7H-Ybf6vcs>
<http://ctb.ku.edu/en/table-of-contents/implement/provide-information-enhance-skills/conflict-resolution/tools>

VA SOL Standard: 9.4 The student will explain and demonstrate the skills needed to be safe, responsible and respectful in all physical activity settings.			
ESSENTIAL UNDERSTANDINGS			
<ul style="list-style-type: none"> Working with others and encouraging teamwork will build confidence and support within a group. Positive relationships play a crucial role in well-being, thus opportunities for social interaction through physical activity in the community could vastly improve the well-being of individuals as well as the community as a whole. 			
VDOE Standard(s) Student Friendly Language What will the student know and be able to do?	SUGGESTED / SAMPLE ASSESSMENTS	Terms (Vocabulary) and Content Information	SUGGESTED / SAMPLE ACTIVITIES
<p>9.4 d) Identify an opportunity for social support in a self-selected physical activity.</p> <p>Suggested Learning Targets:</p> <p>I can identify opportunities for social interaction in the community through (specific activities (i.e., hiking, biking, walking or rock climbing-) and express the benefits to a peer.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> Student knowledge of the emotional and social health (mental health) benefits of physical activity. Investigate opportunities for physical activities appropriate to your area that encourage social interaction. Examples: Skiing, hiking, biking, walking tracks or rock climbing. <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> Student selects two physical activities and compares the social and emotional benefits of participation in the activities. 	<ul style="list-style-type: none"> Social and emotional benefits of participation in a variety of physical activities: <ul style="list-style-type: none"> Improves mental health and mood. Reduces the risk of depression and anxiety. Develops higher self-esteem and body image. Helps develop basic motor skills needed for day-to-day life. Effective in promoting mutual understanding and empathy. Builds character—social skills like teamwork, cooperation and leadership. Ability to handle winning and losing while being a good sport. Develop resiliency. Helps develop discipline. 	<ul style="list-style-type: none"> Emphasize the role of physical activity as a means for group membership and positive social interaction and the importance of this type of interaction throughout history and in different cultures. Make connections between an activity and the emotional benefits and social interaction. Example—It is found that group-based walking substantially increased social capital that includes sense of connectedness, collective efficacy, social engagement and acceptance of other groups.
<p>Resources: SHAPE America National Standards and Grade Level Outcomes http://www.thecommunityguide.org/pa/behavioral-social/community.html; http://ijbnpa.biomedcentral.com/articles/10.1186/1479-5868-4-54</p>			

VA SOL Standard: 9.4 The student will explain and demonstrate the skills needed to be safe, responsible and respectful in all physical activity settings.

ESSENTIAL UNDERSTANDINGS

- Effective communication includes what is said, how it is said and how it is interpreted by the receiver of the message (what is meant is what is understood).
- Effective communication is important for personal, work/career, life and relationship success.

VDOE Standard(s) Student Friendly Language What will the student know and be able to do?	SUGGESTED / SAMPLE ASSESSMENTS	Terms (Vocabulary) and Content Information	SUGGESTED / SAMPLE ACTIVITIES
<p>9.4 c) Apply communication skills and strategies that promote positive team/group dynamics.</p> <p>Suggested Learning Targets:</p> <p>I can use effective communication skills for (selected activity) and demonstrate it to my teacher.</p> <p>I can use appropriate strategies that promote positive team/group dynamics and describe them to a peer.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> ● Teacher observation: What to look for (measure/assess) during activity: <ul style="list-style-type: none"> ○ Are students accepting of all partners? ○ Are students hustling to find partners? ○ Are they mixing themselves up? ● Written: Describe verbal and nonverbal communication. ● Oral: <ul style="list-style-type: none"> ○ Describe the verbal and nonverbal communications that occur in the selected activity. ○ List strategies of how to include others when creating groups for physical activities and explain how these strategies improve time wasted and ease confusion. ● Self-reflection: <ul style="list-style-type: none"> ○ If a classmate says or does something I agree with, I... ○ When I want to make a point to the group, I... ○ If a group member ignores my suggestions, I... ○ If a group member says or does something I disagree with, I... 	<ul style="list-style-type: none"> ● Collaborative Skills include: <ul style="list-style-type: none"> ○ The abilities to contribute to group activities and discussions. ○ Consider the ideas and perspectives of others. ○ Include others in the collaborative process. ○ Stay focused on the task. ○ Provide and receive feedback constructively. ● Communication strategies may include: <ul style="list-style-type: none"> ○ Verbal communication—sharing of information / relay a message between two or more people that uses sounds, signs and/or language; either oral or written; spoken word; either face-to-face or electronically. ○ Nonverbal communication—sending and receiving wordless messages; body movements/body language such as facial expressions, body posture, gestures, eye contact, way, tone of voice, touch. ○ Visual communication—visual aids such as signs, graphics, drawings, design, color, graphs, charts. ○ Active Listening—pay attention to the speaker, avoid being distracted; show you are listening, smile, nod; provide feedback—restate what you heard, ask questions; defer judgment—don't 	<ul style="list-style-type: none"> ● Any outdoor pursuit activities, fitness activities, dance and rhythmic activities, aquatics, selected individual performance activities and net/wall and target games activities that utilize communication strategies. <ul style="list-style-type: none"> ○ Effective listening skills: Staying quiet while someone is speaking. ○ Effective speaking skills: Changing language and tone to make the message clearer and/or more appealing to the listener. ○ Effective non-verbal skills that enhance effective communication: Using appropriate body language such as smiling or an affirmative nod of the head. ● Teach characteristics of good communication comments during team/group physical activities: <ul style="list-style-type: none"> ○ given with the goal of improvement ○ timely ○ honest ○ respectful

	<p>○ If I don't understand the group leaders' ideas, I...</p> <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> ● Written: Evaluation of communication strategies appropriate for selected activity. ● Performance assessment <p style="text-align: center;">Sample Rubric</p> <p>4 (<i>Beyond what was taught</i>) Demonstrates ability to adapt and adjust communication strategies based on the response of others in dynamic and unpredictable situations.</p> <p>3 (<i>What was explicitly taught</i>) Demonstrates appropriate and proper use of verbal and nonverbal communication skills appropriate to selected activity in dynamic situations.</p> <p>2 (<i>Identify basic elements</i>) Demonstrates appropriate and proper use of communication in isolation.</p> <p>1 (<i>With help/prompts/cues</i>) With teacher cues, student can demonstrate communication skills</p>	<p>interrupt; respond with respect.</p> <ul style="list-style-type: none"> ● Strategy guidelines for including others: <ul style="list-style-type: none"> ○ Positive strategies such as offering suggestions/assistance, leading/following others. ○ Providing possible solutions when faced with a group challenge. ○ Helping and encouraging others, avoiding negative talk, and providing support to classmates. 	<ul style="list-style-type: none"> ○ clear ○ issue-specific ○ objective ○ supportive ○ motivating ○ action-oriented ○ solution-oriented
<p>Resources: SHAPE America National Standards and Grade-Level Outcomes; http://kidshealth.org/en/teens/tips-disagree.html</p>			

VA SOL Standard: 9.4 The student will explain and demonstrate the skills needed to be safe, responsible and respectful in all physical activity settings.

ESSENTIAL UNDERSTANDINGS

- Cooperative activities are problem-solving tasks designed to help group members develop their capacity to work effectively together.
- Group dynamics describes the way members of a group interact with each other.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>
<p>9.4 f) Apply problem-solving and critical-thinking skills in physical activity settings, both as an individual and in groups.</p> <p>Suggested Learning Targets:</p> <p>I can work cooperatively with a group to achieve the goals of the group by using problem-solving and critical-thinking skills and give examples of how I demonstrated that in an exit ticket.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • Written: assess student knowledge of problem-solving skill set. • Role-play opportunities to practice problem-solving and critical thinking. • Teacher observation of positive interdependence in which students all need to do their assigned specific roles and duties in order for a task to be completed. • Oral: Partner discussion on how a lack of unity affects problem-solving within a group. <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> • Written: scenario-based assessment to apply problem-solving. • Performance: demonstrate problem-solving strategies with a group to achieve a goal or goals 	<ul style="list-style-type: none"> • Problem-solving skill set: <ul style="list-style-type: none"> ○ Identify the problem ○ Analyze the problem ○ Generate potential solutions ○ Select and plan the solution ○ Implement the solution ○ Evaluate the solution • Positive interdependence: Team members rely on one another to achieve the goal. If any team member fails to do their part, everyone suffers the consequences. • Individual accountability: All students within the group are held accountable for doing their share of the work. • Cooperative learning for problem-solving: <ul style="list-style-type: none"> ○ Division of labor among students in the group. ○ Face-to-face interaction between students. ○ Assignment of specific roles and duties to students. ○ Group processing of a task. ○ Positive interdependence in which students all need to do their assigned duties in order for the task to be completed. ○ Individual accountability for completing one's own assigned duties. 	<ul style="list-style-type: none"> • Cooperative activities or activities that focus on a group goal. • Group processing: Groups set goals, assess what they are doing well and identify changes they will make to function more effectively in the future. • Cooperative games and activities that develop positive social interaction, increase self-confidence and self-esteem. http://www.pecentral.org/lessonideas/ViawLesson.asp?ID=774#.V6Sms7f6vcs • Students participate in a land- or water-based alternative pursuit activity near or away from the school. Examples: <ul style="list-style-type: none"> ○ orienteering at a local park ○ hiking or backpacking ○ canoeing ○ cycling ○ cross-country skiing Involve students in planning the outing, developing a risk-management plan and identifying ways to accommodate the varying abilities of participants.

		<ul style="list-style-type: none"> ○ Group members responsible for the behavior of all members. If a team member displays inappropriate behavior, it is the duty of fellow members to remind that student to 'check' him/herself. The members attempt to refocus the misbehaving student by offering help and suggestions. 	<p>Example: Hiking and backpacking requires students to think about backpacks in regard to:</p> <ul style="list-style-type: none"> ○ Fit and size ○ How to wear ○ How to pack ○ What to pack <p>*Note: Check school/division policy regarding choice of alternative pursuit activities outside of school.</p>
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Resources:
SHAPE America National Standards and Grade-Level Outcomes; <http://www.pecentral.org/climate/january09article.html>

VA SOL Standard: 9.4 The student will explain and demonstrate the skills needed to be safe, responsible and respectful in all physical activity settings.

ESSENTIAL UNDERSTANDING

- Safety has to be thought out and planned prior to engaging in physical activity.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>																								
<p>9.4 g) Apply best practices for participating safely in physical activity, exercise and dance (e.g., injury prevention, proper alignment, hydration, use of equipment, implementation of rules, sun protection).</p> <p>Suggested Learning Targets:</p> <p>I can identify safe practices for (selected activities) that include (injury prevention, proper alignment, hydration, use of equipment, implementation of rules and/or sun protection) and describe it to a peer.</p> <p>I can demonstrate safe practices in (selected activity) and describe them in an exit ticket.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • Student knowledge of safe practices of a variety of activities. • Have students take the Sun Safety IQ test from www.cancer.org. • Compare and contrast safety for indoor versus outdoor activities; short duration versus long duration activities; role of training and knowledge of skill/techniques in preventing injury in two different activities. <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> • Written: Analysis of safety practices for (selected activity). • Performance: Application of safe practices in (selected activity) – rubric or checklist is dependent on the complexity of the activity. • Provide students with the following list of terms and phrases, which include examples of physical activities, exercise techniques and 	<ul style="list-style-type: none"> • Choose types of physical activity that are appropriate for current fitness level and health goals. Increasing physical activity gradually over time whenever more activity is necessary to meet health goals. • Be protected by using appropriate gear and sports equipment, looking for safe environments, following rules and procedures. Examples: <ul style="list-style-type: none"> ○ Policies that promote the use of bicycle helmets reduce the risk of head injury among cyclists. ○ Rules against diving into shallow water at swimming pools prevent head and neck injuries. ○ Tips to prepare for an outdoor adventure such as: developing trip itineraries; carrying appropriate equipment, including guides, maps and a compass; sufficient food and water; dressing in proper clothing; carrying emergency contact numbers; and preparing for access to shelter, such as tents, cabins or lean-tos ○ http://kidshealth.org/en/teens/sport-safety.html?WT.ac=ctg#catdieting • Make good choices about when, where and how to be active to reduce possible 	<ul style="list-style-type: none"> • Provide safe practices for all activities that students are engaged in during physical education classes. • Cover the answers to exercise techniques and physiological reasons for using proper exercise techniques, which includes: examples of physical activities, exercise techniques and physiological reasons for using proper exercise techniques. <table border="1" data-bbox="1457 829 2018 1377"> <thead> <tr> <th>Exercise Activity</th> <th>Exercise Technique</th> <th>Physiological Reason</th> </tr> </thead> <tbody> <tr> <td>hamstring stretch</td> <td>perform in seated position</td> <td>reduce lower-back strain</td> </tr> <tr> <td>low-impact "aerobics" class</td> <td>keep one foot on the floor at all times</td> <td>prevent wear and tear on joints</td> </tr> <tr> <td>lat. pull-down</td> <td>pull bar down to chest</td> <td>reduce lower-back strain</td> </tr> <tr> <td>wall squat</td> <td>bend knees to 90° angle or less</td> <td>prevent strain on knee joints</td> </tr> <tr> <td>standing dumbbell overhead press</td> <td>keep shoulders forward of body's midline</td> <td>prevent shoulder impingement</td> </tr> <tr> <td>lunge</td> <td>bend knees to 90° angle or less</td> <td>prevent strain on knee joints</td> </tr> <tr> <td>half-neck circles (forward)</td> <td>keep head forward of body's midline</td> <td>prevent strain/weight load on cervical spine</td> </tr> </tbody> </table> <ul style="list-style-type: none"> • Have students check all equipment before use. 	Exercise Activity	Exercise Technique	Physiological Reason	hamstring stretch	perform in seated position	reduce lower-back strain	low-impact "aerobics" class	keep one foot on the floor at all times	prevent wear and tear on joints	lat. pull-down	pull bar down to chest	reduce lower-back strain	wall squat	bend knees to 90° angle or less	prevent strain on knee joints	standing dumbbell overhead press	keep shoulders forward of body's midline	prevent shoulder impingement	lunge	bend knees to 90° angle or less	prevent strain on knee joints	half-neck circles (forward)	keep head forward of body's midline	prevent strain/weight load on cervical spine
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physiological reasons for using proper exercise techniques:

- half neck circles (forward)
- reduce lower back strain
- bend knees to 90° angle or less
- hamstring stretch
- keep head forward of body's midline
- prevent wear and tear on joints
- pull bar down to chest
- prevent strain on knee joints
- prevent strain/weight load on cervical spine
- lat pull down (latissimus dorsi)
- bend knees
- low impact "aerobics" class
- keep shoulders forward of body's midline
- standing dumbbell overhead press
- lunge
- prevent shoulder impingement
- perform in seated position
- curl up (abdominal)
- keep one foot on floor at all times
- wall squat

Working in small groups, students place the terms and phrases in the appropriate column(s) of a chart that has the following headings. (Note that terms may apply to more than one heading.)

Exercise Activity	Exercise Technique	Physiological Reason

injuries and adverse events that can be prevented.
 Example: During very hot and humid weather, lessen the chances of dehydration and heat stress by—

- Exercising in the cool of early morning as opposed to mid-day heat.
- Switching to indoor activities.
- Changing the type of activity.
- Lowering the intensity of activity.
- Paying close attention to rest, shade, drinking enough fluids and other ways to minimize effects of heat.

- Utilize proper protection for sun exposure such as sunscreen, hat, clothing that protects from UV rays, sun glasses with protective lens to protect eyes.
 - Equipment for an activity that may range from general items of clothing to special protective suits or apparatus. Example: Having the right footwear and clothing for physical activity for both comfort and safety.
 - Choose the right workout clothing that is ideal for your exercise and body type for safety. Clothing that enables the right amount of movement to perform the activity correctly and comfortably. For instance, if you wear jeans and try to stretch, you won't be able to push your body as far.
- <https://medlineplus.gov/ency/patientinstructions/000817.htm>

- Model safe practices by ensuring students are properly warmed up, have the requisite knowledge and skills to participate, are allowed to protect themselves from sun exposure as appropriate (sun glasses, hats), ensure equipment is safe.
- Safety precautions for different recreational activities.

Examples:

 - Hiking: Bring a charged mobile phone, warm clothing and supplies such as water and light food or energy bars, a flashlight or headlamp, rain gear, sunscreen and matches. Travel in groups or with another person whenever possible. Look out for challenges you may encounter in the outdoors, such as wildfires, sudden storms, muddy trail conditions and fast moving waters. Wear light colored clothing and long pants and long sleeved shirts to protect against ticks and other biting insects.
 - Boating and paddling: wear a personal flotation device, check the weather forecast before heading out on the water and seek immediate shelter on shore if you hear thunder. If paddling in waters where there are motorboats, keep close to shorelines and out of main channels.

Resources:

SHAPE America National Standards and Grade Level Outcomes; <http://www.health.harvard.edu/healthbeat/10-tips-for-exercising-safely>;
<http://www.cancer.org/healthy/besafeinthesun/index>; <http://www.fs.fed.us/recreation/safety/safety.shtml>;
<http://www.cdc.gov/homeandrecreationalafety/water-safety/waterinjuries-factsheet.html>; <http://kidshealth.org/en/teens/safety-inline.html?WT.ac=ctg#catdiating>;
<http://kidshealth.org/en/teens/safety-golf.html?WT.ac=ctg#catdiating>; <http://www.fitnessstipsforlife.com/workout-clothing-why-it-is-important.html>;
http://www.heart.org/HEARTORG/HealthyLiving/PhysicalActivity/FitnessBasics/Warm-Up-Cool-Down_UCM_430168_Article.jsp#.V7G32bf6ves

VA SOL Standard: 9.4 The student will explain and demonstrate the skills needed to be safe, responsible and respectful in all physical activity settings.

ESSENTIAL UNDERSTANDINGS

- Working with others and encouraging teamwork will build confidence and support within a group.
- Positive relationships play a crucial role in well-being, thus opportunities for social interaction through physical activity in the community could vastly improve the well-being of individuals as well as the community as a whole.

VDOE Standard(s) Student Friendly Language What will the student know and be able to do?	SUGGESTED / SAMPLE ASSESSMENTS	Terms (Vocabulary) and Content Information	SUGGESTED / SAMPLE ACTIVITIES
<p>9.4 h) Analyze and compare psychological benefits derived from various physical activities (e.g., decreased stress and anxiety, increased self-esteem, increased mental alertness, improved mood).</p> <p>Suggested Learning Targets:</p> <p>I can analyze and compare social and emotional benefits of two different physical activities. (may include one activity done alone and one activity done with others) and demonstrate it through a graphic organizer.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> Student knowledge of the emotional and social health (mental health) benefits of physical activity. Investigate opportunities for physical activities appropriate to your area that encourage social interaction. Examples: Skiing, hiking, biking, walking tracks or rock climbing. <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> Student selects two physical activities and compares the social and emotional benefits of participation in the activities. 	<ul style="list-style-type: none"> Social and emotional benefits of participation in a variety of physical activities: <ul style="list-style-type: none"> Improves mental health and mood. Reduces the risk of depression and anxiety. Develops higher self-esteem and body image. Helps develop basic motor skills needed for day to day life. Effective in promoting mutual understanding and empathy. Builds character—social skills like teamwork, cooperation and leadership. Ability to handle winning and losing while being a good sport. Develop resiliency. Helps develop discipline. 	<ul style="list-style-type: none"> Emphasize the role of physical activity as a means for group membership and positive social interaction and the importance of this type of interaction throughout history and in different cultures. Make connections between an activity and the emotional benefits and social interaction. Example: It is found that group-based walking substantially increased social capital that includes sense of connectedness, collective efficacy, social engagement and acceptance of other groups.

Resources:

SHAPE America National Standards and Grade Level Outcomes; http://www.teachpe.com/sports_psychology/anxiety.php;
http://www.heart.org/HEARTORG/HealthyLiving/StressManagement/FightStressWithHealthyHabits/Fight-Stress-with-Healthy-Habits_UCM_307992_Article.jsp#.V6eDw_36upe;
http://www.heart.org/HEARTORG/HealthyLiving/StressManagement/FourWaystoDealWithStress/Four-Ways-to-Deal-with-Stress_UCM_307996_Article.jsp#.V6eEG_36upe

VA SOL Standard: 9.5 The student will explain the importance of energy balance and evaluate current caloric intake and caloric expenditure to maintain optimal health and prevent chronic disease.

ESSENTIAL UNDERSTANDING

- The body needs sugar, sodium and fat in appropriate quantities for body functioning.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>
<p>9.5 a) Explain the body's physiological response to sugar, sodium and fat.</p> <p>Suggested Learning Targets:</p> <p>I can explain how the body uses and responds to low and/or increased amounts of sugar, sodium and fat and demonstrate it in my journal.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> Define and describe knowledge of sugar, sodium and fat. <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> Written: Research/investigation of how the body processes/responds to sugar, sodium, fat; what the body needs; how the body uses, eliminates or stores each. 	<ul style="list-style-type: none"> Sugar: Sugar digestion begins in the mouth but most occurs in the small intestine where enzymes break sugar down to monosaccharides that are carried to the liver where it is converted to glucose; glucose is either used for energy or stored for later use; glucose is important and necessary fuel for the body; liver and kidneys produce it naturally; hormone, insulin, is released from cells located in the pancreas and regulates how much sugar circulates in the blood stream; insulin speeds up the transfer of sugar from your blood and delivers it to muscle, liver and fat tissues to be used as fuel or stored for the body to use later; if a person does not have enough insulin, sugar accumulates in the blood stream and a person has diabetes (several causes — see diabetes education website); sugar is a carbohydrate; the body processes table sugar (empty calories) and sugar in fruit (nutrients, fiber, lower calories) the same way; a diet that is very high in sugar content, especially refined sugar — if not burned, excess sugar turns to fat, difficult to burn off fat because it takes a lot of energy. Sodium: Found in salt; sodium is an electrolyte. Our kidneys maintain the balance of electrolytes and water by regulating the fluids that we take in and pass out of our bodies. If this balance is disturbed, our muscles, nerves and organs won't function correctly because the cells can't generate muscle contractions and nerve impulses. Too little salt results in hyponatremia; can happen when a person sweats excessively. If you have very strong cravings for salt, you may be dehydrated or lacking one of the minerals in table salt. But an 	<ul style="list-style-type: none"> Review of basic information for sugar, sodium and fat. Ask students to investigate what happens if a person takes in too much or too little sugar, sodium and fat.

		<p>extreme salt craving can be a symptom of more serious diseases. Too much sodium results in hypernatremia; blood volume can increase, making the heart pump harder and is linked to high blood pressure. Dietary guidelines recommend less than 2300 mg of sodium per day (less than half a teaspoon).</p> <ul style="list-style-type: none">• Fat – transfers vitamins A, D, E and K in the blood that are needed for growth and healthy skin; takes longer to digest than carbohydrates or proteins which helps to satisfy hunger longer than other nutrients; foods high in fat are usually high in calories; consuming excess amounts of fats increases risk of unhealthful weight gain and obesity.	
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Resources:

SHAPE America National Standards and Grade Level Outcomes; <http://www.cdc.gov/>;

<http://dtc.ucsf.edu/types-of-diabetes/type1/understanding-type-1-diabetes/basic-facts/what-is-diabetes-mellitus/>

VA SOL Standard: 9.5 The student will explain the importance of energy balance and evaluate current caloric intake and caloric expenditure to maintain optimal health and prevent chronic disease.

ESSENTIAL UNDERSTANDING

- Physical activity is a key determinant of energy expenditure and thus fundamental to energy balance and weight control.

VDOE Standard(s) Student Friendly Language What will the student know and be able to do?	SUGGESTED / SAMPLE ASSESSMENTS	Terms (Vocabulary) and Content Information	SUGGESTED / SAMPLE ACTIVITIES
<p>9.5 b) Assess and analyze current energy balance, to include intake and expenditure, activity levels, food choices and amount of sleep.</p> <p>Suggested Learning Targets:</p> <p>I can track my caloric intake, expenditure (physical activity) and hours of sleep for one week and demonstrate it in log.</p> <p>I can identify my areas for improvement and areas to maintain for my intake and expenditure, activity levels, food choices and amount of sleep in relation to recommended guidelines and demonstrate it in my journal.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> Seven-day data log for caloric intake, food choices, physical activity (amount per day and at what level of intensity) and number of hours of night sleep. <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> Student reflection of results of seven-day energy balance tracking. Identify areas for improvement and maintenance based on recommended guidelines. 	<ul style="list-style-type: none"> Energy balance <ul style="list-style-type: none"> Energy in: Food calories taken into the body through food and drink. Energy out: Calories being used in the body for our daily energy requirements. When it comes to “energy out,” the body’s energy needs include the amount of energy required for maintenance at rest, physical activity and movement and for food digestion, absorption and transport. Caloric intake http://www.choosemyplate.gov/supertracker-tools/daily-food-plans.html Activity (expenditure) http://www.cdc.gov/physicalactivity/basics/index.htm https://www.supertracker.usda.gov/ Food choices <ul style="list-style-type: none"> http://www.choosemyplate.gov/supertracker-tools/daily-food-plans.html http://kidshealth.org/en/teens/fad-diet-tips.html?WT.ac=ctg#catdieting Sleep http://www.cdc.gov/Features/Sleep/ Importance of sleep: 	<ul style="list-style-type: none"> Teacher-created chart or electronic forms or online applications to track caloric intake, food choices, physical activity (amount per day and at what level of intensity) and number of hours of night sleep. Recommend instruction of 9.5.b as a pre-requisite to 9.5.d. Discussions on: activity levels, food choices and amount of sleep. Example — Signs that you may need more sleep: <ul style="list-style-type: none"> Difficulty waking up in the morning. Inability to concentrate. Falling asleep during classes. Feelings of moodiness and even depression.

		<ul style="list-style-type: none"> ○ Brain Function: While you're sleeping, your brain is preparing for the next day. It's forming new pathways to help you learn and remember information. Studies show that a good night's sleep improves learning. ○ Physical Health: Sleep is involved in healing and repair of your heart and blood vessels. Ongoing sleep deficiency is linked to an increased risk of heart disease, kidney disease, high blood pressure, diabetes, stroke and it increases the risk of obesity. The right amount of sleep also reduces heart rate and blood pressure. ○ Productivity/Safety: Getting enough sleep helps you function well throughout the day. People who are sleep deficient are less productive at work and school. They take longer to finish tasks, have a slower reaction time and make more mistakes. 	
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Resources:
 SHAPE America National Standards and Grade-Level Outcomes; <https://www.supertracker.usda.gov/>; <http://www.cdc.gov/Features/Sleep/>;
<http://www.nhlbi.nih.gov/health/health-topics/topics/sdd/why>; <https://newsinhealth.nih.gov/issue/apr2013/feature1>;
<http://www.nhlbi.nih.gov/health/health-topics/topics/obc/causes>

VA SOL Standard: 9.5 The student will explain the relationship of caloric intake, caloric expenditure and body composition.

ESSENTIAL UNDERSTANDINGS

- There is no ideal body weight or body type for everyone.
- Body composition analysis is an important part of your fitness assessment and should be considered in relation to other fitness assessments.
- Many factors influence body composition, including gender, age, diet, activity level and genes/heredity.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>
<p>9.5-c) Explain body composition, using body mass index (BMI) and other measures, the variety of body types and healthy body weight.</p> <p>Suggested Learning Targets:</p> <p>I can explain the relationship between body composition and healthy body weight using a graphic organizer.</p> <p>I can describe a variety of measures used for body composition to a peer.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • Define and describe body composition. • Describe different ways to measure body composition. <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> • Written: Students investigate <ul style="list-style-type: none"> ○ What is a healthy weight for me? ○ How do I know? ○ How do I monitor weight? • Written: Describe one body composition measure and demonstrate how to implement/calculate. 	<ul style="list-style-type: none"> • Body composition: The relative proportion by weight of fat and lean tissue; the proportion of fat, muscle and bone of an individual's body, usually expressed as percentage of body fat and percentage of lean body mass; ratio of body fat to lean body tissue, including muscle, bone, water and connective tissue. • Body type is determined by heredity: <ul style="list-style-type: none"> ○ Mesomorph—characterized by low to medium percentage of body fat, medium to large bone size and a large amount of muscle mass and size; muscular and broader shoulders ○ Endomorph—characterized by high percentage of body fat, large bone size and a small amount of muscle mass and size; rounder and broader hips ○ Ectomorph—characterized by low percentage of body fat, small bones size and a small amount of muscle mass and size; slender and tall • Body composition measurement <ul style="list-style-type: none"> ○ BMI: body mass index http://www.cdc.gov/healthyweight/assessing/bmi/index.html ○ Underwater Weighing: The most accurate method for measuring body composition. Underwater weighing involves submerging a person in a tank of water and having him/her expel the air out of his/her lungs. This method is not easy to administer and can be very expensive. Error of underwater weighing is 2 to 2.5%. ○ Skinfold Measurement: Measure the subcutaneous fat folds around specific body parts (triceps, waist, thigh and back) with skin calipers. The accuracy of the skinfold test depends upon the person performing it, the integrity of the skin 	<ul style="list-style-type: none"> • Provide appropriate websites for student investigation. • Provide students with appropriate options for body composition measures/measurements.

caliper and the kind of formula one uses to calculate percentage of body fat. These, in turn, increase chances for error, which is 3 to 3.5%, but could be as high as 5%.

- Bioelectrical Impedance: A simple, non-invasive technique that uses electrical conductivity to estimate lean body mass. This test is dependent upon hydration status because muscle holds most of the water in the body; so, the more muscle, the better the conduction. The error of bioelectrical impedance is 3 to 3.5%.
- Circumferences taken of various body parts with a soft measuring tape: Common circumferences taken are the neck, chest, arms, forearms, waist, hip, thighs and calves. There are equations which allow you to estimate body fat percentage using circumferences.

● Body Fat Ranges

	Men	Women
Exceptionally Lean	6–10%	10–15%
Very Lean	11–14%	16–19%
Lean	15–19%	20–25%
Moderate	19–24%	26–29%
Obese	25%+	30%+

- There is not an ideal weight for everyone; weight ranges take into account age, gender, height, body type, growth rate, metabolic rate, activity level

Resources:

SHAPE America National Standards and Grade-Level Outcomes

<http://www.nhlbi.nih.gov/health/educational/wecan/healthy-weight-basics/balance.htm>; — <http://www.cdc.gov/healthyweight/assessing/bmi/index.html>

<http://kidshealth.org/en/teens/healthy-weight-plan.html?WT.ac=ctg#catdieting>; — <http://teenshealth.org/en/teens/help-body.html>;

<http://kidshealth.org/en/teens/food-fitness/>; — <http://kidshealth.org/en/teens/bmi.html?WT.ac=ctg#catdieting>

VA SOL Standard: 9.5 The student will explain the importance of energy balance and evaluate current caloric intake and caloric expenditure to maintain optimal health and prevent chronic disease.

ESSENTIAL UNDERSTANDINGS

- Physical activity is a key determinant of energy expenditure and thus fundamental to energy balance and weight control.
- Two people who are the same height and weight may need different amounts of energy or calories to maintain their weight, depending on their body composition.

VDOE Standard(s) Student Friendly Language What will the student know and be able to do?	SUGGESTED / SAMPLE ASSESSMENTS	Terms (Vocabulary) and Content Information	SUGGESTED / SAMPLE ACTIVITIES
<p>9.5 d) Design and implement a plan to maintain an appropriate energy balance for a healthy, active lifestyle, to include intake, expenditure (levels of intensity) and sleep.</p> <p>Suggested Learning Targets:</p> <p>I can set goals for energy balance and create a plan with action steps to achieve the goals through my wellness portfolio.</p> <p>I can implement a plan for energy balance that includes intake, expenditure (levels of intensity) and sleep for (selected time frame) and demonstrate it to my teacher.</p> <p>I can evaluate my energy balance goal(s) attainment at the end of my plan in my wellness portfolio.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> Student's energy balance assessment conducted for 9.5.b. <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> Energy balance plan includes goals for intake, expenditure and sleep; action steps, documentation over (selected time period); reflection of goal progress during plan implementation and/or reflection of goal attainment at end of plan period 	<ul style="list-style-type: none"> Caloric intake http://www.choosemyplate.gov/supertracker-tools/daily-food-plans.html Activity (expenditure) http://www.cdc.gov/physicalactivity/basics/index.htm https://www.supertracker.usda.gov/ Food choices http://www.choosemyplate.gov/supertracker-tools/daily-food-plans.html Sleep http://www.cdc.gov/Features/Sleep/ 	<ul style="list-style-type: none"> Recommend instructing 9.5.d in connection to 9.5.b. Utilize assessment conducted in 9.5.b as the basis for the energy balance plan. http://kidshealth.org/en/teens/lose-weight-safely.html?WT.ac=ctg#catdieting

Resources:

SHAPE America National Standards and Grade Level Outcomes;

<https://www.supertracker.usda.gov/>; <http://www.cdc.gov/Features/Sleep/>; <http://classroom.kidshealth.org/classroom/9to12/body/functions/sleep.pdf>;
<http://www.nhlbi.nih.gov/health/educational/wecan/healthy-weight-basics/balance.htm>

VA SOL Standard: 10.1 The student will demonstrate proficiency and apply the concepts and principles of exercise physiology, biomechanics and anatomy in a variety of lifetime activities that may include outdoor pursuits, fitness activities, dance and rhythmic activities, aquatics, selected individual performance activities and net/wall and target games in at least two self-selected, lifelong, skill-related physical activities.

ESSENTIAL UNDERSTANDINGS

- Development of mature movement patterns occurs during dynamic and unpredictable movement experiences.
- Understanding key elements of fundamental movement skills and movement concepts allows for efficient and effective mature movement that can be applied to a variety of activities.
- Outdoor pursuits provide excitement, challenge and a degree of risk while minimizing the importance of winning and losing.
- Lifetime recreational pursuits can increase self-esteem, reduce substance abuse, build family bonds and promote volunteerism, all at the same time.

Note: Society for Health and Physical Educators (SHAPE America) National Physical Education Standards Document 2014 recommends exclusion of invasion and fielding/striking games for high school outcomes because these activities require team participation and are less suited to lifelong participation.

VDOE Standard(s) Student Friendly Language What will the student know and be able to do	SUGGESTED / SAMPLE ASSESSMENTS	Terms (Vocabulary) and Content Information	SUGGESTED / SAMPLE ACTIVITIES
<p>10.1 a) Demonstrate skill attainment in one or more lifetime activities.</p> <p>Suggested Learning Targets:</p> <p>I can analyze the skills needed to be successful in (specific activity: i.e.; cycling, disc golf, swimming, etc.) and demonstrate this by creating a rubric for the skills needed to perform the activity.</p> <p>I can perform the skills needed to be successful in (specific activity: i.e.; golf, tennis, bowling, etc.) and demonstrate my ability to be successful through a skill checklist.</p> <p>I can compile the benefits, equipment needed and safety concerns for (specific activity: i.e.; scuba diving, white water rafting, rock climbing, etc.) and</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • Skill rubric: Perform each activity skill and movement correctly (self and/or peer analysis and feedback). • Written: Evaluation of activity skills and movements, their components and indicators for success. • Teacher observation with feedback. <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> • Cognitive Assessment: Evaluation of activity skills and movements, their components and indicators for success 	<ul style="list-style-type: none"> • Content dependent upon activities offered to or selected by students. • Health benefits associated with lifetime recreational physical activity pursuits: <ul style="list-style-type: none"> ◦ Reduced risks for chronic diseases and obesity. ◦ Enhancement of the immune system. Active individuals have fewer hospital stays, fewer physician visits and use less medication resulting in lower annual direct medical costs. ◦ Can increase life expectancy in measurable increments. ◦ Can have positive effects on depression, stress and self-esteem. • Benefits derived from outdoor pursuits: <ul style="list-style-type: none"> ◦ Self-confidence: Students with limited physical skills can experience a swift success in outdoor pursuits that leads them to believe in their ability to succeed. Example: Planning a travel route that is efficient and enjoyable for everyone. By understanding a map's contours, students can not only avoid potential hazards (e.g.; moving water, exposure to lightning) but also conserve energy by avoiding unnecessary elevation gain or loss. By matching the difficulty of the route to the abilities of the group, the student supports the group while 	<ul style="list-style-type: none"> • Teach lifetime outdoor pursuits through video clips, local instructors, field trips, or classroom instruction on the skills for activities such as: cycling, fishing, canoeing, hiking, kayaking, rock climbing, sailing, skiing, surfing, swimming, paddle boarding, scuba diving, white water rafting, etc. • Teach lifetime recreational sports skills for activities such as: tennis, golf, softball, volleyball, beach volleyball, badminton, table tennis, racquetball, bowling, handball, disc golf, duckpin bowling, etc. By doing the following— <ul style="list-style-type: none"> ◦ Movement activities in isolated and dynamic movements for each skill. ◦ Stations for skill practice. ◦ Display cues with visuals.

<p>demonstrate this through a graphic organizer.</p>	<p>• Skill rubric(s): Skill components and application in unpredictable situations. Sample Rubric</p> <p>4 (<i>Beyond what was taught</i>) Displays consistent and correct performance of all elements (during unpredictable situations); includes smooth transitions between skills/movements; includes advanced strategies and tactics.</p> <p>3 (<i>What was explicitly taught</i>) Performs all critical elements appropriately and consistently (during unpredictable situations). -</p> <p>2 (<i>Identify basic elements</i>) Performs critical elements in isolation.</p> <p>1 (<i>With help/prompts/cues</i>) With teacher cues, student can demonstrate some/most of the critical elements in isolation.</p>	<p>also experiencing a sense of accomplishment. Acquiring a new technical skill empowers and encourages continued involvement in an activity. Students are better poised to take on new challenges when they feel genuinely capable as a result of gaining new proficiencies.</p> <ul style="list-style-type: none"> ○ Mutual support: The emphasis on working together and respecting others necessitates a combination of interpersonal skills and appropriate communication. Example: Rock climbing involves cohesiveness and trust between climber and belayer. Good belayers provide climbers with the reassurance to push their physical limits by giving them the knowledge that they can do so without worry. Outdoor pursuits develop enthusiastic and contributing group members who view their roles as an important component of an effective team. ○ Fitness: There are different types of fitness in outdoor pursuits. Examples: Cycling up a steep incline provides the steady, sustained exercise recommended for cardiorespiratory endurance and weight control. Bouldering demands power, agility and flexibility. Cycling can be adapted to individual fitness levels and bouldering involves certain skills that can compensate for insufficient power (e.g.; relying more on the legs than the arms or using techniques for shifting weight and resting). ○ Excitement and fun: Whether perceived or real, an element of risk adds to the excitement of outdoor experiences. When students learn to cope successfully with risks, many of them become more autonomous and self-sufficient. Example: Caving often includes squeezing through cramped, shadowy passages that may be steep or slippery. This task can help students learn how to cope with fears and anxieties. Furthermore, if an activity isn't enjoyable, students will not willingly experience more of it. ○ Wonder of nature: Although climbing high peaks presents important challenges, an equally valuable experience may be sitting still in a quiet place away from the usual distractions and listening to the breeze or observing a vast landscape or delicate flower. 	<p>Examples: http://www.sparkpe.org/wp-content/uploads/backhand-throw-card-hs.pdf</p> <p>http://www.sparkpe.org/wp-content/uploads/forehand-throw-card-hs.pdf</p> <ul style="list-style-type: none"> ○ Display assessment rubrics when skills are introduced. ○ Example recreational lesson: http://www.pecentral.org/lesonideas/ViewLesson.asp?ID=4039#_V4zNabf6vcs • Teach lifetime fitness and dance classes through video clips, local instructors, field trips, or classroom instruction for fitness activities such as: yoga, Zumba, step aerobics, spin, kettlebell, cross training, Tabata interval training, Pilates, kickboxing, strength and conditioning, etc. Dance activities such as: jazz, hip hop, line, rumba, ballroom, etc.
<p>Resources: SHAPE America National Standards and Grade Level Outcomes; VDOE Physical Education Instructional Resources http://www.doe.virginia.gov/instruction/physed/index.shtml; www.ndya.org/uploads/Coaches_Manual_2009_Revised_Ch_6.docx</p>			

VA SOL Standard: 10.1 The student will demonstrate proficiency and apply the concepts and principles of exercise physiology, biomechanics and anatomy in a variety of lifetime activities that may include outdoor pursuits, fitness activities, dance and rhythmic activities, aquatics, selected individual performance activities and net/wall and target games in at least two self-selected, lifelong, skill-related physical activities.

ESSENTIAL UNDERSTANDINGS

- Successful movement includes knowledge of and ability to create, direct and stabilize a variety of movements in a variety of movement situations.
- Performing a variety of movements will lead to effective body management.

Note: Society for Health and Physical Educators (SHAPE America) National Physical Education Standards Document 2014 recommends exclusion of invasion and fielding/striking games for high school outcomes because these activities require team participation and are less suited to lifelong participation.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>
<p>10.1 b) Apply and demonstrate knowledge of how movement is created, directed and stabilized in one or more lifetime activities.</p> <p>Suggested Learning Targets:</p> <p>I can analyze skills for (selected activity) in relation to how successful movement is created, directed and stabilized and demonstrate this through a summary with specific purpose.</p> <p>I can apply the ability to create, direct and stabilize movements for (selected activity) and then demonstrate the understanding through an exit ticket.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • Written: Knowledge of how movement is created, directed and stabilized in a lifetime activity. Sample Basic principles of biomechanics and physics of cycling such as: center of gravity (seat position) force production (standing versus sitting while climbing) optimal joint angles (saddle height) gear ratios (optimizing gears on a climb) and bike design (why the seat is positioned behind the crankset) etc. • Skill rubric (self and peer) <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> • Written: Evaluation of skills (breakdown of component parts to explain how successful movement is created, directed and stabilized); may include practice plan for component parts. 	<ul style="list-style-type: none"> • Movement is created by agility, power, coordination, reaction time, speed, force, motion, rotation and energy. • Movement is directed by type of muscle action that directs a movement (concentric, eccentric and isometric) the direction the body part moves relative to its joints (abduction, adduction, flexion and extension) levers, force, rotation, motion and planes of movement. • Movement is stabilized by balance (center of gravity and center of support, muscle actions) and planes of movement (sagittal plane flexion and extension; frontal plane adduction and abduction; transverse plane internal and external rotation; multi-plane movements). 	<ul style="list-style-type: none"> • Movement activities in isolated and dynamic movements for each skill. • Opportunities to practice skill components. • Opportunities for students to engage in and/or demonstrate knowledge and skills in outdoor pursuits, fitness activities, dance and rhythmic activities, aquatics, selected individual performance activities, net/wall and target games. • Discussions on the biomechanical principles of a physical activity. Example – <ul style="list-style-type: none"> ○ Running is produced by a rotary motion of the limbs as they pivot at an individual's joints and the individual's center of gravity rises and falls during each stride. ○ A tennis ball hit with topspin will rebound faster and lower. A tennis ball hit with backspin will rebound slower and higher. ○ Cycling: *See written formative assessment example.

	<p style="text-align: center;">Sample Rubric</p> <ul style="list-style-type: none"> • Skill rubric: <p>4 (<i>Beyond what was taught</i>) Displays ability to create, direct and stabilize movement successfully and consistently with flow and smooth transitions between movements.</p> <p>3 (<i>What was explicitly taught</i>) Displays ability to create, direct and stabilize movement successfully.</p> <p>2 (<i>Identify basic elements</i>) Displays ability to create, direct and stabilize movement within discrete skill components.</p> <p>1 (<i>With help/prompts/cues</i>) With teacher cues, student can demonstrate ability to create, direct and stabilize movement for isolated components.</p>		
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Resources:
SHAPE America National Standards and Grade Level Outcomes; VDOE Physical Education Instructional Resources
<http://www.doe.virginia.gov/instruction/physed/index.shtml>

VA SOL: 10.1 The student will demonstrate proficiency and apply the concepts and principles of exercise physiology, biomechanics and anatomy in a variety of lifetime activities that may include outdoor pursuits, fitness activities, dance and rhythmic activities, aquatics, selected individual performance activities and net/wall and target games in at least two self-selected, lifelong, skill-related physical activities.

ESSENTIAL UNDERSTANDINGS

- Successful movement and effective body management includes knowledge of and ability to move in the planes of movement in dynamic situations.
- Performing a variety of movements will lead to effective body management.

VDOE Standard(s) Student Friendly Language What will the student know and be able to do	SUGGESTED / SAMPLE ASSESSMENTS	Terms (Vocabulary) and Content Information	SUGGESTED / SAMPLE ACTIVITIES
<p>10.1 c) Identify and demonstrate movement activities in each plane of movement (frontal, sagittal and transverse) and activities that occur in multiple planes.</p> <p>Suggested Learning Targets:</p> <p>I can analyze movement activities in (selected activity) to determine the planes of movement for individual skills and movements and demonstrate this by telling my partner/group.</p> <p>I can demonstrate ability to move in each plane of movement and in multiple planes of movement to be successful in (selected activity) and demonstrate comprehension through an exit ticket.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • Written: List each plane of movement and movement activities that occur in each plane. <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> • Written: Evaluation of skills (breakdown of component parts to explain movements in relation to planes of movement; may include practice plan for component parts. • Skill rubric <p style="text-align: center;">Sample Rubric</p> <p>4 (<i>Beyond what was taught</i>) Demonstrates ability to move in a variety of planes of movement successfully and consistently with flow and smooth transitions between movements in dynamic situations.</p> <p>3 (<i>What was explicitly taught</i>) Demonstrates ability to move in a variety of planes of movement successfully in</p>	<ul style="list-style-type: none"> • Sagittal plane is a vertical plane passing from the rear (posterior) to the front (anterior) dividing the body into left and right halves. It is also known as the anteroposterior plane. Most sport and exercise movements that are almost two-dimensional, such as running and long jumping, take place in this plane. Flexion and extension take place in the sagittal plane. • Frontal plane is also vertical and passes from left to right, dividing the body into posterior and anterior halves. It is also known as the coronal or the mediolateral plane. Abduction and adduction is often in the frontal plane. • Transverse/horizontal plane divides the body into top (superior) and bottom (inferior) halves. Any time there is rotation in a joint we are moving along the transverse plane. 	<ul style="list-style-type: none"> • Movement activities in isolated and dynamic movements for each skill. • Identify and perform movement activities in each plane. Examples: <ul style="list-style-type: none"> ○ Movements that involve forward and backward motion are sagittal plane movements. When a forward roll is executed, the entire body moves parallel to the sagittal plane. ○ Bowling and cycling are all sagittal plane movements. ○ Running occurs in three planes: <ol style="list-style-type: none"> 1. Sagittal: Flexion and extension are the movements. Flexion occurs in the legs at the beginning of the swing phase of running, when the limb is moving forward. Extension occurs in the stance limb, reaching its full extension. 2. Frontal: Abduction and adduction are the movements. Observing the waistline, abduction is movement away from the middle line of the body and adduction is movement towards the middle line. Frontal plane movement is also seen in the rear foot when the shoe strikes the ground this is termed ankle inversion and eversion. 3. Transverse: Rotation occurs in this plane between the pelvis, ribcage and shoulders.

	<p>dynamic situations.</p> <p><i>2 (Identify basic elements)</i> Demonstrates ability to move in a variety of planes of movement within discrete skill components.</p> <p><i>1 (With help/prompts/cues)</i> With teacher cues, student can demonstrate ability to move in some planes of movement in isolation.</p>		
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Resources:
SHAPE America National Standards and Grade-Level Outcomes; VDOE Physical Education Instructional Resources <http://www.doe.virginia.gov/instruction/physed/index.shtml>; PE Central (key term — Dance) <http://www.pecentral.org/>

VA SOL Standard: 10.1 The student will demonstrate proficiency and apply the concepts and principles of exercise physiology, biomechanics and anatomy in a variety of lifetime activities that may include outdoor pursuits, fitness activities, dance and rhythmic activities, aquatics, selected individual performance activities and net/wall and target games in at least two self-selected, lifelong, skill-related physical activities.

ESSENTIAL UNDERSTANDINGS

- Equipment used in activities are designed to provide safety, help to mitigate issues of the environment and/or provide an advantage for more efficient movement.
- Equipment only works when it is used appropriately and properly at all times.

Note: Society for Health and Physical Educators (SHAPE America) National Physical Education Standards Document 2014 recommends exclusion of invasion and fielding/striking games for high school outcomes because these activities require team participation and are less suited to lifelong participation.

VDOE Standard(s) Student Friendly Language What will the student know and be able to do	SUGGESTED / SAMPLE ASSESSMENTS	Terms (Vocabulary) and Content Information	SUGGESTED / SAMPLE ACTIVITIES
<p>10.1 d) Demonstrate appropriate and proper use of equipment in one or more lifetime activities.</p> <p>Suggested Learning Targets:</p> <p>I can identify the proper equipment for use in (selected lifetime activity) and explain the importance of appropriate equipment use through a (selected assessment product: i.e.; foldable, videotape, etc.)</p> <p>I can demonstrate appropriate and proper use of equipment for (selected activity) and demonstrate this by performing the correct usage to my teacher.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • Design and build an obstacle course using the outdoors and equipment that is assessable to most individuals outside of school. Present through lecture and demonstration, how to navigate the course for injury prevention, proper alignment, use of equipment, rules, plus hydration and sun protection for an outdoor activity. <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> • Written Identification of a lifetime activity, its equipment and why it's appropriate use is important. <p style="text-align: center;">Sample Rubric 4 (<i>Beyond what was taught</i>) Demonstrates appropriate and proper use of equipment consistently, maintaining control in dynamic and unpredictable situations.</p>	<ul style="list-style-type: none"> • Dependent upon activities. • Equipment for an activity may range from general items of clothing to special protective suits or apparatus. • It is essential to use the correct equipment and to make sure it is in good condition. 	<ul style="list-style-type: none"> • Opportunities for students to engage in and/or demonstrate knowledge and skills in outdoor pursuits, fitness activities, dance and rhythmic activities, aquatics, selected individual performance activities and net/wall and target games. <p>Example lessons:</p> <ul style="list-style-type: none"> ◦ http://www.pecentral.org/lessonideas/ViewLesson.asp?id=21#.V49x8Lf6vcs ◦ http://www.pecentral.org/lessonideas/ViewLesson.asp?ID=2983#.V4zKnLf6vcs • Discussions on proper equipment for lifetime activities. Example — Helmets for different activities such as cycling, rock climbing and canoeing. Why they should be worn, how to wear one and other points such as: wearing a helmet that is old and could crack on impact. ◦ http://kidshealth.org/en/teens/safety-inline.html?WT.ac=ctg#catdieting

	<p>3 <i>(What was explicitly taught)</i> Demonstrates appropriate and proper use of equipment in dynamic situations.</p> <p>2 <i>(Identify basic elements)</i> Demonstrates appropriate and proper use of equipment in isolation.</p> <p>1 <i>(With help/prompts/cues)</i> With teacher cues, student can demonstrate ability to use equipment appropriately.</p>		<p>◦ http://kidshealth.org/en/teens/sport-safety.html?WT.ac=ctg#catdieting</p>
<p>Resources: SHAPE America National Standards and Grade-Level Outcomes; VDOE Physical Education Instructional Resources http://www.doe.virginia.gov/instruction/physed/index.shtml; http://kidshealth.org/en/teens/safety-golf.html?WT.ac=ctg#catdieting</p>			

VA SOL Standard: 10.2 The student will apply knowledge of biomechanics and anatomy, and analyze and evaluate the ability to move proficiently and efficiently in a variety of lifetime activities.

ESSENTIAL UNDERSTANDINGS

- There are two energy systems used during the process of respiration, anaerobic and aerobic respiration.
- The two energy systems are interdependent — dominate at different times depending on duration and intensity of the activity.

VDOE Standard(s) Student Friendly Language What will the student know and be able to do	SUGGESTED / SAMPLE ASSESSMENTS	Terms (Vocabulary) and Content Information	SUGGESTED / SAMPLE ACTIVITIES
<p>10.2 a) Explain how the body responds to energy needs for anaerobic and aerobic activities, to include fast and slow twitch muscle fibers and anaerobic respiration (ATP-PC and Lactic Acid System) and aerobic respiration.</p> <p>Suggested Learning Targets:</p> <p>I can explain the energy needs for (400 meter run) from the start to the finish line in relation to the types of muscle fibers used and the energy systems used (anaerobic respiration [ATP-PC and Lactic Acid System] and aerobic respiration) and demonstrate this through an exit ticket.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> Written: Describes anaerobic and aerobic energy systems; define fast and slow twitch muscle fibers (exit tickets, short answer assessments). <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> Written: Explain how the body responds to energy needs for anaerobic and aerobic activities, to include fast and slow twitch muscle fibers and anaerobic respiration (ATP-PC and Lactic Acid System) and aerobic respiration for at least one lifetime activity. 	<ul style="list-style-type: none"> Responses to Anaerobic Exercise: <ul style="list-style-type: none"> To immediately meet the sudden higher energy demand, stored ATP is the first energy source. This lasts for approximately 2 seconds. The ATP-PC system can only last 8-10 seconds before PC stores are depleted. The lactic acid system (Anaerobic glycolysis) must then take over as the predominant source of energy production; high intensity (but sub-maximal) exercise can last for between 3 and 5 minutes using this system. If the exercise continues at a high intensity, oxygen is not available at a fast enough rate to allow aerobic metabolism to take over. The production of lactic acid will reach the point where it interferes with muscular function; this is called the lactate threshold. Muscles begin to fatigue when ATP resynthesizes can no longer match demand. Responses to Aerobic Exercise: <ul style="list-style-type: none"> Due to the necessity of oxygen being present for aerobic metabolism, the first few minutes of low to moderate intensity exercise are powered by anaerobic metabolism. Continued low to moderate intensity exercise is then fueled by carbohydrate and fat stores using aerobic metabolism. The intensity and duration of exercise determines which fuel source is used: <ul style="list-style-type: none"> Fat metabolism is a slow process and so can only be used as fuel for exercise at less than 60% VO₂ max. Carbohydrate is a much faster fuel source and so can be used for exercise up to 80% (in trained individuals). Carbohydrate stores within the muscle and liver can fuel exercise 	<ul style="list-style-type: none"> Incorporate instruction of energy systems during warm-up activities, instant activities and skill practice during a variety of lifetime activities.

for up to 80 minutes. As carbohydrate stores get lower, the body has to rely more and more on fat stores.

- The intensity of exercise, which can be maintained, drops as fat cannot supply the amount of energy.
- Fast twitch muscle fibers contract relatively rapidly, utilized especially in actions requiring maximum effort of short duration, such as sprinting.
- Slow twitch muscle fibers contract relatively slowly and is resistant to fatigue.

Resources:

VDOE Physical Education Instructional Resources <http://www.doe.virginia.gov/instruction/physed/index.shtml>;
http://www.teachpe.com/anatomy/energy_systems.php; <http://www.sport-fitness-advisor.com/energysystems.html>

VA SOL Standard: 10.2 The student will apply knowledge of biomechanics and anatomy and analyze and evaluate the ability to move proficiently and efficiently in a variety of lifetime activities.

ESSENTIAL UNDERSTANDINGS

- Movement skills and patterns may transfer from one activity to another; increasing the activities that a person can pursue for a lifetime.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>
<p>10.2 b) Analyze movement activities for component skills and movement patterns for one or more lifetime activities.</p> <p>Suggested Learning Targets:</p> <p>I can analyze (selected activity) for the skills and movement patterns needed to be successful and demonstrate this through a (e.g.; group presentation, videotaping).</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • Written: Skills needed to be successful; movement patterns needed to be successful • Videotaping for activity evaluation by: posing, defining the problems, collaborating, concluding, practicing and refining. Example: https://www.youtube.com/watch?v=Rv9onxrvxmg • Using videos (specific tool i.e.: iPads) to comprehend how a movement activity is performed and then performing what was seen on the video. <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> • Cognitive/Written Assessment: Analysis of activity skills and movement patterns to be successful for chosen activity. 	<ul style="list-style-type: none"> • Division phases of movement: <ul style="list-style-type: none"> ◦ Preparatory: Movements that prepare such as: backswing in golf or tennis. ◦ Execution: <ul style="list-style-type: none"> – Force producing movements such as, the forward motion of the tennis forehand shot. – Critical instant, the point of contact or the release such as: the moment of contact in the tennis serve. ◦ Follow-through: Body movements after the execution where the movement slows down such as: the golf club after the ball is struck. • Movement skill phases may not all fit neatly into three phases and additional phases may be devised or added. Example: The long jump may also be divided into: preliminary movements; run-up; take-off and landing. 	<ul style="list-style-type: none"> • Refining movement specific skills (e.g.; balancing, turning, sculling, paddling...) for lifetime activities (e.g.; downhill skiing; canoeing, rowing, inline skating...) • Discussions on movement activities: Example: Yoga <ul style="list-style-type: none"> ◦ Component skills: flexibility, balance, coordination, concentration, strength, endurance ◦ Movement patterns: posture, body alignment, balance and movement in all planes of movement.

Resources:

SHAPE America National Standards and Grade Level Outcomes; VDOE Physical Education Instructional Resources
<http://www.doe.virginia.gov/instruction/physed/index.shtml>; <https://www.youtube.com/watch?v=Rv9onxrvxmg>

VA SOL Standard: 10.2 The student will apply knowledge of biomechanics and anatomy and analyze and evaluate the ability to move proficiently and efficiently in a variety of lifetime activities.

ESSENTIAL UNDERSTANDINGS

- Almost all body movements involve the action of more than one muscle.
- Injuries can be reduced by planning resistance programs that address both agonist and antagonist muscle groups.

VDOE Standard(s) Student Friendly Language What will the student know and be able to do	SUGGESTED / SAMPLE ASSESSMENTS	Terms (Vocabulary) and Content Information	SUGGESTED / SAMPLE ACTIVITIES
<p>10.2 c) Identify and explain the relationship of opposing muscle groups (agonist/antagonist).</p> <p>Suggested Learning Targets:</p> <p>I can identify the agonist and antagonist muscle/muscle group for (e.g.; leg extension exercise/running) and explain to my partner the relationship between the muscle/muscle group for efficient and successful movement.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • Written: Identify the muscle/muscle groups used in a variety of activities (which are the agonists and which are the antagonists). <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> • Cognitive/Written Assessment: Explanation of a variety of movements in relation to the agonist and antagonist muscle/muscle groups involved in the movement and how the muscle groups work to facilitate movement from start to finish. 	<ul style="list-style-type: none"> • Agonist: (prime mover) Muscle most directly involved in bringing about a movement by shortening with contraction to produce the movement. • Agonist: Muscle that can slow down or stop the movement. Example: Throwing triceps act as an agonist, extending the elbow to accelerate the ball. As the elbow approaches full extension, the biceps act as an antagonist to slow down elbow extension and bring it to a stop, thereby protecting elbow structures from internal impact. • Antagonistic pairs: (Opposing muscles to agonists). One muscle contracts while the other relaxes. Example—The biceps flexes the elbow and the triceps extends it. • Synergist: (Produce motion similar to or in concert with agonist muscles). Muscles that act around a moveable joint to produce motion similar to, or in concert with agonist muscles, allowing for a range of movements. Sometimes referred to as neutralizers because they help cancel out, or neutralize, extra motion from the agonists to make sure that the force generated works within the desired plane of motion. • Resistance programs should include activities for both agonist and antagonist muscle groups to decrease injury by decreasing disparity of muscle strength (balance of muscle strength throughout a movement). Muscle balance does not always mean equal strength, proper ratio of strength, power, or muscular endurance of one muscle/muscle group to another muscle/muscle group. 	<ul style="list-style-type: none"> • Use visuals to depict muscles used in a variety of activities. • Incorporate knowledge concepts into movement activities.

Resources:

SHAPE America National Standards and Grade Level Outcomes; VDOE Physical Education Instructional Resources

<http://www.doe.virginia.gov/instruction/physed/index.shtml>; Baechle, T. R. and Earle, R. W. (2008). Essentials of Strength Training and Conditioning (3rd ed.)

<p>VA SOL Standard: 10.2 The student will apply knowledge of biomechanics and anatomy and analyze and evaluate the ability to move proficiently and efficiently in a variety of lifetime activities.</p> <p>ESSENTIAL UNDERSTANDINGS</p> <ul style="list-style-type: none"> Optimal performance and physical health requires planning for strength and conditioning. Meeting performance goals requires effort and monitoring. 			
<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>
<p>10.2 d) Design and implement a program for strength and conditioning.</p> <p>Suggested Learning Targets:</p> <p>I can design and implement a program for strength and conditioning to meet my personal fitness needs to be successful in (specific activity) and demonstrate it using a rubric.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> Pair/Share: Knowledge of warm-up, cool-down, overload, specificity and progression. List nutrients needed in a diet for an optimal strength and conditioning program. <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> Written: Strength and conditioning program/plan (assessment may occur at beginning, end and at interval times such as instructional quarter). <p style="text-align: center;">Sample Rubric</p> <p>4 <i>(Beyond what was taught)</i> All elements of score 3 and evaluates plan effectiveness to meet goals; identifying and addressing barriers.</p> <p>3 <i>(What was explicitly taught)</i> Program plan includes all elements for strength and conditioning (goals (short and long term) measures, timeline, work plans, intensity levels, time, documentation of daily activities,</p>	<ul style="list-style-type: none"> Muscular endurance vs. muscular strength. <ul style="list-style-type: none"> Sets and Reps: Circuit training stations. Weight training circuits use large muscle groups first and require 10 to 20 repetitions per station vs. strength training programs that require up to five sets of one to eight repetitions. Rest Intervals: Circuit training targets muscular endurance by employing short rest periods, of 20 to 30 seconds, between stations, or sets vs. strength training that requires maximal effort lifting during each set. Therefore, strength training programs use rest periods of two to five minutes between sets. Longer rest periods enable full muscular recovery while shorter periods do not. 	<ul style="list-style-type: none"> Circuit training. Review goal setting as appropriate. Provide resources for strength and conditioning programs for a variety of activities. Provide examples of strength and conditioning programs completed by students. Specific lessons on the basic principles of training and examples for students to perform (e.g.; warm-up, cool-down, overload, specificity and progression). <p>http://kidshealth.org/en/teens/strength-training.html?WT.ac=ctg#catdieting</p> <p>http://www.sparkpe.org/wp-content/uploads/basic-training-chest-card-hs.pdf</p> <p>http://kidshealth.org/en/teens/strength-training-vid.html?WT.ac=ctg#catdieting</p> <p>http://greatist.com/fitness/full-body-dynamic-warm-up</p>

	<p>documentation of conditioning activities (evidence of use of RPE and pacing) reassessments, reflection, nutrient needs, revisions to goals and action plans as needed.</p> <p>2 (<i>Identify basic elements</i>) Plan includes goals, measures, work plans, intensity levels, some documentation of daily activities, documentation of conditioning activities, reassessments, reflection.</p> <p>1 (<i>With help/prompts/cues</i>) With teacher cues, student can demonstrate ability to create a plan with a goal and activities to meet the goal.</p>		<p>http://greatist.com/fitness/50-bodyweight-exercises-you-can-do-anywhere</p> <p>https://www.youtube.com/watch?nomebile=1&edufilter=E-nlA6VrvGA5Avu83FoomA&v=rEgAN8pgbB0</p> <ul style="list-style-type: none"> • Identify the nutrients needed in a diet for optimal muscle strength and endurance. Example: <ul style="list-style-type: none"> ○ Pre workout: A good supply of protein for tissue repair 1-2 hours before workout. ○ After workout: Go for carbohydrates to replace the energy in depleted muscles. Protein, though, is almost equally important in sealing in your workout's benefits and promoting recovery.
<p>Resources: SHAPE America National Standards and Grade Level Outcomes; http://darebee.com/</p>			

VA SOL Standard: 10.2 The student will apply knowledge of biomechanics and anatomy and analyze and evaluate the ability to move proficiently and efficiently in a variety of lifetime activities.

ESSENTIAL UNDERSTANDINGS

- Healthy blood pressure is important to good personal health.
- Blood pressure reflects the force of the heartbeat and the resistance of the arteries to the pumping action of the heart.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>																								
<p>10.2 e) Explain why blood pressure is an indicator of personal health.</p> <p>Suggested Learning Targets:</p> <p>I can evaluate my blood pressure and explain its importance for personal health and demonstrate this through a summary with specific purpose.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • Blood pressure readings • List: Possible health consequences that can happen over time when high blood pressure is left untreated. Examples: Heart attack, heart disease, congestive heart failure, aortic dissection, stroke, atherosclerosis, kidney damage, vision loss, erectile dysfunction, memory loss, fluid in the lungs, angina and peripheral artery disease. <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> • Written: Explain the importance of blood pressure as an indicator of personal health. 	<ul style="list-style-type: none"> • Systolic: Top number (highest of the two numbers) measures the pressure in the arteries when the heart beats/contracts. • Diastolic: The bottom number (lowest of the two numbers) measures the pressure in the arteries between heartbeats (when the heart muscle is resting between beats and refilling with blood). • Blood pressure: Measure of the force of blood pushing against blood vessel walls. The heart pumps blood into the arteries (blood vessels) which carry the blood throughout the body. High blood pressure, also called hypertension, is dangerous because it makes the heart work harder to pump blood to the body and contributes to hardening of the arteries, or atherosclerosis and to the development of heart failure. • BP rises with each heartbeat and falls when your heart relaxes between beats and can change from minute to minute with changes in posture, exercise, stress or sleep. • Blood pressure that is higher than normal leads to the following conditions: heart attack, stroke, heart failure, atherosclerosis (fatty buildup in the arteries) kidney damage, vision loss, erectile dysfunction. <table border="1" data-bbox="821 1208 1583 1471"> <thead> <tr> <th>Blood Pressure</th> <th>Systolic</th> <th></th> <th>Diastolic</th> </tr> </thead> <tbody> <tr> <td>Normal</td> <td>Less than 120</td> <td>and</td> <td>Less than 80</td> </tr> <tr> <td>Prehypertension</td> <td>120-139</td> <td>or</td> <td>80-89</td> </tr> <tr> <td>High Blood Pressure (Hypertension) Stage 1</td> <td>140-159</td> <td>or</td> <td>90-99</td> </tr> <tr> <td>High Blood Pressure (Hypertension) Stage 2</td> <td>160 or higher</td> <td>or</td> <td>100 or higher</td> </tr> <tr> <td>Hypertensive Crisis Emergency care needed</td> <td>Higher than 180</td> <td>or</td> <td>Higher than 110</td> </tr> </tbody> </table>	Blood Pressure	Systolic		Diastolic	Normal	Less than 120	and	Less than 80	Prehypertension	120-139	or	80-89	High Blood Pressure (Hypertension) Stage 1	140-159	or	90-99	High Blood Pressure (Hypertension) Stage 2	160 or higher	or	100 or higher	Hypertensive Crisis Emergency care needed	Higher than 180	or	Higher than 110	<ul style="list-style-type: none"> • Engage School Public Health nurse and/or CTE academy programs to explain blood pressure, demonstrate how to measure and help students' measure blood pressure. • Discuss how risk increases based on factors such as: age, heredity (including race) gender, smoking, weight, high cholesterol, diabetes, physical inactivity, salt intake, alcohol intake and stress. • Discuss high blood pressure (hypertension) and the relationship to the health of the heart such as: When blood pressure measures 140/90 or greater on two or more occasions, it is the heart's way of telling you that it is working harder than it should.
Blood Pressure	Systolic		Diastolic																								
Normal	Less than 120	and	Less than 80																								
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Resources: SHAPE America National Standards and Grade Level Outcomes; VDOE Physical Education Instructional Resources http://www.doe.virginia.gov/instruction/physed/index.shtml ; American Heart Association www.heart.org ; http://kidshealth.org/en/teens/hypertension.html http://www.heart.org/HEARTORG/Conditions/HighBloodPressure/AboutHighBloodPressure/Understanding-Blood-Pressure-Readings_UCM_301764_Article.jsp#.VwKBBLfmrcs			

VA SOL Standard: 10.2 The student will apply knowledge of biomechanics and anatomy and analyze and evaluate the ability to move proficiently and efficiently in a variety of lifetime activities.

ESSENTIAL UNDERSTANDINGS

- The RPE scale is used to measure the intensity of your conditioning plan.
- Rating of perceived exertion (RPE) is a subjective rating system for activity intensity based on general fatigue and helps individuals focus on the feelings of exertion.

VDOE Standard(s) Student Friendly Language What will the student know and be able to do	SUGGESTED / SAMPLE ASSESSMENTS	Terms (Vocabulary) and Content Information	SUGGESTED / SAMPLE ACTIVITIES
<p>10.2 f) Apply rate of perceived exertion (RPE) and pacing to a conditioning plan that meets the needs of one or more lifetime activities.</p> <p>Suggested Learning Targets:</p> <p>I can plan for, monitor and record my pacing during conditioning activities using RPE and time/distance/other measures to meet my plan goals for (my personal fitness needs/to be successful in [specific activity]) and demonstrate this through a graphic organizer.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • Written: Review of vocabulary and RPE scale(s); drafts of strength and conditioning program/plan; documentation of action steps taken; documentation of conditioning activities and RPE/pacing. <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> • Conditioning plan dependent upon lifetime activities offered to or selected by students. Application of RPE and pacing to a conditioning plan for one or more lifetime activity. 	<ul style="list-style-type: none"> • Rate of perceived exertion (RPE) <ul style="list-style-type: none"> ◦ Scale(s) selection such as: <ol style="list-style-type: none"> 1. 0-10 scale—With 0 (nothing at all) would be how you feel when sitting in a chair and 10 (very, very heavy) is how you feel at the end of a very difficult activity. 2. Borg Scale (CDC) <ul style="list-style-type: none"> 6 No exertion at all 7 Extremely light (7.5) 8 9 Very light 10 11 Light 12 13 Somewhat hard 14 15 Hard (heavy) 16 17 Very hard 18 19 Extremely hard 20 Maximal exertion • Pacing • Conditioning activities 	<ul style="list-style-type: none"> • Engage in a variety of activities to understand pacing and RPE. • Plan elements that may include: goals (short and long term) measures, timeline, work plans, intensity levels, time, documentation of daily activities, documentation of conditioning activities (evidence of use of RPE and pacing) reassessments, reflection, revisions to goals and action plans as needed. • Intensity Levels (such as) <ul style="list-style-type: none"> ◦ Intensity Level 1—Not moving (seated) ◦ Intensity Level 2—Slow (walking) ◦ Intensity Level 3—Medium (skipping, galloping) ◦ Intensity Level 4—Fast (jogging/running) ◦ Intensity Level 5—Very fast (sprinting)

Resources:

SHAPE America National Standards and Grade Level Outcomes
<http://darebee.com/>; <http://www.webmd.com/lung/copd/borg-scale-of-perceived-exertion-with-exercise>

VA SOL Standard: 10.3 The student will demonstrate the ability to apply basic principles of training and scientific concepts and principles to evaluate current fitness behaviors and identify strategies needed for health-enhancing fitness for the present and into adulthood.

ESSENTIAL UNDERSTANDINGS

- Physical fitness is a lifelong pursuit that affects personal health and success/achievement of current and future goals.
- Evaluating and monitoring fitness and activity levels should be ongoing and adaptable for individual needs and ease throughout life.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>
<p>10.3 a) Create a fitness and activity plan for the present and a potential plan for the future (postsecondary education, college/career) to address the health-related components of fitness.</p> <p>Suggested Learning Targets:</p> <p>I can evaluate my current fitness and physical activity status by performing fitness tests for each of the components of fitness and identify needs through completing a data analysis.</p> <p>I can create a fitness and activity plan for the present that addresses the health-related components of fitness and demonstrate this through a rubric.</p> <p>I can create a fitness and activity plan for the future that addresses the health-related components of fitness and demonstrate this through a collaborative poster.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> List the essential components of a personal fitness and activity plan (goals, FITT principle and physical activity strategies). Pair/Share: Discuss activities for the future that apply to the health-related components of fitness. Examples— <ul style="list-style-type: none"> Cardiovascular Endurance: Fast pace walking, cycling, skating, swimming and dancing. Flexibility: Vacuuming, stretching exercises, Yoga. Muscular strength and endurance: Lifting and carrying groceries, climbing stairs, yard and garden work, exercises like abdominal curl ups. Written: Assessments of personal fitness and physical activity levels; identify strategies to meet needs 	<ul style="list-style-type: none"> Review previous year’s vocabulary and content as appropriate such as FITT, SOP Health-related components of fitness. <ul style="list-style-type: none"> Aerobic exercise to strengthen and keep your heart healthy. Strength exercises to keep other muscles of the body in good condition and help your sense of balance. Stretching exercises to keep muscles flexible. Physical activity refers to the guideline of 60 minutes a day of moderate to vigorous physical activity. While the “freshman 15” is often an exaggeration, the average teenager enters college at a healthier weight and baseline health status than when they depart. While one-third of Children and teenagers are overweight or obese, two-thirds of adults are overweight or obese. For many, it is during college that this transition from a healthy weight to an unhealthy weight occurs. Performance-related fitness is linked to athletic performance (for example: a 50-yard dash time or the ability to maneuver around obstacles quickly) and is linked to speed, reaction time and coordination. Health-related fitness is linked to fitness components that may lower risks such as high blood pressure, diabetes, or low back pain and includes the following components: <ul style="list-style-type: none"> Aerobic fitness—Ability of the heart and lungs to deliver blood to muscles. Muscular strength and endurance—Enough to do normal activities 	<ul style="list-style-type: none"> Complete Virginia Wellness testing (FitnessGram) in conjunction with any additional tests or opportunities to gather personal fitness data throughout the year such as: internet, software data-management systems, heart rate monitors, pedometers, skinfold calipers, etc. Stations targeting specific health-related fitness components. Assess physical activity levels (time and intensity levels). Evaluate (self/peer) a personal fitness plan in relation to the FITT principle.

	<p>(present and future); identify available technology to assess and monitor personal fitness and physical activity levels.</p> <ul style="list-style-type: none"> • Skill checklist for use and application of evaluation tools. <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> • Written: Evaluation of personal fitness and physical activity levels; personal fitness plans; personal activity plans; describe technology applications; explain plan implementation for future fitness and activity needs. 	<p>easily and protect the low back.</p> <ul style="list-style-type: none"> ○ Flexibility— Ability to move your many joints through their proper range of motion. ○ Body composition— not too much body fat, especially around the waist. <ul style="list-style-type: none"> • Addressing fitness components for needs beyond high school: <ul style="list-style-type: none"> ○ Muscular Strength and Endurance— Critical to both your health and ability to carry out daily activities, such as performing household tasks (yard work, carrying groceries) or job-related tasks (lifting or moving heavy objects). ○ Flexibility— For good joint function as well as being able to walk, lift and step normally. The ability to move a joint through its normal range of motion is affected by the condition of the joint itself (for example: arthritis). A short (tight) muscle limits the joints ability to move normally. If the hamstrings are too short, they limit the ability of the pelvis to tilt, which directly affects the lower (lumbar) spine and can lead to low back pain. ○ Body Composition— BMI is related to the risk of disease and death. The score is valid for both men and women, but it does have some limitations such as: <ul style="list-style-type: none"> – It may overestimate body fat in athletes and others who have a muscular build. – It may underestimate body fat in older persons and others who have lost muscle mass. <p>Waist Circumference can serve as another indicator for some health risks for individuals who may have a BMI classification of normal or overweight (a BMI score between 18.5 and 29.9). A high waist circumference is associated with an increased risk for type 2 diabetes, elevated blood lipids (fats like cholesterol and triglycerides) hypertension and cardiovascular disease in patients with a BMI between 25 and 34.9. Recording changes over time in waist circumference is important since it can change even when body weight remains the same.</p>	
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Resources:

SHAPE America National Standards and Grade Level Outcomes; VDOE Physical Education Instructional Resources
<http://www.doe.virginia.gov/instruction/physed/index.shtml>; http://www.heart.org/HEARTORG/Educator/Educator_UCM_001113_SubHomePage.jsp
http://www.cdc.gov/physicalactivity/basics/adding_pa/index.htm; http://www.cdc.gov/physicalactivity/basics/older_adults/index.htm
http://www.cdc.gov/physicalactivity/worksites_pa/toolkits/walkability/index.htm; <https://www.adultfitnessstest.org/>
http://www.heart.org/HEARTORG/Conditions/More/CardiacRehab/Develop-a-Physical-Activity-Plan-for-You_UCM_307380_Article.jsp#.VwJ-Zrfmrc
https://www.acefitness.org/acefit/fitness_programs_core_workout.aspx?workoutid=17; <https://www.youtube.com/watch?v=qDnA9TaVZxg>

VA SOL Standard: 10.3 The student will demonstrate the ability to apply basic principles of training and scientific concepts and principles to evaluate current fitness behaviors and identify strategies needed for health-enhancing fitness for the present and into adulthood.

ESSENTIAL UNDERSTANDINGS

- Technology is a powerful instructional tool, an assessment tool and an advocacy tool.
- Relevant fitness data helps a good planner know when and where to make adjustments to improve physical fitness.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>
<p>10.3 b) Use a variety of resources, including available technology, to analyze current fitness and activity levels and to improve physical activity and personal fitness.</p> <p>Suggested Learning Targets:</p> <p>I can identify and use available technology to evaluate and monitor my fitness and activity and demonstrate it through reflective writing on the findings generated through the different resources used and goals developed for improvement.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • List resources available to analyze current fitness and activity levels. <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> • *Refer to 10.3.a “fitness and activity plan” to incorporate a reflection on resources used to analyze current fitness and activity levels. How the different resources maintained/improved physical activity and personal fitness. 	<ul style="list-style-type: none"> • Accelerometer: An electromechanical device used to measure acceleration forces. Such forces may be static, like the continuous force of gravity or, as is the case with many mobile devices, dynamic to sense movement or vibrations; ability to distinguish between walking and running on level terrain, but currently do not accurately estimate other activities such as stationary biking, elliptical trainer. • Heart rate monitors: Wireless chest strap that sends continuous data to a monitor (watch) worn on the wrist; pulse monitors may be worn on the wrist that require you to put your finger on a certain spot to take your pulse; may have indicators worn on shoes or have GPS capability to map routes or distance; fitness trackers provide multiple target zones, calorie counters, speed/distance. • Pedometers tracks steps taken by indicating each time the wearer’s hips move or some models can track foot movement • Calculator sites such as: For BMI— http://www.acefitness.org/acefit/healthy_living_tools_content.aspx?id=1 Calories burned— http://www.acefitness.org/acefit/healthy_living_tools_content.aspx?id=9 One repetition maximum or 1RM in weight training— http://www.acefitness.org/acefit/healthy_living_tools_content.aspx?id=10 	<ul style="list-style-type: none"> • Independently participate in physical activity monitoring using resources that may include pedometers, accelerometers, personal fitness tracking devices, heart rate, appropriate apps, BMI calculations, activity logs and fitness and activity planning. • Demonstration of measures and analysis of results of measures for heart rate, training zones and exercise intensity. • Class discussion and demonstration of technology in lifetime activities to include outdoor pursuits and how they improve the performance of the activity (e.g.; use of a GPS device when hiking or backpacking). • Self-assessment of health-related fitness and interpret fitness data comparing individual scores to established Virginia Wellness fitness standards and BMI calculations to the CDC protocols and recommendations. <p>Note: It is an inappropriate practice to grade students on fitness test results.</p>

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Resources:

SHAPE America National Standards and Grade-Level Outcomes; VDOE Physical Education Instructional Resources

<http://www.doe.virginia.gov/instruction/physed/index.shtml>

http://www.heart.org/HEARTORG/Educator/Educator_UCM_001113_SubHomePage.jsp

VA SOL Standard: 10.3 The student will demonstrate the ability to apply basic principles of training and scientific concepts and principles to evaluate current fitness behaviors and identify strategies needed for health-enhancing fitness for the present and into adulthood.

ESSENTIAL UNDERSTANDINGS

- Moderate and vigorous physical activity is needed for energy balance and physical health.
- Fitness adds years to your life and it conditions muscles, tendons, ligaments and bones to help fight osteoporosis; keep your body more limber and stabilize your joints, thus lowering the risk of everyday injury.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>
<p>10.3 c) Identify fitness needs to prevent health concerns in the present and into the future.</p> <p>Suggested Learning Targets:</p> <p>I can identify any current health concerns (may include potential future health concerns such as inherited or familial) that can benefit from or be improved by physical activity and list them in an exit ticket.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • Written: Identify any current health concerns or potential future health concerns. (Note: Let students know that they are not to share personal health concerns and may use a general health concern such as cardiovascular disease, skin cancer); explain how they feel before and after physical activity; identify activities that are enjoyed with others. <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> • Written: Explain the impact of physical activity and personal fitness in preventing health concerns for the present and into the future; explain the connection between physical activity and emotional and social well-being. 	<ul style="list-style-type: none"> • Familial—Tending to occur in more members of a family than expected by chance alone. • Inherited—To receive from a parent or ancestor by genetic transmission. • Risks with aging: Examples such as falling <ul style="list-style-type: none"> ◦ Try to do balance training on at least 3 days a week and do standardized exercises from a program that's been proven to reduce falls. These exercises might include backward walking, sideways walking, heel walking, toe walking and practicing standing from a sitting position. Tai Chi, a form of martial arts developed in China, may also help with balance. ◦ Strong leg and hip muscles help to reduce the risk of falls, a cause of considerable disability among older adults. To prevent possible falls, participate in resistance training at least two days per week, making sure to exercise all major muscle groups through a full range of motion. End each workout with stretching exercises to help maintain your mobility and range of motion and decrease your risk for injury. • Regular exercise helps control the following: blood pressure, body weight, cholesterol levels, cuts the risk for hardening of the arteries, heart attack, stroke, arthritis, diabetes, improves digestion, manages stress better, aids in better sleep and is good for managing low-back pain. • Adults older than 50 years who do not perform 	<ul style="list-style-type: none"> • Research conducted outside of class to explore health concerns and strategies such as: Preventive effects of physical activity, which include: <ul style="list-style-type: none"> ◦ Lowering the risk of developing chronic diseases such as heart disease and type 2 diabetes. ◦ Healthy weight or weight loss strategies. • Discuss future fitness needs and how safety becomes more important as we age for example:—The best cardiovascular exercises for seniors are non-jarring, such as walking, swimming and cycling.

		resistance training lose nearly 1/4 pound of muscle mass per year. Since muscle mass is directly related to how many calories your body burns each day, resistance training is important for weight management.	
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Resources:

SHAPE America National Standards and Grade-Level Outcomes; VDOE Physical Education Instructional Resources

<http://www.doe.virginia.gov/instruction/physed/index.shtml>

<http://www.cdc.gov/>

VA SOL Standard: 10.3 The student will demonstrate the ability to apply basic principles of training and scientific concepts and principles to evaluate current fitness behaviors and identify strategies needed for health-enhancing fitness for the present and into adulthood.

ESSENTIAL UNDERSTANDINGS

- Personal, social, economic and environmental factors all play a role in physical activity levels; so understanding the barriers to and facilitators of physical activity is important to ensure the effectiveness of interventions and other actions to improve levels of physical activity.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>
<p>10.3 d) Identify the impact of life choices, economics, motivation, accessibility, exercise adherence and participation in physical activity in college or career settings.</p> <p>Suggested Learning Targets:</p> <p>I can describe the factors (life choices, economics, motivation, accessibility, exercise adherence and participation) that may impact my participation in physical activity after high school (college and/or career) and how to overcome those factors/possible barriers and demonstrate this through a (i.e.;; foldable, graphic organizer, etc.)</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> Written: Create a 30 minute lunch workout. <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> Written: Evaluate the factors and influences that help and that create barriers to participating in physical activity in the present; forecast those factors and influences into the future. <p>Example – Barriers could include:</p> <ul style="list-style-type: none"> Lack of local facilities and spaces for physical activity such as: walkable neighborhoods (e.g.; street connectivity, pedestrian access, sidewalks) and the presence of parks and green spaces). Lack of workplace or organizational policies to support physical activity, affordability of programs, competing priorities and design of physical spaces. Social awkwardness, no exercise companions, 	<p>Improving college/career choices that can impact health:</p> <ul style="list-style-type: none"> Head to class/office prepared by packing healthy snacks so you won't turn to vending machines. Eat some foods less often for example pizza. This can be a "sometime" food eaten in smaller amounts and less frequent. Instead of 4 slices of pizza, consider 2 slices of pizza, a glass of water and a side salad. Drink water it should be your first choice. Sodas, caffeine-loaded energy drinks and sports drinks are a major source of added sugar and calories – at the very least, consume these in moderation. Get your caffeine fix from plain coffee or unsweetened iced tea. Grab a friend and get moving. College/office can be a very social experience, so make a friend and do something active together. <p>Ways to increase physical activity throughout your day:</p> <ul style="list-style-type: none"> Take the stairs instead of the elevator. Park farther away from the front door. Stand instead of sitting (this burns more calories). Take a walk on your lunch break. Walk or bike to your destination instead of driving. Sit on an exercise ball at your desk instead of a chair (this builds core strength). Do stretches or ride a stationary bike while watching TV. During commercial breaks do abdominal crunches, jumping jacks, push-ups, or simply get up and walk around. Take a 10 minute walk in the morning and/or evening. Take your dog for a walk. Keep hand weights at your desk. Do bicep and triceps exercises while on phone calls. 	<ul style="list-style-type: none"> Students reflect on what they are looking for in choosing post-secondary goals – what do colleges and universities offer for personal fitness and physical activity, what do their career choices / businesses / organizations offer for support? Discuss advantages of group fitness classes such as: <ul style="list-style-type: none"> Social support. The feeling of being part of something bigger. Camaraderie is forged in group fitness classes. Group fitness classes exude positivity and serve as a welcome invitation for people of all different ages, backgrounds and ability levels to come together in one inclusive experience to move with passion and intention, all without judgement or expectation. Identifying accessibility in connection to participation in physical activity. Example: Walkability is the idea of quantifying the safety and

	<p>competing priorities (e.g.; family, friends, other activities).</p> <p>Physical, cognitive and mental health (e.g.; physical health status, frailty, chronic pain or discomfort, chronic diseases, depression, fatigue and low energy) self-perception (e.g.; values, culture, self-confidence, negative stereotypes and unattainable expectations) lifestyle (e.g. apathy, isolation, independence, socio-economic status, enjoyment of physical activity).</p>	<ul style="list-style-type: none"> • Turn on the music and dance around the house. • Rake leaves instead of using a leaf blower. • Walk through your golf game instead of driving a cart. • Get up and walk around after sitting for 30 minutes. • Wear a good quality pedometer and aim for 10,000 steps per day. <p>The cost of being unhealthy in the work force:</p> <ul style="list-style-type: none"> • Absenteeism and lost productivity from employee illness, injury, obesity or chronic conditions. One study reports that obesity alone has been estimated to cost employers almost \$2,500 per employee per year, including direct medical expenditures and absenteeism (Steps to Wellness Physical Activity in the Workplace; CDC). 	<p>desirability of the walking routes. At work/college, these can be streets and sidewalks in between buildings on your campus or city blocks if you work in a downtown area.</p> <p>*Meeting this standard may be combined with 10.3.a and 10.3.b to plan strategies to address present and future barriers to physical fitness and physical activity.</p>
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Resources:

SHAPE America National Standards and Grade-Level Outcomes

- <http://www.acefitness.org/fitness-fact-article/3644/healthy-eating-myplate-on-campus/>; <http://kidshealth.org/en/teens/motivation.html?WT.ac=ctg#catdieting>
<https://www.acefitness.org/acefit/fitness-programs-core-workout.aspx?workoutid=17>

VA SOL Standard: 10.3 The student will demonstrate the ability to apply basic principles of training and scientific concepts and principles to evaluate current fitness behaviors and identify strategies needed for health-enhancing fitness for the present and into adulthood.

ESSENTIAL UNDERSTANDINGS

- Physical fitness is linked very closely to “health” as it is to do with your general ability to function and carry out everyday activities without excessive fatigue.
- Being physically fit can help you have increased energy, handle more stress and enhance your performance in any job.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>
<p>10.3 e) Describe components of health-related fitness in relation to one career goal.</p> <p>Suggested Learning Targets:</p> <p>I can name a career goal, and describe the importance of health-related fitness to achieving success towards that goal and/or success during that career and demonstrate this through a summary paragraph.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • Written: Describe the importance of health-related fitness for a post-secondary career goal. • Pair/Share: Discuss the need to be “fit” for jobs such as: firefighter, policeman, construction worker, etc. • List ways to stay fit when working a job that requires sitting at a desk all day. <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> • Choose a future career and describe what components of fitness will be needed to perform the career and what components of fitness will be needed to stay healthy and fit throughout the career. 	<ul style="list-style-type: none"> • Accumulate 60 minutes of physical activity every day to stay healthy or improve health. Recommendations: <ul style="list-style-type: none"> ○ Endurance: Perform 30 minutes or more of moderate-intensity physical activity on most days of the week for cardiovascular health. The 30 minutes need not be continuous. Time required for improvements depends on effort. Examples include: Fast pace walking, cycling, skating, swimming and dancing. ○ Flexibility: Flexibility training should be performed daily, including stretches for all major muscle groups, in order to maintain mobility. Perform gentle reaching, bending and stretching to keep muscles relaxed and joints mobile. Examples include: Vacuuming, stretching exercises, Yoga. ○ Strength: Performing 1 set of 8 to 12 repetitions of resistance training for the entire body is necessary to maintain and develop muscular strength and endurance. On 2 to 4 days a week, perform resistance exercise to strengthen muscles and bones and improve posture. Examples include: Lifting and carrying groceries, climbing stairs, yard and garden work, exercises like abdominal curl ups. ○ Body composition is the proportion of fat free mass (muscle, bone, blood, organs and fluids) to fat mass (adipose tissue deposited under the skin and around organs). Some of the long-term adaptations of improving body composition are decreased risk of cardiovascular disease, improved basal metabolic rate, improved bodily function and improved BMI. 	<ul style="list-style-type: none"> • Discussions on health-related fitness in connection to future careers. Example, military career: Going through basic training that separates the fit from the unfit. For example, the Army expects all men and women to score high on a fitness test that includes running at least two miles and doing a minimum number of push-ups and sit-ups within two minutes. Advanced training for careers in units such as the Navy SEALs or Army Rangers can require additional, more intense, physical training that incorporates swimming, climbing, five-mile runs and obstacle courses. • Relays or obstacle courses that imitate physical challenges that must be met for a career. For example: Carrying a medicine ball running up flights of stairs to imitate firefighters.

Resources:

SHAPE America National Standards and Grade Level Outcomes <http://www.humankinetics.com/excerpts/excerpts/the-importance-of-health-fitness-and-wellness>

<p>VA SOL Standard: 10.3 The student will demonstrate the ability to apply basic principles of training and scientific concepts and principles to evaluate current fitness behaviors and identify strategies needed for health-enhancing fitness for the present and into adulthood.</p> <p>ESSENTIAL UNDERSTANDINGS</p> <ul style="list-style-type: none"> • Aerobic physical activity is positively associated with cognition, academic achievement, behavior and psychosocial functioning outcomes. • Physical education enhances achievement in other areas of learning and is closely inter-related with intellectual and social development by building self-esteem, motivation, co-operation and concentration; thus making it an important part of a balanced curriculum. 			
<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>
<p>10.3 f) Explain the impact of physical activity on emotional and social well-being for the present and into the future.</p> <p>Suggested Learning Targets:</p> <p>I can explain the connection between physical activity and emotional and social well-being by (i.e.: group presentation, exit ticket, sharing to a partner, etc.).</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • Oral: Partner discussions on the impact of physical education beyond the school years and the potential impact of physical education on public health. • Written: Example: How does involvement in physical activities improve the learning performance of young people, encourage school attendance and help develop a desire to succeed academically. <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> • Explain the connection between physical activity and emotional and social well-being. 	<ul style="list-style-type: none"> • Worksite wellness programs that include a physical activity component which helps maintain a healthier workforce with benefits such as: <ul style="list-style-type: none"> ◦ Reduced direct costs associated with health care expenses. ◦ Increased employee productivity. ◦ Reduced absenteeism. ◦ Increased work morale. • Health benefits of physical activity both now and into the future: <ul style="list-style-type: none"> ◦ A chance to have fun and be with friends and family. ◦ A chance to enjoy the outdoors. ◦ A chance to improve personal appearance. ◦ A chance to improve fitness so one can participate in more intensive physical activity or sporting events. ◦ Certain benefits such as feeling more energetic. • Recommended adult physical activity: <ul style="list-style-type: none"> ◦ Low activity: Fewer than 150 minutes (2 hours and 30 minutes) of moderate-intensity physical activity a week or the equivalent amount (75 minutes, or 1 hour and 15 minutes) of vigorous-intensity activity. ◦ Medium activity: 150 minutes to 300 (5 hours) minutes of moderate-intensity activity a week (or 75 to 150 minutes of vigorous-intensity physical activity a week). ◦ High activity: More than the equivalent of 300 minutes of moderate-intensity physical activity a week. • Older adult physical activity: At least 150 minutes (2 hours and 30 minutes) of moderate-intensity physical activity a week, or an equivalent amount (75 minutes or 1 hour and 15 minutes) of vigorous-intensity activity. Older adults can also do an equivalent amount of activity by combining moderate and vigorous-intensity activity. 	<ul style="list-style-type: none"> • Discuss the numerous health benefits related to physical activity such as: a lower risk of chronic diseases, diabetes, heart disease, stroke, some cancers, weight control and depression. • Discuss the importance of worksite wellness programs that are often seen as a central component of an attractive employee compensation and benefits package that can also be used as a recruitment and retention tool to attract and keep high quality employees.

Resources:

SHAPE America National Standards and Grade-Level Outcomes: http://www.cdc.gov/physicalactivity/worksite_pa/index.htm
<http://health.gov/paguidelines/guidelines/chapter1.aspx> ; <http://health.gov/paguidelines/guidelines/chapter5.aspx>

Physical Education Framework for Instruction

Strand: Social Development

Grade Level: 10

VA SOL Standard: 10.4 The student will demonstrate appropriate behaviors in all physical activity settings and the social skills needed to be a contributing member of society.

ESSENTIAL UNDERSTANDINGS

- Rules are important for the safety of all participants.
- Achieving goals with others requires cooperation.
- Through participation in game play physical activities, young people learn about the importance of key values such as: honesty, teamwork, fair play, respect for themselves and others and adherence to rules.

VDOE Standard(s) Student Friendly Language What will the student know and be able to do	SUGGESTED / SAMPLE ASSESSMENTS	Terms (Vocabulary) and Content Information	SUGGESTED / SAMPLE ACTIVITIES
<p>10.4 a) Explain the importance of and demonstrate communication skills in physical activity settings.</p> <p>Suggested Learning Targets:</p> <p>I can explain why communication is important to enjoyable and successful participation in (selected activity) to a group/partner.</p> <p>I can show effective communication skills for (selected activity) in a variety of situations and demonstrate them to the teacher.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> Written— Describe the verbal and nonverbal communications that occur in the selected activity. Describe how “reading” the nonverbal communication of opponents (such as body movements) can increase success in the selected activity. <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> Written— Evaluation of communication strategies appropriate for selected activity. <p style="text-align: center;">Sample Rubric</p> <p><i>4 (Beyond what was taught)</i> Demonstrates ability to adapt and adjust movements based on the nonverbal cues of others in dynamic and unpredictable situations.</p> <p><i>3 (What was explicitly taught)</i> Demonstrates appropriate and proper use of verbal and nonverbal communication skills appropriate to selected activity in dynamic</p>	<ul style="list-style-type: none"> Verbal and nonverbal communication strategies may include “reading” body movements of others and masking own body movements to confuse opponents 	<ul style="list-style-type: none"> Any outdoor pursuit activities, fitness activities, dance and rhythmic activities, aquatics, selected individual performance activities and net/wall and target games activities that utilize communication strategies.

	<p>situations.</p> <p><i>2 (Identify basic elements)</i> Demonstrates appropriate and proper use of communication in isolation.</p> <p><i>1 (With help/prompts/cues)</i> With teacher cues, student can demonstrate communication skills.</p>		
<p>Resources: SHAPE America National Standards and Grade-Level Outcomes;VDOE Physical Education Instructional Resources http://www.doe.virginia.gov/instruction/physed/index.shtml</p>			

VA SOL Standard: 10.4 The student will demonstrate appropriate behaviors in all physical activity settings and the social skills needed to be a contributing member of society.

ESSENTIAL UNDERSTANDINGS

- Positive social interactions affect student's ability to be a contributing member of society.
- Appreciating differences in others promotes positive social interactions.

VDOE Standard(s) Student Friendly Language What will the student know and be able to do	SUGGESTED / SAMPLE ASSESSMENTS	Terms (Vocabulary) and Content Information	SUGGESTED / SAMPLE ACTIVITIES
<p>10.4 b) Explain the importance of critical thinking and problem solving for current and future health and fitness.</p> <p>Suggested Learning Targets:</p> <p>I can explain why it is important to know your health status and how to access accurate and reliable health information and services and demonstrate that through (i.e.: exit ticket, explaining to a partner/group).</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • Written — Describe the role of critical thinking for current health and fitness. • Teacher observation of positive interdependence in which students all need to do their assigned specific roles and duties in order for a task to be completed. • Oral: Partner discussion on how a lack of unity affects problem solving within a group. <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> • Written — Explain how to address a selected health or fitness concern; where to obtain information or services and how to assess the information or service for accuracy and reliability. 	<ul style="list-style-type: none"> • Create plans or strategies to address health and fitness needs, access accurate and reliable information, and evaluate resources for providers of health services and products. • Online sites such as: http://www.cdc.gov/physicalactivity/worksites-pa/toolkits/walkability/audit_tool.htm <p>A worksite audit tool from the CDC designed to broadly assess pedestrian facilities, destinations and surroundings along and near a walking route and identify specific improvements that would make the route more attractive and useful to pedestrians.</p> <ul style="list-style-type: none"> • Lack of cohesion between races, sexes and cultures is due to mistrust, stereotyping and more within culture conversation and language problems. When these problems are not paid attention to it may lead to an inability to endorse ideas, the inability to gain agreement on decisions and inability to take united action. 	<ul style="list-style-type: none"> • Addressing barriers to physical activity at worksites or in the community. Example: Walking paths that provides individuals/employees with the opportunity to walk may have barriers such as not having time to walk, concerns about neighborhood safety, lack of social support or attractiveness of the walking environment. • Introduce a sample of a worksite walkability audit from the CDC. • Participate in activities that use resistance, refusal, negotiation, collaboration and conflict resolution skills, to maximize personal potential and to teach the importance of building and maintaining healthy relationships.

Resources:

SHAPE America National Standards and Grade Level Outcomes; VDOE Physical Education Instructional Resources <http://www.doe.virginia.gov/instruction/physed/index.shtml>; <http://www.cdc.gov/physicalactivity/worksites-pa/index.htm> <http://www.cdc.gov/physicalactivity/worksites-pa/toolkits/walkability/index.htm>; http://www.cdc.gov/physicalactivity/worksites-pa/toolkits/walkability/audit_tool.htm

VA SOL Standard: 10.4 The student will demonstrate appropriate behaviors in all physical activity settings and the social skills needed to be a contributing member of society.

ESSENTIAL UNDERSTANDINGS

- Following the rules and procedures in physical activity settings eliminates or reduces risks.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>
<p>10.4 c) Identify and avoid potentially dangerous situations in physical activity settings.</p> <p>Suggested Learning Targets:</p> <p>I can explain the impact of using and not using appropriate safety equipment for (selected activity) and demonstrate that through (i.e.: exit ticket, explaining to a partner/group).</p> <p>I can explain the importance of having the proper skill training and/or accessing skilled trainers for (selected activity) and demonstrate that through (i.e.: exit ticket, explaining to a partner/group, summary paragraph, etc.).</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> List a potentially dangerous physical activity and questions you would need to answer before participating in the activity. Example: Cross-country skiing <ul style="list-style-type: none"> How do I dress for the weather? How do I size and handle the equipment? What are the general safety rules and etiquette? Pair/Share: Discuss safety and violence prevention in physical activity settings such as: jogging through a park, walking/hiking trails, cycling on roadways. <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> For a selected activity, identify the safety measures/equipment needed and the advanced skills needed for safe participation. Identify resources to obtain the equipment and/or advanced skills. 	<ul style="list-style-type: none"> Impact of the use/nonuse of safety equipment, impact of participating in physical activities without proper skill and/or without skilled providers (such as personal trainers, guides for outdoor pursuits). Safety considerations in selected alternative pursuits such as: <ul style="list-style-type: none"> Wear protective equipment. Use reflective tape for night time visibility. Have first-aid kit available. Watch for extreme weather conditions. Strategies to manage identified hazards related to community facilities and areas (e.g.; playground areas, bicycle routes, roads bordering schools, fitness and recreational facilities, safe workplace). 	<ul style="list-style-type: none"> When you're deciding on a class or program, make sure the instructor is certified by an accredited professional organization such as the American Council on Exercise. Discuss making wise choices to prevent possible injury. Examples such as: <ul style="list-style-type: none"> Wear comfortable, well-fitting shoes. Avoid outdoor activities in extreme temperatures. Drink plenty of fluids to stay well hydrated. Listen to your body when determining an appropriate exercise intensity (and keep in mind that monitoring intensity using heart rate isn't accurate if you are on heart-rate-altering medications such as most medications for hypertension). Be aware of danger signs. Stop activity and call your doctor or 911 if you experience any of the following: pain or pressure in your chest, arms, neck or jaw; feeling lightheaded, nauseated or weak; becoming short of breath; developing pain in your legs, calves or back; or feeling like your heart is beating too fast or skipping beats.

Resources:

SHAPE America National Standards and Grade Level Outcomes; VDOE Physical Education Instructional Resources <http://www.doe.virginia.gov/instruction/physed/index.shtm>

<p>VA SOL Standard: 10.4 The student will demonstrate appropriate behaviors in all physical activity settings and the social skills needed to be a contributing member of society.</p> <p>ESSENTIAL UNDERSTANDINGS</p> <ul style="list-style-type: none"> Cultural diversity promotes understanding of others Culture is one of the key factors to enhance our understanding of motivation in physical activity physical activity settings. 			
<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>
<p>10.4 d) Explain the importance of understanding cultural diversity for personal health and fitness.</p> <p>Suggested Learning Targets:</p> <p>I can describe the variety of cultures I belong to and the importance of understanding cultural diversity for my health and wellbeing through a written short essay.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> Written: Define culture and identify the variety of cultures that students may belong to. Pair/Share: Name and discuss areas of concern related to a failure to understand cultural diversity. Examples include: relationships, teamwork and productivity. Often when people lack knowledge of things that they are not accustomed to they are quick to judge or stereotype and make ignorant decisions. Reflect how culture affects attitudes and behaviors related to how people spend their leisure time. <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> Written: Identify a cultural group (what the group has in common) and how diversity has a positive effect on the group (such as exposure to different perspectives, different experiences and different ways of thinking). 	<ul style="list-style-type: none"> Culture: The beliefs, customs, arts, etc., of a particular society, group, place, or time. Cultural diversity: Ethnic, gender, racial and socioeconomic variety in a situation, institution, or group; the coexistence of different ethnic, gender, racial and socioeconomic groups within one social unit (dictionary.com). <ul style="list-style-type: none"> All of the significant differences between people, including perceptions of differences that need to be considered in particular situations and circumstances. Often the most significant differences are the least obvious, such as our thinking styles or beliefs and values. Students belong to a variety of cultures such as family, gender, teams, faith community, school, grade level, school classes, ethnicity and interest groups/clubs. 	<ul style="list-style-type: none"> Discussions on diversity in groups. Example: A diverse group is one that values the difference in people. It is one that recognizes that people with different backgrounds, skills, attitudes and experiences bring fresh ideas and perceptions. Diverse groups encourage and harness these differences and draw upon the widest possible range of views and experiences.
<p>Resources: SHAPE America National Standards and Grade Level Outcomes; VDOE Physical Education Instructional Resources http://www.doc.virginia.gov/instruction/physed/index.shtml</p>			

VA SOL Standard: 10.4 The student will demonstrate appropriate behaviors in all physical activity settings and the social skills needed to be a contributing member of society.

ESSENTIAL UNDERSTANDINGS

- Access to social interactions and social support changes over time.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>
<p>10.4 e) Evaluate opportunities for social interaction and social support in a self-selected physical activity or dance.</p> <p>Suggested Learning Targets:</p> <p>I can evaluate the potential for developing positive social relationships in the activities I am interested in pursuing now and into the future and demonstrate this through a summary with specific purpose.</p> <p>I can analyze and compare social and emotional benefits of (specific activity i.e.: a walking group) through a graphic organizer.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • Identify activities that students are interested in pursuing now and into the future and how those activities may help students develop positive social relationships, now and into the future. • Questioning to check for understanding. Sample – What are the social opportunities and emotional benefits of walking groups? Answer: Walking does not require any special skills or equipment and it can be done almost anywhere and with little cost. Group-based walking programs have been conducted with many different types of groups such as, older adults, women, new mothers and people from non-English speaking backgrounds, as well as low income populations. It shows promising results with respect to fostering social capital like social networks and support, cooperation, community involvement, promoting physical activity and the creation of a sense of purpose and belonging. <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> • Research resources available in your community for physical activity. Evaluate if the activities provide social interaction and social support. 	<ul style="list-style-type: none"> • Community resources for accessing physical activity or dance opportunities (parks and recreation facilities, faith community, recreation leagues, associations and organizations). <ul style="list-style-type: none"> • Physical activities such as: group exercise classes that offer an opportunity to socialize and develop friendships. 	<ul style="list-style-type: none"> • Lessons about the role of physical activity as a means for group membership and positive social interaction and the importance of this type of interaction throughout history and in different cultures. • Discussions on the connections between an activity and the emotional benefits and social interaction. Example: It is found that group-based walking substantially increased social capital that includes sense of connectedness, collective efficacy, social engagement and acceptance of other groups.

Resources:

SHAPE America National Standards and Grade-Level Outcomes; VDOE Physical Education Instructional Resources

<http://www.doe.virginia.gov/instruction/physed/index.shtml>

<p>VA SOL Standard: 10.4 The student will demonstrate appropriate behaviors in all physical activity settings and the social skills needed to be a contributing member of society.</p> <p>ESSENTIAL UNDERSTANDINGS</p> <ul style="list-style-type: none"> Effectively dealing with stress means to activate the body's natural relaxation response by practicing relaxation techniques. 			
<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>
<p>10.4 f) Apply stress-management strategies (e.g.; mental imagery, relaxation techniques, deep breathing, aerobic exercise, meditation) to reduce stress.</p> <p>Suggested Learning Targets:</p> <p>I can identify and demonstrate stress-management strategies that work for me and identify when I can apply the strategies and demonstrate this through a summary paragraph.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> Written: Identify situations that cause stress; identify stress-management strategies; explore one or more strategies that interest the student. Demonstrate one or more stress-management strategies/activities. <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> Written: Describe stress-management strategies and situations that the strategies can be used to address different stress levels. Performance: Rubric or checklist for one or more mind-body activities I am interested in pursuing now and into the future. 	<ul style="list-style-type: none"> Relaxation techniques <ul style="list-style-type: none"> Breathing meditation: Deep breathing. Progressive muscle relaxation: Systematically tense and relax different muscle groups in the body. Body scan meditation: Focus on the sensations in each part of your body. Mindfulness: Staying calm and focused in the present moment. Visualization: Imagining a scene in which you feel at peace. Rhythmic exercise (such as running, walking, rowing, or cycling): Engaging in the present moment, focusing your mind on how your body feels right now. Social support and self-care (CDC) <ul style="list-style-type: none"> Eat a healthy, well-balanced diet Exercise regularly Get plenty of sleep Give yourself a break if you feel stressed out (listen to music, take a walk) Maintain a normal routine Stay active. You can take your mind off your problems by helping a neighbor, volunteering in the community, even taking the dog on a long walk. Symptoms of Stress: <ul style="list-style-type: none"> Lack of interest in activities or school Irritability and impatience Frequent stomach problems or headaches Anxiety Activity burnout Trouble sleeping Weaken your immune system, making it harder to fight off disease 	<ul style="list-style-type: none"> Teach basic movements used in other stress-reducing activities such as yoga, Pilates and Tai Chi.

Resources:

VDOE Physical Education Instructional Resources <http://www.doe.virginia.gov/instruction/physed/index.shtml>;

http://www.cdc.gov/physicalactivity/basics/older_adults/index.htm; — <http://classroom.kidshealth.org/classroom/9to12/problems/emotions/stress.pdf>

VA SOL Standard: 10.4 The student will demonstrate appropriate behaviors in all physical activity settings and the social skills needed to be a contributing member of society.

ESSENTIAL UNDERSTANDINGS

- Although yoga, Pilates and Tai Chi are different types of exercises, they all have something in common: they can help alleviate pain and improve quality of life.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>
<p>10.4 g) Explain possible benefits of mind-body exercise/activities (e.g.; yoga, Pilates, Tai Chi).</p> <p>Suggested Learning Targets:</p> <p>I can explain the benefits of (selected mind-body activity) through (i.e.: exit ticket, explaining to a partner/group, summary paragraph, etc.).</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> Oral: Partner discussions on the benefits of different mind-body exercise/activities. Examples – <ul style="list-style-type: none"> Stretching is rejuvenating and helps a lot with joint pain. Improves sleep. Weight management. Improvement in strength. <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> Written: Explain the benefits of yoga, Pilates and Tai Chi. Examples – <ul style="list-style-type: none"> Yoga, Tai Chi and Pilates are lower impact than traditional exercises. Yoga, Tai Chi and Pilates are done with relative ease. Beginners' exercises can be found online and videos and DVDs can lead you through the postures and breathing if you don't feel ready for a public class. One can also go online and create their own routine. Performing yoga, Tai Chi and Pilates causes the release of endorphins, which can improve mood and reduce pain. Tai Chi may contribute to the psychological well-being among healthy adults and patients with chronic conditions. Pilates focuses on the core postural muscles, which help keep the body balanced and are essential to providing support for the spine. 	<ul style="list-style-type: none"> Yoga: A system of exercises; series of moving and stationary poses and postures, combined with deep breathing, which help improve strength, flexibility and balance. http://kidshealth.org/en/teens/yoga-home.html?WT.ac=ctg#catdieting Pilates: Series of fluid movements performed in a precise manner, accompanied by specialized breathing techniques and intense mental concentration. Tai Chi: A Chinese form of exercise that uses very slow and controlled movements; it involves the practice of various postures; movements are continuous and serve to relax and align the body. http://kidshealth.org/en/teens/tai-Chi.html?WT.ac=ctg#catdieting 	<ul style="list-style-type: none"> Pilates, yoga, Tai Chi, or other mind-body activity; teacher training may be needed; use of commercially prepared audio/visual should be reviewed for appropriateness (safety and age-appropriateness). http://www.sparkpe.org/wp-content/uploads/yoga-basic-training.pdf http://www.sparkpe.org/wp-content/uploads/yoga-content-card_hs.pdf

Resources:

SHAPE America National Standards and Grade Level Outcomes; VDOE Physical Education Instructional Resources
<http://www.doe.virginia.gov/instruction/physed/index.shtml>; <http://darebee.com/>; <http://kidshealth.org/en/teens/yoga.html?WT.ac=ctg#catdieting>

VA SOL Standard: 10.4 The student will demonstrate appropriate behaviors in all physical activity settings and the social skills needed to be a contributing member of society.

ESSENTIAL UNDERSTANDINGS

- Conflict may occur in a variety of settings and requires different strategies to address.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>
<p>10.4 h) Explain the importance of conflict resolution for current and future health and fitness.</p> <p>Suggested Learning Targets:</p> <p>I can explain the impact of conflict on current and future health and fitness through (i.e.: exit ticket, explaining to a partner/group, summary paragraph, etc.).</p> <p>I can identify conflict resolution strategies to address a variety of situations and demonstrate this to the teacher.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> Written: Identify situations where conflict may arise (peer interactions, family interactions, others). Pair/Share: Describe conflict resolution strategies. <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> Written: Explain the impact of conflict on health and fitness and strategies to address conflict in a variety of situations (current and future). 	<ul style="list-style-type: none"> Conflict Resolution: <ul style="list-style-type: none"> Talk about problems without assigning blame Use active listening Identify and clarify issues and needs Brainstorm solutions Choose and apply solution Evaluate solution The goals of negotiation are: <ul style="list-style-type: none"> To produce a solution that all parties can agree to. To work as quickly as possible to find this solution. To improve, not hurt, the relationship between the groups in conflict. Why it is important to resolve conflict: <ul style="list-style-type: none"> To understand more about those whose ideas, beliefs and backgrounds may be different from your own. In order to resolve a conflict, you'll need to look at the conflict from your opponent's point of view and learn more about this person or group's perspective and motivations. To ensure that your relationships with opponents continue and grow. If you make peace with your opponents, you increase your own allies. Successful negotiations pave the way for smooth relationships in the future. To find peaceful solutions to difficult situations. Full-blown battles use up resources — time, energy, good reputation, motivation. By negotiating, you avoid wasting these resources and you may actually make new allies and find new resources! 	<ul style="list-style-type: none"> Activities that involve decisions that must be made by more than one person. Teacher asks students to think about the following questions before negotiating the solution. <ul style="list-style-type: none"> What are my interests? What do I really care about in this conflict? What do I want? What do I need? What are my concerns, hopes, fears?

Resources:
 SHAPE America National Standards and Grade-Level Outcomes; VDOE Physical Education Instructional Resources

<http://www.doe.virginia.gov/instruction/physed/index.shtml>; <http://www.cdc.gov/Features/HandlingStress/index.html>
<http://ctb.ku.edu/en/table-of-contents/implement/provide-information-enhance-skills/conflict-resolution/tools>

VA SOL: 10.5 The student will explain the importance of energy balance and evaluate current caloric intake and caloric expenditure to maintain optimal health and prevent chronic disease for the present and into adulthood.

ESSENTIAL UNDERSTANDINGS

- Optimum health requires knowledge of and adherence to recommendations and guidelines for physical activity, nutrition, body composition and sleep.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>
<p>10.5 a) Analyze the relationships among physical activity, nutrition, body composition and sleep that are optimal for personal health and/or for participation in lifetime activities.</p> <p>Suggested Learning Targets:</p> <p>I can explain the relationship between and among physical activity, nutrition, body composition and sleep that are optimal for personal health and/or for participation in lifetime activities and demonstrate this through a rubric.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • Written: Identify the requirements/guidelines for physical activity, nutrition, body composition and sleep that are optimal for personal health and/or for participation in lifetime activities. • Log daily amount of moderate to vigorous physical activity, caloric intake and sleep for a week. • Pair/Share: Personal strategies to meet guidelines for physical activity and caloric intake. <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> • Written: Explain the relationship between and among physical activity, nutrition, body composition and sleep that are optimal for personal health and/or for participation in lifetime activities. 	<ul style="list-style-type: none"> • Calories needed to maintain energy balance for females and males: Females (14-18) ◦ Sedentary—1,800 ◦ Moderately Active—2,000 ◦ Active—2,400 Males (14-18) ◦ Sedentary—2,000 to 2,200 ◦ Moderately Active—2,400 to 2,800 ◦ Active—2,800 to 3,200 • One pound of body weight is equal to 3,500 calories. • Body fat ranges: Females ◦ Lean—20% to 25% ◦ Moderate—26% to 29% ◦ Obese—30%+ Males ◦ Lean—15% to 19% ◦ Moderate—19% to 24% ◦ Obese—25%+ • Sleep is a powerful regulator of appetite, energy use and weight control. Sleep deprivation can inhibit one's ability to lose weight even while exercising and eating well. *See 10.5.d for additional information on sleep. • Physical activity levels: ◦ High burns more than 7 calories per minute. ◦ Moderate burns between 3.5 and 7 calories per minute. ◦ Low (Light) burns less than 3.5 calories per minute. 	<ul style="list-style-type: none"> • Make connections to activity level and calorie intake. • Make connections to body composition and how it is affected by activity, nutrition and sleep.

Resources:

VA SOL Standard: 10.5 The student will explain the importance of energy balance and evaluate current caloric intake and caloric expenditure to maintain optimal health and prevent chronic disease for the present and into adulthood.

ESSENTIAL UNDERSTANDINGS

- Intensity refers to how hard your body is working during physical activity.

VDOE Standard(s) Student Friendly Language What will the student know and be able to do	SUGGESTED / SAMPLE ASSESSMENTS	Terms (Vocabulary) and Content Information	SUGGESTED / SAMPLE ACTIVITIES												
<p>10.5 b) Evaluate current activity and intensity levels.</p> <p>Suggested Learning Targets:</p> <p>I can assess and evaluate my current activity levels and intensity of the activities through (i.e., exit ticket, explaining to a partner/group, summary paragraph, etc.).</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> Written: One week log of daily activities that includes intensity levels. <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> Evaluate a one week log of daily activities that includes at least two measurements of intensity levels. 	<p>Review previous years' content as appropriate:</p> <p>Physical cues of intensity levels:</p> <table border="1" data-bbox="848 699 1398 1219"> <thead> <tr> <th>Level of Intensity</th> <th>RPE</th> <th>Physical Cues</th> </tr> </thead> <tbody> <tr> <td>Light</td> <td>Easy</td> <td>Does not induce sweating unless it's a hot, humid day. There is no noticeable change in breathing patterns.</td> </tr> <tr> <td>Moderate</td> <td>Somewhat hard</td> <td>Will break a sweat after performing the activity for about 10 minutes. Breathing becomes deeper and more frequent. You can carry on a conversation but not sing.</td> </tr> <tr> <td>High</td> <td>Hard</td> <td>Will break a sweat after 3-5 minutes. Breathing is deep and rapid. You can only talk in short phrases.</td> </tr> </tbody> </table> <p><small>Duncan GE, Sydemann SJ, Perri MG, Limacher MC, Martin AD. Can sedentary adults accurately recall the intensity of their physical activity? Prev Med. 2004 Jul;33(1):18-26</small></p> <ul style="list-style-type: none"> The RPE scale used to measure the intensity of your exercise. 	Level of Intensity	RPE	Physical Cues	Light	Easy	Does not induce sweating unless it's a hot, humid day. There is no noticeable change in breathing patterns.	Moderate	Somewhat hard	Will break a sweat after performing the activity for about 10 minutes. Breathing becomes deeper and more frequent. You can carry on a conversation but not sing.	High	Hard	Will break a sweat after 3-5 minutes. Breathing is deep and rapid. You can only talk in short phrases.	<ul style="list-style-type: none"> Participate in physical activities that cause the body to change and record or talk about the changes. Examples: <ul style="list-style-type: none"> Describe how the activity makes you feel. Identify differences in the amount of intensity in activities such as: which used a medium (moderate) amount; which used the least amount? Evaluate where activities falls on the RPE scale. Physical activities that cause students to move through the different intensity levels and take target heart rates throughout. Use the RPE scale and determine workout intensity. The talk test is a simple way to measure intensity: <ul style="list-style-type: none"> If you can talk and sing without puffing at all, you're exercising at a low level. If you can comfortably talk, but not sing, you're doing moderate intensity activity. If you can't say more than a few words without gasping for breath, you're exercising at a vigorous intensity.
Level of Intensity	RPE	Physical Cues													
Light	Easy	Does not induce sweating unless it's a hot, humid day. There is no noticeable change in breathing patterns.													
Moderate	Somewhat hard	Will break a sweat after performing the activity for about 10 minutes. Breathing becomes deeper and more frequent. You can carry on a conversation but not sing.													
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Resources:

SHAPE America National Standards and Grade-Level Outcomes

VDOE Physical Education Instructional Resources <http://www.doe.virginia.gov/instruction/physed/index.shtml>;

CDC (for guidelines) <http://www.cdc.gov/healthyyouth/npao/index.htm>

VA SOL Standard: 10.5 The student will explain the importance of energy balance and evaluate current caloric intake and caloric expenditure to maintain optimal health and prevent chronic disease for the present and into adulthood.

ESSENTIAL UNDERSTANDINGS

- Caloric expenditure and intake needs change over time.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do</p>	<p>SUGGESTED / SAMPLE ASSESSMENTS</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>SUGGESTED / SAMPLE ACTIVITIES</p>												
<p>10.5 c) Evaluate current and future caloric expenditure and intake needs.</p> <p>Suggested Learning Targets: (Student Friendly Language)</p> <p>I can explain how caloric expenditure and intake needs change over time through (i.e., exit ticket, explaining to a partner/group, summary paragraph, etc.).</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> Explain the relationship between current and future caloric expenditure and intake needs. <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> *(Can combine the "Assessment of Learning" 10.5.b with this assessment to be completed within a one week period.) Log a one week of daily caloric expenditure and intake and evaluate current and future needs based on present and future activity levels. 	<ul style="list-style-type: none"> Review vocabulary and requirements/guidelines from previous grade levels. Refer to CDC for adolescent and adult guidelines for caloric expenditure and intake. Calorie Calculators such as: http://www.freedieting.com/tools/calorie_calculator.htm http://www.freedieting.com/tools/calories_burned.htm http://www.freedieting.com/tools/ideal_body_weight.htm Cause, Effect & Result of Your Daily Calorie Intake: <table border="1" data-bbox="846 868 1453 1075"> <thead> <tr> <th>The Cause</th> <th>The Effect</th> <th>The Result</th> </tr> </thead> <tbody> <tr> <td>Calories In Beats Calories Out</td> <td>Caloric Surplus</td> <td>Muscle gain, fat gain, or both.</td> </tr> <tr> <td>Calories Out Beats Calories In</td> <td>Caloric Deficit</td> <td>Fat loss, muscle loss, or both</td> </tr> <tr> <td>Calories In = Calories Out</td> <td>Maintenance</td> <td>Everything remains the same.</td> </tr> </tbody> </table>	The Cause	The Effect	The Result	Calories In Beats Calories Out	Caloric Surplus	Muscle gain, fat gain, or both.	Calories Out Beats Calories In	Caloric Deficit	Fat loss, muscle loss, or both	Calories In = Calories Out	Maintenance	Everything remains the same.	<ul style="list-style-type: none"> Make connections to activity level and calories burned during a physical activities. http://www.pecentral.org/lessonideas/VlewLesson.asp?ID=8818#.V4zK_rf6ves
The Cause	The Effect	The Result													
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Resources:
<http://www.choosemyplate.gov/food-groups/>; VDOE Physical Education Instructional Resources <http://www.doe.virginia.gov/instruction/physed/index.shtml>;
 CDC (for guidelines) <http://www.cdc.gov/healthyyouth/npao/index.htm>

VA SOL Standard: 10.5 The student will explain the importance of energy balance and evaluate current caloric intake and caloric expenditure to maintain optimal health and prevent chronic disease for the present and into adulthood.

ESSENTIAL UNDERSTANDINGS

- Optimum health requires knowledge of and adherence to recommendations and guidelines for physical activity, nutrition, body composition and sleep.
- Sleep is a vital indicator of overall health and well-being.

VDOE Standard(s) Student Friendly Language What will the student know and be able to do	SUGGESTED / SAMPLE ASSESSMENTS	Terms (Vocabulary) and Content Information	SUGGESTED / SAMPLE ACTIVITIES
<p>10.5 d) Evaluate current and future sleep needs.</p> <p>Suggested Learning Targets:</p> <p>I can access recommendations for and explain my current and future sleep needs for optimum health through a graphic organizer.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • Written: Access accurate and reliable recommendations for sleep; identify requirements for adolescents and adults. • Pair/Share: Lifestyle factors that are affecting the quality and quantity of your sleep such as school schedules and stress. <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> • Written: Explain current and future sleep needs for optimum health. 	<ul style="list-style-type: none"> • National Heart, Lung and Blood Institute Recommended Amount of Sleep <ul style="list-style-type: none"> ◦ Teens (14-17) 8-10 hours a day ◦ Young Adults (18-25) 7-8 hours a day ◦ Adults (26-64) 7-9 hours a day ◦ Older adults (65+) 7-8 hours a day • Stimulants like coffee and energy drinks, alarm clocks and external lights (including those from electronic devices) interfere with our "circadian rhythm" or natural sleep/wake cycle. • Sleep needs: <ul style="list-style-type: none"> ◦ A good night's sleep improves learning. ◦ Sleep is involved in healing and repair of your heart and blood vessels. The right amount of sleep reduces heart rate and blood pressure. ◦ Getting enough sleep helps you function productivity/safety throughout the day. People who are sleep deficient are less productive at work/school. They take longer to finish tasks, have a slower reaction time and make more mistakes. • Consult a primary care physician or a sleep professional to determine the underlying cause, if experiencing symptoms such as: sleepiness during the day or when you expect to be awake and alert, snoring, leg cramps or tingling, gasping or difficulty breathing during sleep, prolonged insomnia or another symptom that is preventing you from sleeping well. 	<ul style="list-style-type: none"> • Discuss questions that help students assess how they feel on different amounts of sleep such as: <ul style="list-style-type: none"> ◦ Are you productive, healthy and happy on seven hours of sleep? Or does it take you nine hours of quality sleep to get you into high gear? ◦ Do you have health issues such as weight concerns? Are you at risk for any disease? ◦ Are you experiencing sleep problems? ◦ Do you depend on caffeine to get you through the day? ◦ Do you feel sleepy when driving? • Introduce sleep tips such as: <ul style="list-style-type: none"> ◦ Stick to a sleep schedule, even on weekends. ◦ Practice a relaxing bedtime ritual. ◦ Exercise daily. ◦ Evaluate your bedroom to ensure ideal temperature, sound and light. ◦ Sleep on a comfortable mattress and pillows. ◦ Beware of hidden sleep stealers, like caffeine. ◦ Turn off electronics before bed. • Evaluate personal sleep patterns http://kidshealth.org/classroom/9to12/body/functions/sleep_handout2.pdf

Resources:			

SHAPE America National Standards and Grade Level Outcomes; VDOE Physical Education Instructional Resources

<http://www.doe.virginia.gov/instruction/physed/index.shtml>; http://www.heart.org/HEARTORG/Educator/Educator_UCM_001113_SubHomePage.jsp;

www.cdc.gov/sleep/about_sleep/how_much_sleep.html; <http://www.nhlbi.nih.gov/health/health-topics/topics/sdd/howmuch>

<https://sleepfoundation.org/how-sleep-works/how-much-sleep-do-we-really-need>; <https://sleepfoundation.org/sleep-diary/SleepDiaryv6.pdf>

<http://classroom.kidshealth.org/classroom/9to12/body/functions/sleep.pdf>

VA SOL Standard: 10.5 The student will explain the importance of energy balance and evaluate current caloric intake and caloric expenditure to maintain optimal health and prevent chronic disease for the present and into adulthood.

ESSENTIAL UNDERSTANDINGS

- "Adequate food and fluid should be consumed before, during and after exercise to help maintain blood glucose concentration during exercise, maximize exercise performance and improve recovery time". (American College of Sports Medicine)

VDOE Standard(s) Student Friendly Language What will the student know and be able to do	SUGGESTED / SAMPLE ASSESSMENTS	Terms (Vocabulary) and Content Information	SUGGESTED / SAMPLE ACTIVITIES												
<p>10.5 e) Evaluate the caloric intake needs for before, during and after a variety of lifetime activities.</p> <p>Suggested Learning Targets:</p> <p>I can explain the caloric needs for before, during and after (selected activities) and demonstrate this through a collaborative poster.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • Identify a variety of lifetime activities the student is/may be interested in, describe the caloric expenditure and nutrition needs for the activities. • List foods and beverages to consume before, during and after a specific lifetime activity. <p>Examples:</p> <ul style="list-style-type: none"> ○ Pre activity — Egg omelet with spinach, whole grain toast and skim milk. Greek yogurt with banana, walnuts, apples and honey. ○ After activity — Take 10-20 grams of protein within 2 hours after a lifetime activity that emphasis muscular strength and endurance such as: whole grain, vegetables, fruits and beans. <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> • Pick two lifetime activities that you plan to participate in during your lifetime and evaluate the caloric intake needs for before, during and after participation. 	<ul style="list-style-type: none"> • Pre lifetime physical activity: Good supply of protein for tissue repair 1-2 hours before activity. A lifetime activity that has a lot of cardio requires more carbohydrates than protein. Carbohydrates are metabolized into glucose (energy) very quickly so they should be consumed 30-60 minutes before an activity. • During physical lifetime activity: Add protein and fiber to deliver a steadier supply of energy throughout the activity. • After a lifetime physical activity: Go for carbohydrates to replace the energy in depleted muscles. Protein, though, is almost equally important in sealing in your physical activity benefits and promoting recovery. • Breakdown for carbohydrate, protein and fat needs: <table border="1" data-bbox="1010 1125 1650 1227"> <thead> <tr> <th>Age (years)</th> <th>Carbohydrate</th> <th>Protein</th> <th>Fat</th> </tr> </thead> <tbody> <tr> <td>6-18</td> <td>45-65%</td> <td>10-30%</td> <td>30-40%</td> </tr> <tr> <td>19+ (adults)</td> <td>45-65%</td> <td>10-35%</td> <td>20-35%</td> </tr> </tbody> </table>	Age (years)	Carbohydrate	Protein	Fat	6-18	45-65%	10-30%	30-40%	19+ (adults)	45-65%	10-35%	20-35%	<ul style="list-style-type: none"> • Develop alone or with a group, lists of foods and beverages to consume for different phases of a workout. <p>Example:</p> <ul style="list-style-type: none"> ○ Pre workout — Egg omelet with spinach, whole grain toast and skim milk. Greek yogurt with banana, walnuts, apples and honey. ○ After — Take 10-20 grams of protein within 2 hours after strength training. Whole grain, vegetables, fruits and beans.
Age (years)	Carbohydrate	Protein	Fat												
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Resources:

SHAPE America National Standards and Grade Level Outcomes

<http://www.choosemyplate.gov/> See education resources and curriculum ideas;

VDOE Physical Education Instructional Resources <http://www.doe.virginia.gov/instruction/phyped/index.shtml>;
http://www.heart.org/HEARTORG/Educator/Educator_UCM_001113_SubHomePage.jsp; <http://darebee.com/mealplans.html>

VA SOL Standard: 10.5 The student will explain the importance of energy balance and evaluate current caloric intake and caloric expenditure to maintain optimal health and prevent chronic disease for the present and into adulthood.

ESSENTIAL UNDERSTANDINGS

- Choosing nutrient dense foods and abiding by calorie recommendations will help one reach their nutrition needs while maintaining a healthy body weight.
- Everything we do, from sleeping to running, requires energy.

VDOE Standard(s) Student Friendly Language What will the student know and be able to do	SUGGESTED / SAMPLE ASSESSMENTS	Terms (Vocabulary) and Content Information	SUGGESTED / SAMPLE ACTIVITIES																																																
<p>10.5 f) Explain energy balance (caloric expenditure vs. caloric intake) in relation to changing needs from adolescence through adulthood.</p> <p>Suggested Learning Targets:</p> <p>I can compare and contrast my current and future energy balance for a variety of ages, weight and activity levels through a graphic organizer.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • Compare and contrast a variety of ages, weight and activity levels using an application. • Pair/Share: Explain what energy balance is and why it is important for good health. <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> • Compare and contrast current and future energy balance for now and as one ages. 	<ul style="list-style-type: none"> • Energy balance—The relationship between “energy in” (food calories taken into the body through food and drink) and “energy out” (calories being used in the body for our daily energy requirements). • Effects of a negative energy balance (more out than in) include: Decline in metabolism, decreases in bone mass, reductions in thyroid hormones, reductions in testosterone levels, inability to concentrate and a reduction in physical performance. • Even when we're sleeping, our body needs energy for all its "hidden" functions, such as breathing, circulating blood and growing and repairing cells. • Calorie Requirements: <table border="1" data-bbox="848 987 1598 1312"> <thead> <tr> <th rowspan="2">Gender</th> <th rowspan="2">Age</th> <th colspan="3">Moderately Active</th> </tr> <tr> <th>Sedentary</th> <th>Active</th> <th>Active</th> </tr> </thead> <tbody> <tr> <td>Female</td> <td>14-18</td> <td>1,800</td> <td>2,000</td> <td>2,400</td> </tr> <tr> <td>Female</td> <td>19-30</td> <td>2,000</td> <td>2,000—2,200</td> <td>2,400</td> </tr> <tr> <td>Female</td> <td>31-50</td> <td>1,800</td> <td>2,000</td> <td>2,200</td> </tr> <tr> <td>Female</td> <td>51+</td> <td>1,600</td> <td>1,800</td> <td>2,000—2,200</td> </tr> <tr> <td>Male</td> <td>14-18</td> <td>2,200</td> <td>2,400—2,800</td> <td>2,800—3,200</td> </tr> <tr> <td>Male</td> <td>19-30</td> <td>2,400</td> <td>2,600—2,800</td> <td>3,000</td> </tr> <tr> <td>Male</td> <td>31-50</td> <td>2,200</td> <td>2,400—2,600</td> <td>2,800—3,000</td> </tr> <tr> <td>Male</td> <td>51+</td> <td>2,000</td> <td>2,200—2,400</td> <td>2,400—2,800</td> </tr> </tbody> </table>	Gender	Age	Moderately Active			Sedentary	Active	Active	Female	14-18	1,800	2,000	2,400	Female	19-30	2,000	2,000—2,200	2,400	Female	31-50	1,800	2,000	2,200	Female	51+	1,600	1,800	2,000—2,200	Male	14-18	2,200	2,400—2,800	2,800—3,200	Male	19-30	2,400	2,600—2,800	3,000	Male	31-50	2,200	2,400—2,600	2,800—3,000	Male	51+	2,000	2,200—2,400	2,400—2,800	<ul style="list-style-type: none"> • Compare and contrast a variety of ages, weight and activity levels using an application such as one available from the Mayo Clinic—calculator http://www.mayoclinic.org/calorie-calculator/ITT-20084939
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VA SOL Standard: 10.5 The student will explain the importance of energy balance and evaluate current caloric intake and caloric expenditure to maintain optimal health and prevent chronic disease for the present and into adulthood.

ESSENTIAL UNDERSTANDING

- Over-exercising can lead to injury and illness.
- The best way to prevent over-exercising is to follow a program that varies your training load and includes mandatory rest phases.

VDOE Standard(s) Student Friendly Language What will the student know and be able to do	SUGGESTED / SAMPLE ASSESSMENTS	Terms (Vocabulary) and Content Information	SUGGESTED / SAMPLE ACTIVITIES
<p>10.5 g) Explain the consequences of over-exercising.</p> <p>Suggested Learning Targets:</p> <p>I can explain what over-exercising is and some possible concerns through a summary paragraph.</p>	<p>Assessment for Learning (Formative)</p> <ul style="list-style-type: none"> • Written: Investigate physical activity guidelines and information about “over-exercising”; what are signs or symptoms of over-exercising <p>Assessment of Learning (Summative)</p> <ul style="list-style-type: none"> • Explain what over-exercising is and some possible concerns. 	<ul style="list-style-type: none"> • Adolescents and young adults, both male and female, benefit from physical activity. • Greater amounts of physical activity are even more beneficial, up to a point. Excessive amounts of physical activity can lead to injuries, menstrual abnormalities and bone weakening. • Risk of injury increases with greater amounts of activity, care should be taken to avoid excessive amounts. • Signs of over-exercise may include delayed recovery time, depression, insomnia, disinterest in exercise, mood changes, fatigue. 	<ul style="list-style-type: none"> • Discussions on over-exercising concerns.
<p>Resources:</p> <p>SHAPE America National Standards and Grade Level Outcomes http://www.choosemyplate.gov/ See education resources and curriculum ideas; VDOE Physical Education Instructional Resources http://www.doe.virginia.gov/instruction/physed/index.shtml; Center for Disease Control and Prevention http://www.cdc.gov/nccdphp/sgr/adoles.htm http://www.nhlbi.nih.gov/health/educational/wecan/healthy-weight-basics/balance.htm</p>			

VA SOL Standard: FI.1 The student will demonstrate mastery of movement skills and patterns used to perform a variety of strength training, physical conditioning, and fitness activities.

ESSENTIAL UNDERSTANDINGS

- Distinguish key elements of correct movement skills and patterns for strength training, physical conditioning, and fitness activities
- Critique peer observation skills of basic and advanced strength training, physical conditioning and functional fitness.
- Analyze the critical components of ergonomically safe movement patterns for strength training, physical conditioning and functional fitness.

<p style="text-align: center;">Required VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p style="text-align: center;">Suggested Assessments</p>	<p style="text-align: center;">Terms (Vocabulary) and Content Information</p>	<p style="text-align: center;">Suggested Activities</p>
<p>FI.1.a Demonstrate correct movement skills and patterns for strength training, physical conditioning, and fitness activities.</p> <p>I can demonstrate correct movement skills and patterns through participation in basic and advanced strength training activities.</p> <p>I can demonstrate correct movement skills and patterns through participation in basic and advanced physical conditioning activities.</p> <p>I can demonstrate correct movement skills and patterns through participation in basic and advanced fitness activities.</p> <p>FI.1.b Analyze movement activities for component skills and movement patterns.</p> <p>I can analyze the component skills and movement patterns of basic and advanced strength training, personal conditioning, and fitness activities.</p>	<p>Assessment for Learning Self and peer observation Teacher observation with feedback Written: identify motor cues, movement patterns (exit tickets, short answer, reflection activities)</p> <p>Assessment of Learning Self and peer observation with written feedback Create a google slide analysis of component skills and movement patterns of basic and advanced strength training, physical conditioning, and fitness activities.</p>	<p>Component skills and movement patterns may include:</p> <ul style="list-style-type: none"> • Squat • Lunge • Push • Pull • Bend • Twist <p>Terminology specific to selected basic and advanced strength training, personal conditioning, and fitness activities</p>	<p>Strength training activity skills may include:</p> <ul style="list-style-type: none"> • Free weight activities • Olympic lifts • Dumbbell / kettlebell activities • Manual resistance activities • Resistance band activities • Resistance machines <p>Specific physical conditioning and fitness activities referenced may include:</p> <ul style="list-style-type: none"> • Speed and agility activities • Endurance activities • Flexibility activities • Plyometric activities <p>Video feedback on basic and advanced skills in strength training, personal conditioning, and fitness activities</p> <p>Analysis of basic and advanced skills in strength training, personal conditioning, and fitness activities for component skills and movement patterns applicable to skill performance</p>

Resources: VDOE Physical Education Instructional Resources <http://www.doe.virginia.gov/instruction/physed/index.shtml>; <http://www.exrx.net/Lists/Directory.html>
<https://www.nasm.org/docs/default-source/PDF/nasm-cpt-executive-summary-job-task-analysis.pdf?sfvrsn=2>

VA SOL Standard: FI.1 The student will demonstrate mastery of movement skills and patterns used to perform a variety of strength training, physical conditioning, and fitness activities.

ESSENTIAL UNDERSTANDINGS

Use basic training techniques to optimize motor-related fitness components.

<p>Required VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>Suggested Assessments</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>Suggested Activities</p>
<p>FI.1.c— Describe and demonstrate activities specific to improving the skill-related components of fitness.</p> <p>I can describe and plan for improvement in each of the six skill-related fitness components.</p> <p>I can demonstrate proficiency in activities that help improve agility, balance, coordination, power, reaction time, and speed.</p>	<p>Assessment for Learning Self and peer observation Teacher observation with feedback Written: identification of activities that improve skill-related components (exit tickets, short answer reflection activities)</p> <p>Assessment of Learning Create a written plan of activities to improve at least three specific skill-related components of fitness</p>	<p>Review previous year's vocabulary, as appropriate.</p>	<p>Participation in a variety of activities that contribute to the improvement of the health and skill-related components of fitness</p> <p>Planning for improvement of at least three skill-related components of fitness</p>
<p>Resources: VDOE Physical Education Instructional Resources http://www.doe.virginia.gov/instruction/phyped/index.shtml; https://www.nasm.org/docs/default-source/PDF/nasm_cpt_executive_summary_job_task_analysis.pdf?sfvrsn=2</p>			

VA SOL Standard: FI.1 The student will demonstrate mastery of movement skills and patterns used to perform a variety of strength training, physical conditioning, and fitness activities.

ESSENTIAL UNDERSTANDINGS

- Apply current national physical activity Guidelines for achieving health benefits to cardiorespiratory and strength training program design.

<p>Required VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>Suggested Assessments</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>Suggested Activities</p>
<p>FI.1.d—Define and identify <i>activities of daily living (ADL)</i> as the tasks of everyday life.</p> <p>I can define activities of daily living (ADL) as the tasks of everyday life.</p> <p>I can identify movement skills and patterns involved in ADL.</p> <p>FI.1.e—Apply movement skills and patterns to functional fitness activities that support ADL.</p> <p>I can apply movement skills and patterns used in ADL in to fitness activities to improve or maintain functioning in ADL.</p>	<p>Assessment for Learning Written: defining ADL; identification of activities involving ADL; reflection activities on the improvement / maintenance of movement skills and patterns involved in ADL</p> <p>Assessment of Learning Written: application of movement skills and patterns in to a prescription of fitness activities for an individual</p>	<p>Activities of Daily Living (ADL): basic tasks of everyday life, such as eating, bathing, dressing, transferring</p> <p>Movement skills and patterns used in ADL include:</p> <ul style="list-style-type: none"> Bending/raising and lifting/lowering movements (e.g. squatting) Single leg movements Pushing movements in vertical/horizontal planes and resultant movement Pulling movements in vertical/horizontal planes and resultant movement Rotational movements 	<p>Participation in activities which incorporate movement skills and patterns used in ADL, to include:</p> <ul style="list-style-type: none"> Bending/raising and lifting/lowering movements (e.g. squatting) Single leg movements Pushing movements in vertical/horizontal planes and resultant movement Pulling movements in vertical/horizontal planes and resultant movement Rotational movements
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VA SOL Standard: FI.1 The student will demonstrate mastery of movement skills and patterns used to perform a variety of strength training, physical conditioning, and fitness activities.

ESSENTIAL UNDERSTANDINGS

- Design a resistance training program focused on the four unique properties of muscle tissue: excitability, contractibility, extensibility, and elasticity.
- Design a resistance training program focused on the three major types of muscular contractions (isometric, isotonic, and isokinetic) and the two types of isotonic contractions (concentric and eccentric) and their use in training.

<p align="center">Required VDOE Standard(s) Student Friendly Language</p> <p align="center">What will the student know and be able to do?</p>	<p align="center">Suggested Assessments</p>	<p align="center">Terms (Vocabulary) and Content Information</p>	<p align="center">Suggested Activities</p>
<p>FI.1.f Identify and describe advanced resistance training techniques.</p> <p>I can identify advanced training techniques, including Olympic lifts, plyometric exercises, pyramid training, and super sets.</p> <p>I can describe techniques used to complete the snatch and the clean and jerk.</p> <p>I can describe techniques used to perform multiple plyometric exercises to increase power.</p> <p>I can describe pyramid training methods used to increase muscle mass.</p> <p>I can describe multiple methods for completing a super set.</p>	<p>Assessment for Learning Identification of Olympic lifts, plyometric activities, and super set activities</p> <p>Assessment of Learning Create a pamphlet describing how to use advanced training techniques when creating a strength training program for another individual</p>	<p>Olympic lifts: two exercises, the snatch and the clean and jerk, performed in the modern Olympic program</p> <p>Plyometric exercises: a system of exercise in which the muscles are repeatedly stretched then suddenly contracted; explosive exercise used to develop muscular power</p> <p>Pyramid training: training methodology in which high repetition, lower weight sets are paired with high weight, lower repetition sets</p> <p>Super sets: performing multiple exercises with little to no rest between</p>	<p>Olympic lifts:</p> <ul style="list-style-type: none"> ● Snatch ● Clean and jerk <p>Plyometric exercises:</p> <ul style="list-style-type: none"> ● Chops ● Push-ups ● Throws ● Twists ● Jumps (depth jumps, multiple jumps, lateral jumps) <p>Pyramid training:</p> <ul style="list-style-type: none"> ● Ascending—weight is increased and repetitions decrease each set ● Descending—weight is decreased and repetitions increase each set ● Triangle—weight increases as reps decrease, then weight decreases as reps increase each set <p>Super sets:</p> <ul style="list-style-type: none"> ● Compound sets—two+ exercises for same muscle group performed in succession ● Isolation sets—exercises for two different muscle groups combined in supersets

Resources: VDOE Physical Education Instructional Resources <http://www.doe.virginia.gov/instruction/physed/index.shtml>;
<http://www.exrx.net/Lists/PowerExercises.html>; <http://www.exrx.net/Lists/OlympicWeightlifting.html>;

VA SOL Standard: FI.1—The student will demonstrate mastery of movement skills and patterns used to perform a variety of strength training, physical conditioning, and fitness activities.

<p>Required VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>Suggested Assessments</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>Suggested Activities</p>
<p>FI.1.g—Apply principles of exercise progression to improve fitness.</p> <p>I can apply the principle of progression to continually increase physical demand and achieve a safe and optimal level of overload.</p> <p>I can include appropriate rest and recovery to best improve levels of fitness.</p> <p>I can vary workout / exercise types to help enhance recovery.</p>	<p>Assessment for Learning Define principle of progression; identify recovery types and desired recovery times</p> <p>Assessment of Learning Create an infographic for a fitness plan for a teen, young adult and older individual, incorporating appropriate rest and recovery times to meet optimal fitness gains</p>	<p>Active Recovery: low intensity activities completed during recovery periods to speed up recovery process</p> <p>Passive Recovery: completely resting during scheduled recovery periods</p> <p>Principle of Progression: to effectively improve fitness, an individual must apply an optimal level of overload within a certain time period</p> <p>Ten Percent Rule: To meet optimal levels of overload, it is recommended to increase frequency, intensity, or duration by no more than 10% per week</p>	<p>Participation in a variety of fitness activities, utilizing appropriate rest and recovery times</p> <p>Development of a fitness plan, incorporating appropriate rest and recovery times</p>

Resources: VDOE Physical Education Instructional Resources <http://www.doe.virginia.gov/instruction/phyped/index.shtml>; https://www.nasm.org/docs/default-source/PDF/nasm_cpt_executive_summary_job_task_analysis.pdf?sfvrsn=2

VA SOL Standard: FI.1 The student will demonstrate mastery of movement skills and patterns used to perform a variety of strength training, physical conditioning, and fitness activities.

ESSENTIAL UNDERSTANDINGS

- Skill in selection, proper application, and modification/amplification of resistance training exercises within abilities and goals.
- Recognize pertinent abilities or physical limitations, and selecting and using appropriate training methods, equipment, and procedures.
- Monitor and recognize proper and improper exercise technique and apply biomechanical principles to provide corrective measures necessary for proper exercise execution.
- Ability to inspect and maintain fitness equipment and physical activity surroundings to ensure safety.

<p style="text-align: center;">Required VDOE Standard(s) Student Friendly Language</p> <p style="text-align: center;">What will the student know and be able to do?</p>	<p style="text-align: center;">Suggested Assessments</p>	<p style="text-align: center;">Terms (Vocabulary) and Content Information</p>	<p style="text-align: center;">Suggested Activities</p>
<p>FI.1.h Demonstrate correct and safe techniques and form when performing strength training, physical conditioning, and fitness activities and exercises.</p> <p>I can demonstrate safe and proper form when exercising.</p> <p>FI.1.i Demonstrate proper use of fitness equipment, selectorized weight machines, and free weights.</p> <p>FI.1.j Demonstrate safety protocols and procedures for strength training, physical conditioning, and fitness activities.</p> <p>I can demonstrate appropriate use of exercise equipment.</p> <p>I can demonstrate selection of appropriate weight and activities to meet individual goals and abilities.</p> <p>I can demonstrate safety procedures through the use of a spotter.</p>	<p>Assessment for Learning Self and peer observation Teacher observation with feedback</p> <p>Assessment of Learning Create a google slide presentation about correct and safe techniques and form when performing strength training, physical conditioning, and fitness activities and exercises and the proper use of fitness equipment, selectorized weight machines, and free weights</p>	<p>Review previous year's content and vocabulary as appropriate</p>	<p>Safe participation in a variety of strength training, physical conditioning, and fitness activities.</p> <p>Strength training activity skills may include:</p> <ul style="list-style-type: none"> — Free weight activities — Olympic lifts — Dumbbell / kettlebell activities — Manual resistance activities — Resistance band activities — Resistance machines <p>Specific physical conditioning and fitness activities referenced may include:</p> <ul style="list-style-type: none"> — Speed and agility activities — Endurance activities — Flexibility activities — Plyometric activities
<p>Resources: VDOE Physical Education Instructional Resources http://www.doe.virginia.gov/instruction/physed/index.shtml; http://www.exrx.net/Exercise.html; http://www.teachpe.com/strengthening/free_weights.php</p>			

VA SOL Standard: FI.1 The student will demonstrate mastery of movement skills and patterns used to perform a variety of strength training, physical conditioning, and fitness activities.

ESSENTIAL UNDERSTANDINGS

- Knowledge of contraindicated or “risky” exercises and safer alternatives.

<p>Required VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>Suggested Assessments</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>Suggested Activities</p>
<p>FI.1.k—Identify contraindications to advanced resistance training techniques.</p> <p>I can identify conditions that can make advanced resistance training techniques improper and/or undesirable.</p>	<p>Assessment for Learning Self-assessment of physical abilities to identify any contraindications to advanced resistance training Written: identification of common contraindications to resistance training and advanced techniques</p> <p>Assessment of Learning Assessment of another individual to identify any contraindications to resistance training and/or advanced resistance training techniques</p>	<p>Contraindication: any condition that renders some particular movement, activity, or treatment improper or undesirable</p> <p>Contraindications for participation in resistance training include:</p> <ul style="list-style-type: none"> • Pain • Inflammation • Severe cardiac diseases • Cardiac symptoms such as chest pain (angina) or arrhythmias • Hypertension > 160/105 <p>Contraindications for participation in advanced resistance training techniques include:</p> <ul style="list-style-type: none"> • Inability to perform basic resistance training techniques • Lack of muscular strength (Squat 1RM of less than 1.5 times body weight; Bench press 1RM of less than 1-1.5 times body weight) • Low levels of skill-related fitness 	<p>Discussion about conditions that make resistance training techniques undesirable</p> <p>Assessment of another individual to determine contraindications to participation in resistance training activities</p>

Resources: VDOE Physical Education Instructional Resources <http://www.doe.virginia.gov/instruction/physed/index.shtml>; <http://www.exrx.net/Exercise.html>; <https://www.nasm.org/docs/default-source/PDF/nasm-cpt-executive-summary-job-task-analysis.pdf?sfvrsn=2>

VA SOL Standard: FI.1 The student will demonstrate mastery of movement skills and patterns used to perform a variety of strength training, physical conditioning, and fitness activities.

ESSENTIAL UNDERSTANDINGS

- Knowledge of behavior change process and its importance in exercise adherence.
- Effective goal setting and behavior reinforcement techniques.
- Plan and design programs to promote the development of exercise confidence.

<p style="text-align: center;">Required VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p style="text-align: center;">Suggested Assessments</p>	<p style="text-align: center;">Terms (Vocabulary) and Content Information</p>	<p style="text-align: center;">Suggested Activities</p>
<p>FI.1.l Identify and describe factors that influence participation in physical activity and adherence to an exercise program.</p> <p>I can identify factors that influence participation and adherence to an exercise program.</p> <p>I can describe that personal attributes, environmental factors, physical activity factors, motivation, and feedback all influence participation in physical activity as well as adherence to an exercise program.</p> <p>I can assess an individual's likelihood of adhering to an exercise program.</p> <p>FI.1.n Describe psychological factors that may influence a person's adherence to an exercise program.</p> <p>I can describe the psychological factors associated with maintaining participation in an exercise program, including self-motivation and self-efficacy.</p>	<p>Assessment for Learning Written identification of factors that influence participation in and adherence to an exercise program; self-assessment to determine personal likelihood of adherence to an exercise program</p> <p>Assessment of Learning Assessment of another individual to determine likelihood of adherence to an exercise program Create poster of life skills for making good decisions and solving problems and barriers for participation and adherence to an exercise program</p>	<p>Personal Attributes:</p> <ul style="list-style-type: none"> ● Activity history—past program participation is the most reliable predictor of current participation ● Demographic variables—adherence is related to education, income, age, and gender; lower activity levels are seen in individuals with older age, lower education, and lower income; men demonstrate more adherence to exercise programs than women ● Health perception—an individual's perception of their own health is a factor in exercise adherence as individuals that perceive themselves to be healthier tend to demonstrate more adherence ● Health status—individuals with chronic illness are less likely to adhere to an exercise program ● Knowledge, attitudes, beliefs—the more knowledge an individual has, the more likely they will adhere to an exercise program; individuals with an internal locus of control, or belief that internal or personal factors control events or outcomes, are more likely to adhere to an exercise program <p>Environmental Factors:</p> <ul style="list-style-type: none"> ● Access to facilities—an individual is more likely to adhere to an exercise program if the facility is conveniently located near a person's home or work 	<p>Instruction relating to the psychological components of behavior change and adherence to exercise programs</p> <p>Creation of adherence strategies to use as a fitness instructor</p>

- Time— individuals that have the perception that there is not enough time to participate in physical activity is less likely to adhere to an exercise program
- Social support— individuals with support from family and friends are more likely to adhere to an exercise program

Physical Activity Factors:

- Intensity— individuals participating in vigorous intensity exercises are much more likely to drop out of the physical activity program; individuals participating in moderate intensity programs are more likely to adhere to the exercise program
- Injury— individuals that experience injury are less likely to adhere to an exercise program

Feedback:

- Intrinsic— information individuals provide to themselves based on their own sensory systems; adherence to an exercise program is dependent on intrinsic feedback
- Extrinsic— feedback provided from outside sources, including coaches or other fitness professionals; early in an exercise program, extrinsic feedback is key to program adherence

Psychological Factors:

- Motivation— an individual's motivation correlates with their adherence to an exercise program
- Self motivation— reflective of one's ability to set goals, monitor progress, and self-reinforce, shows a positive relationship with adherence to an exercise program
- Self-efficacy— an individual's belief in his or her capacity to execute behaviors necessary to produce specific performance attainments; individuals with high levels of self-efficacy are more likely to adhere to an exercise program

Resources: VDOE Physical Education Instructional Resources <http://www.doe.virginia.gov/instruction/physed/index.shtml>;
<https://www.acefitness.org/blog/3808/motivation-behavior-change-and-program-adherence>; <http://exrx.net/Psychology/AdherenceTips.html>
<https://www.nasm.org/docs/default-source/PDF/nasm-cpt-executive-summary-job-task-analysis.pdf?sfvrsn=2>

VA SOL Standard: FI.1 The student will demonstrate mastery of movement skills and patterns used to perform a variety of strength training, physical conditioning, and fitness activities.

ESSENTIAL UNDERSTANDINGS

- Identify and use adherence strategies for long-term maintenance of healthy behaviors.
- Classify and respond to individuals by stage of behavior change using the Transtheoretical Model of Behavior Change and apply stage-appropriate strategies.
- Explains the role of the personal trainer in promoting an individual's adherence to an exercise program.

<p>Required VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>Suggested Assessments</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>Suggested Activities</p>
<p>FI.1.m Explain principles that result in behavior change.</p> <p>I can explain the Transtheoretical Model of behavior change.</p> <p>I can explain principles that result in behavior change, including operant conditioning, shaping, observational learning, and cognitions and behavior.</p> <p>FI.1.o Identify and apply strategies to increase adherence in an exercise program.</p> <p>I can identify strategies to increase exercise adherence, including stimulus control, written agreements and behavioral contracting, individualized goals, self-monitoring, feedback, and decision-making.</p> <p>I can apply strategies to increase exercise adherence for self and others.</p> <p>FI.1.p Explain the role of the personal trainer in promoting an individual's adherence to an exercise program.</p>	<p>Assessment for Learning Explain the Transtheoretical Model of behavior change and principles that result in behavior change, including operant conditioning, shaping, observational learning, and cognitions and behavior</p> <p>Assessment of Learning Create a Podcast about the Transtheoretical Model of behavior change</p>	<p><u>Transtheoretical Model of Behavior Change:</u> <u>Stages of Change:</u></p> <ul style="list-style-type: none"> • Precontemplation — unaware that a behavior change is needed • Contemplation — considering a behavior change • Preparation — starting behavior change; inconsistent patterns of change • Action — consistent behavior change; <6 months after starting change • Maintenance — regular change in behavior; change becomes part of lifestyle; >6 months after starting change <p><u>Processes of Change:</u> providing a process to move from one stage to the next; interventions necessary (see ACE ITM resource)</p> <p><u>Self-Efficacy:</u> development of the belief that an individual can master the behavior change</p> <p><u>Decisional Balance:</u> development of an understanding that the behavior change will benefit the individual</p> <p><u>Operant Conditioning:</u> process by which behaviors are influenced by their consequences (positive and negative)</p> <p><u>Shaping:</u> process of using reinforcements to gradually achieve a target behavior</p> <p><u>Observational Learning:</u> learning which occurs through observing the behaviors of others</p>	<p>Instruction relating to the psychological components of behavior change and adherence to exercise programs</p> <p>Creation of adherence strategies to use as a fitness instructor</p>

<p>I can explain the role of the personal trainer in exercise adherence, including program design; effective communication and role clarity; goal setting; and developing contracts or agreements.</p>		<p>Cognitions and Behavior: The influence a person's beliefs have on their behaviors</p> <p><u>Adherence Strategies</u></p> <p>Stimulus Control: making adjustments to the environment to increase the likelihood of engagement in a behavior (e.g. changing schedule to include workout times, laying out exercise clothes before bed, choosing a fitness location between home and school/work)</p> <p>Written Agreements and Behavior Contracting: specific written agreements which outline roles and behaviors of all involved in the behavior change</p> <p>Individualized Goal Setting: goals must be effectively written and tailored to the individual to elicit changes in behavior (e.g. SMART goal)</p>	
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Resources: ~~VDOE Physical Education Instructional Resources~~ <http://www.doe.virginia.gov/instruction/physed/index.shtml>;
<https://www.acefitness.org/blog/3808/motivation-behavior-change-and-program-adherence>; <http://exrx.net/Psychology/AdherenceTips.html>;
<https://www.nfpt.com/the-role-of-a-personal-trainer>

VA SOL Standard: FI.1 The student will demonstrate mastery of movement skills and patterns used to perform a variety of strength training, physical conditioning, and fitness activities.

ESSENTIAL UNDERSTANDINGS

- Modified, amplified, or alternative exercises to accommodate different levels of fitness, abilities, and/or to prevent exacerbation of chronic/acute conditions.

<p>Required VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>Suggested Assessments</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>Suggested Activities</p>
<p>FI.1.q—Identify and explain considerations for special populations.</p> <p>I can identify considerations for individuals with specific conditions.</p> <p>I can explain and apply considerations for individuals with specific conditions, such as cardiovascular disorders, hypertension, stroke, peripheral vascular disease, dyslipidemia, cancer, fibromyalgia, low-back pain, aging adults, pre- and post-natal, diabetes, metabolic syndrome, asthma, osteoporosis, arthritis, chronic fatigue syndrome, weight management, and youth.</p>	<p>Assessment for Learning Identification of conditions which require special considerations when planning for physical activity; identification of special considerations and modifications to use when working with special populations</p> <p>Assessment of Learning Design an exercise program for an individual requiring special considerations in order to participate in physical activity</p>	<p>Exercise Considerations:</p> <ul style="list-style-type: none"> Cardiovascular disease— all individuals with coronary artery disease (CAD) should have a physician-supervised maximal graded exercise test to determine functional capacity to establish safe exercise levels; heart rates should not exceed training targets, Rating of Perceived Exertion (RPE) should not exceed 11-14 on the Borg scale (6-20 scale). Hypertension— participation in 30 minutes of regular exercise five times per week; aerobic activities supplemented with low intensity resistance training; avoid isometric training and teach proper technique and breathing; monitor blood pressure during and after bouts of exercise Stroke— focus on optimizing activities of daily living (ADL) to regain balance, coordination, and functional independence; light to moderate intensity activities focusing on gait, balance, and coordination such as walking, bicycle ergometer, water, and weight-supported treadmill activities; Peripheral Vascular Disease (PVD)— complete medical evaluation with a medical professional; walking that is short in duration and includes multiple opportunities for rest; general, non-impact conditioning activities with an RPE of 9-13 on the Borg scale Dyslipidemia— individuals with dyslipidemia may also have other risk factors for cardiovascular diseases; fitness professionals should follow physician recommendations in the development of an exercise plan; individuals that do not exhibit any other risk factors may follow age-specific guidelines 	<p>Application of exercise considerations for individuals through the development of an exercise program for an individual with a need for special considerations (e.g. case study with fitness program development)</p>

- Cancer—obtain physician clearance before any exercise program; gradual build-up focusing more on duration than intensity; light to moderate intensity; resistance training activities utilizing low weights for 10-15 repetitions; proper warm-up and cool-down; individuals with low white blood cell counts should avoid exercising in public gyms; encourage proper nutrition and hydration; monitor for swollen ankles, unexplained weight gain, and/or shortness of breath at rest or with limited exertion; people should not exercise within two hours of chemotherapy or radiation.
- Fibromyalgia—discuss exercise goals and obtain medical clearance from physician prior to starting an exercise program; low impact, low intensity activities (9-13 RPE on Borg scale) with intensity levels lowered during periods of flare-up; warm water exercise is especially beneficial;
- Low back pain—specific low back exercises supplemented with aerobic activity for cardiorespiratory health; ensure proper form and alignment; focus on good posture
- Older adults—decrease in maximum heart rate, muscle mass, basal metabolic rate, balance, and coordination are common in older adults; older adults should consult a physician prior to starting an exercise program; older adults without other underlying factors can follow [age-specific guidelines](#)
- Pre and postnatal—pregnant women with preeclampsia, vaginal bleeding, premature rupture of membranes, or risk factors for pre-term labor should not exercise; use light to moderate intensity; avoid activities that require extensive running, hopping, skipping, jumping, or bouncing, deep knee bends, full sit-ups, double leg raises, and contact sports; women should obtain medical clearance to begin exercise postpartum, and should begin slowly and work to increase duration
- Diabetes—monitor blood glucose levels and avoid exercise if fasting glucose levels are ≥ 250 mg/dL and ketosis is present or if blood glucose levels are > 300 mg/dL and no ketosis is present; avoid injecting insulin into the primary muscle groups that will be used during exercise; avoid exercise during peak insulin activity; exercise at the same time daily to establish a consistent routine; ensure that individuals with diabetes exercise with a partner and wear a medical ID; focus on hydration
- Metabolic syndrome—medical clearance prior to starting a program; exercise program should be designed around

guidelines for treatment of overweight and obese individuals; aerobic modes of activity including walking, elliptical training/ergometers, stationary cycling, and other non-weightbearing activities such as aquatic exercise are recommended

- Asthma—medical clearance; ensure rescue medication at all times; avoid asthma triggers prior to exercise; gradual and prolonged warm-up and cool-down; gradually increase intensity
- Osteoporosis—weightbearing and resistance activities with intensities that stimulate bone adaptation; avoid spinal flexion, jumping, high-impact aerobics, abducting or adducting legs against resistance
- Arthritis—focus on duration rather than intensity, ensure proper body alignment and exercise technique, put all joints through full range of motion (ROM) at least once daily; avoid exercise during periods of inflammation for rheumatoid arthritis patients
- Chronic Fatigue Syndrome—use a 1:3 exercise to rest ratio; limit deconditioned individuals to ADL; develop low-intensity activities
- Weight Management—low to moderate levels of intensity; dose-response relationship states the more exercise done the greater the response; recommended at least 150-200 minutes of physical activity/week
- Youth—obtain medical clearance and parental consent; proper supervision; ensure facility is safe for children prior to use; avoid single maximal lifts or sudden explosive movements; avoid competition with children; teach children how to breathe properly; allow for appropriate rest (at least two minutes between each exercise); encourage nutrition, hydration, and proper communication

Resources: VDOE Physical Education Instructional Resources <http://www.doe.virginia.gov/instruction/physed/index.shtml>; [Cardiovascular Disease Guidelines](#); [Stroke Guidelines](#); [Exercise for Fibromyalgia](#); [Guidelines for Cancer Survivors](#); [Guidelines for Pregnancy](#);

VA SOL Standard: FI.2 The student will apply knowledge of anatomy and movement principles and concepts to skill performance in strength training, conditioning, and fitness activities.

ESSENTIAL UNDERSTANDINGS

- Biomechanical movement strategies for the three planes of movement (sagittal, transverse, frontal).

<p><u>Required</u> <u>VDOE Standard(s)</u> <u>Student Friendly Language</u> What will the student know and be able to do?</p>	<p><u>Suggested</u> <u>Assessments</u></p>	<p><u>Terms (Vocabulary) and</u> <u>Content Information</u></p>	<p><u>Suggested</u> <u>Activities</u></p>
<p>FI.2.a—Identify the planes of movement and types of movement that occur in the frontal, sagittal, and transverse planes.</p> <p>I can identify the planes of movement, including the frontal plane, sagittal plane, and transverse plane.</p> <p>I can identify movements that occur in each plane of movement.</p>	<p>Assessment for Learning Written identification / definition of the planes of movement (class work, exit tickets)</p> <p>Assessment of Learning Analysis of movement forms to determine plane(s) of movement being executed</p>	<p>Frontal Plane—a vertical plane that divides the body in to anterior and posterior (front and back) sections. Movements that occur in the frontal plane include adduction, abduction, elevation, depression, inversion, and eversion.</p> <p>Sagittal Plane—a vertical plane that divides the body in to left and right sections. Movements that occur in the sagittal plane include flexion, extension, dorsiflexion and plantar flexion.</p> <p>Transverse Plane—a horizontal plane which divides the body in to superior and inferior (top and bottom) sections. Movements that occur in the transverse plane include rotation (internal and external), pronation, supination, horizontal flexion, and horizontal extension.</p>	<p>Analysis of multiple movement forms, to include basic and advanced skills and patterns in resistance training, physical conditioning, and fitness activities, to determine the plane(s) of movement for each</p>
<p>Resources: VDOE Physical Education Instructional Resources http://www.doe.virginia.gov/instruction/physed/index.shtml; https://www.acefitness.org/blog/2863/explaining-the-planes-of-motion https://www.nasm.org/docs/default-source/PDF/nasm-cpt-executive-summary-job-task-analysis.pdf?sfvrsn=2</p>			

VA SOL Standard: FI.2 The student will apply knowledge of anatomy and movement principles and concepts to skill performance in strength training, conditioning, and fitness activities.

ESSENTIAL UNDERSTANDINGS

- Use proper terminology for all exercise prescriptions.

<p>Required VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>Suggested Assessments</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>Suggested Activities</p>
<p>FI.2.b—Define common anatomical terms.</p> <p>I can identify common anatomical terms of movement, such as abduction / adduction, circumduction, extension / flexion, external rotation / internal rotation, hyperextension, and supination / pronation.</p> <p>I can identify common anatomical terms of body position such as inferior / superior, proximal / distal, and medial / lateral.</p>	<p>Assessment for Learning Definitions thorough class work, exit tickets, reflection assignments</p> <p>Assessment of Learning Cognitive post-assessment Create an word cloud using definitions in exercise prescription and anatomical movements</p>	<p>Abduction—movements away from the midline of the body</p> <p>Adduction—movements toward the midline of the body</p> <p>Circumduction—a combination of flexion, extension, abduction, and adduction; circular movement; performed at shoulder, hip, wrist, and ankle (e.g. tennis overhead serve)</p> <p>Distal—distant from the main mass of the body (e.g. the hands are at the distal end of the arms)</p> <p>Dorsiflexion—flexion of the ankle joint in an upward direction</p> <p>Extension—movement which increases the angle between the bones of a joint</p> <p>External Rotation—rotation away from the center of the body</p> <p>Flexion—movement which decrease the angle between the bones of a joint</p> <p>Hyperextension—extension which increases the angle between bones of a joint to a point which is greater than normal</p>	<p>Use of proper terminology through participation in basic and advanced skills and patterns in resistance training, personal conditioning, and fitness activities</p> <p>Use of proper terminology in course work, including exercise prescriptions</p>

Inferior— low, or lower in body position

Internal Rotation— rotation towards the center of the body

Lateral— furthest away from the midline of the body (e.g. the lateral collateral ligament of the knee is on the outside of the knee)

Medial— closest to the midline of the body (e.g. the medial collateral ligaments of the knee is on the inside of the knee)

Plantar flexion— flexion of the ankle joint in a downward direction

Pronation— internal rotation of the forearm or foot; pronation of the forearm/wrist will result in the thumb being medial; pronation of the foot will result in weight being borne on the medial part of the foot

Proximal— closest to the main mass of the body (e.g. the shoulder joint is at the proximal end of the arms)

Rotation— movement around a central axis

Superior— high, or higher in body position

Supination— external rotation of the forearm or foot; supination of the forearm/wrist will result in the thumb being lateral (carrying a cup of soup); supination of the foot will result in weight being borne on the lateral part of the foot.

Resources: VDOE Physical Education Instructional Resources <http://www.doe.virginia.gov/instruction/physed/index.shtml>; https://www.nasm.org/docs/default-source/PDF/nasm_cpt_executive_summary_job_task_analysis.pdf?sfvrsn=2

VA SOL Standard: FI.2 The student will apply knowledge of anatomy and movement principles and concepts to skill performance in strength training, conditioning, and fitness activities.

ESSENTIAL UNDERSTANDINGS

- Design exercise prescriptions using structural components of the musculoskeletal system (bone, skeletal muscle, and connective tissues) and muscles that comprise major muscle groups.
- Appraise joint movement: flexion, extension, hyperextension, adduction, abduction, rotation, circumduction, supination, pronation, inversion, eversion, elevation, depression, dorsi flexion, and plantar flexion.

<p>Required VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>Suggested Assessments</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>Suggested Activities</p>
<p>FI.2.c Identify major bones of the skeletal system.</p> <p>FI.2.d Identify and describe types of joints, including hinge and multiaxial (ball and socket).</p> <p>I can identify major bones being used in a variety of physical activities.</p> <p>I can identify joints being used in a variety of physical activities.</p> <p>I can describe the movements associated with hinge and multiaxial joints.</p>	<p>Assessment for Learning Written identification of major bones and joints/joint types</p> <p>Description of joints and their associated movements</p> <p>Assessment of Learning Create Google Slides for the major bones and joints/joint types and describe associated movements</p>	<p><u>Major bones of skeletal system:</u></p> <p>Skull—cranium, mandible, maxilla Shoulder girdle—clavicle, scapula Arm—humerus, radius, ulna Hand—carpals, metacarpals, phalanges Chest—sternum, ribs Spine—cervical vertebrae (7), thoracic vertebrae (12), lumbar vertebrae (5), sacrum (5 vertebrae fused together), coccyx Pelvis—ilium, ischium, pubis Leg—femur, tibia, fibula, patella Ankle—talus, calcaneus Foot—tarsals, metatarsals, phalanges</p> <p><u>Joint types:</u></p> <p>Hinge—joint in which movement is restricted to only one plane; allows for flexion/extension movements; e.g. elbow, knee</p> <p>Multiaxial (ball and socket)—joint in which a spherical head lies in a socket, allowing for multidirectional movement; allows for flexion/extension, abduction/adduction, and rotation movements; e.g. shoulder, hip</p>	<p>Identification of bones and joints being used in movement skills and patterns of basic and advanced resistance training, personal conditioning, and fitness activities.</p>

Resources: VDOE Physical Education Instructional Resources <http://www.doe.virginia.gov/instruction/physed/index.shtml>;
<http://www.teachpe.com/anatomy/skeleton.php>; <http://www.teachpe.com/anatomy/joints.php> <https://www.nasm.org/docs/default-source/PDF/nasm-cpt-executive-summary-job-task-analysis.pdf?sfvrsn=2>

VA SOL Standard: FI.2 The student will apply knowledge of anatomy and movement principles and concepts to skill performance in strength training, conditioning, and fitness activities.

ESSENTIAL UNDERSTANDINGS

- Classify three types (skeletal, smooth, cardiac) of muscle tissue in the body.
- Roles muscles can assume (agonist, antagonist, stabilizer, and neutralizer).
- Three major types of muscular contractions (isometric, isotonic, and isokinetic) and the two types of isotonic contractions (concentric and eccentric) and their use in training.

<p>Required VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>Suggested Assessments</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>Suggested Activities</p>
<p>FI.2.e Explain muscle structure and function, to include major muscles of the body, terms related to muscles, and muscle origins and insertions.</p> <p>I can identify parts of the muscle and explain how those muscle anatomy functions in the musculoskeletal system.</p> <p>I can explain the points of origin and insertion for major muscles of the body.</p> <p>I can explain muscular terms, such as atrophy, hypertrophy, and hyperplasia.</p> <p>FI.2.f Explain movements that result based on muscle origin and insertion.</p> <p>I can explain that points of origin tend to be stationary and that points of insertion tend to be moved by muscle contraction—e.g., the point of origin of the biceps brachii is the scapula, which stays stationary while the biceps contracts, while the point of insertion is the radius which is moved to reduce the angle of the elbow when the biceps contracts.</p>	<p>Assessment for Learning Identification of major muscles, muscle origins and insertions Identification of muscle anatomy Definition of muscular terms Identification of muscle contractions</p> <p>Assessment of Learning Create pamphlet with explanation and depiction of the sliding filament theory of muscle contraction and agonist, and antagonist muscles and muscle origins, and insertions during movements</p>	<p>See Personal Fitness I/II for major muscle identification</p> <p><u>Terms related to muscles:</u> Agonist Muscle—muscle causing body to move (e.g. biceps brachii in a biceps curl movement)</p> <p>Antagonist Muscle—muscle lengthening causing body to move (e.g. triceps brachii in a biceps curl movement)</p> <p>Atrophy—decrease in muscle mass</p> <p>Concentric Contraction—contraction in which force causes muscle to shorten and change angle of a joint</p> <p>Eccentric Contraction—muscle elongates while under tension due to an opposing force greater than the muscle generates</p> <p>Hypertrophy—increase in muscle mass</p> <p>Hyperplasia—increase the number of muscle cells present in tissue</p>	<p>Instruction on muscle identification, muscle anatomy, and muscle physiology</p>

<p>Fl.2.g— Explain how muscles contract, to include agonist and antagonist movements in relation to muscle contraction.</p> <p>I can explain concentric, eccentric, and isometric muscle contractions.</p> <p>I can explain that muscles work in pairs called agonists and antagonists to create movement, e.g. the biceps brachii is the agonist muscle, shortening to cause movement, in elbow flexion while the triceps brachii is the antagonist, elongating due to the force of the agonist.</p> <p>I can explain the process by which muscles contract by defining the sliding filament theory.</p>		<p><u>Insertion</u>— distal attachment point of a muscle; tends to be the more mobile structure of which the muscle is attached</p> <p><u>Isometric Contraction</u>— muscular force precisely matches the load, and no movement results</p> <p><u>Origin</u>— proximal attachment point of a muscle; tends to be the more stationary structure of which the muscle is attached</p> <p><u>Muscle Structure</u></p> <p><u>Actin</u>— thin protein filament that works with Myosin to cause muscles to contract</p> <p><u>Epimysium</u>— connective tissue surrounding muscle</p> <p><u>Fasciculi</u>— bundles of muscle fibers</p> <p><u>Motor Neuron</u>— a nerve cell that causes the muscles to produce movement</p> <p><u>Motor Units</u>— one motor neuron and all of the muscle fibers that it innervates</p> <p><u>Muscle fibers</u>— cylindrical muscle cell that contracts when stimulated</p> <p><u>Myofibril</u>— contractile unit of a muscle fiber, containing contractile proteins actin and myosin</p> <p><u>Myosin</u>— Thick protein filament that works with Actin to cause muscle contraction</p> <p><u>Sarcomere</u>— functional segment of a myofibril which shorten in a concentric muscle contraction</p> <p><u>Sliding Filament Theory</u> Method by which muscles contract; Release of energy causes Myosin filaments to pull Actin filaments and the Z line inwards toward the H zone of the sarcomere to cause muscle to contract and generate force</p>	
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Resources: VDOE Physical Education Instructional Resources <http://www.doe.virginia.gov/instruction/physed/index.shtml>;
http://www.teachpe.com/anatomy/types_of_muscle_contractions.php; http://www.teachpe.com/anatomy/sliding_filament.php;
http://www.teachpe.com/anatomy/structure_skeletal_muscle.php; http://www.teachpe.com/gcse_anatomy/muscles.php; <http://www.exrx.net/Lists/Directory.html>

VA SOL Standard: FI.2 The student will apply knowledge of anatomy and movement principles and concepts to skill performance in strength training, conditioning, and fitness activities.

ESSENTIAL UNDERSTANDINGS

- Common postural deviations and associated bone/skeletal muscle involvements.
- Common assessments used to measure range of motion and to identify postural abnormalities.

<p>Required VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>Suggested Assessments</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>Suggested Activities</p>
<p>FI.2.h Identify and explain curvatures of the spine.</p> <p>I can identify the natural curvatures of the spine, including the cervical, thoracic, lumbar, sacral, and coccygeal curvatures.</p> <p>I can identify unnatural curvatures, such as curvatures that occur with kyphosis, lordosis, sway back, flat back, and scoliosis.</p> <p>I can explain that unnatural curvatures of the spine may indicate muscular endurance issues in postural muscles or a potential imbalance at the joints.</p> <p>FI.2.i Perform and analyze postural evaluation of another individual.</p> <p>I can perform a postural evaluation, such as the plumb line evaluation, to determine the postural alignment of another individual.</p> <p>I can identify postural deviations and evaluate the probable causes of the deviations.</p>	<p>Assessment for Learning Identification of natural curvatures of spine; identification of unnatural curvatures of spine (kyphosis, lordosis, sway back, flat back, scoliosis); documentation of possible muscle imbalances associated with postural irregularities</p> <p>Assessment of Learning Performance of a postural evaluation / assessment on another individual</p>	<p>Kyphosis—excessive outward curvature of the spine which causes a hunching of the back</p> <p>Lordosis—excessive inward curvature of the spine</p> <p>Scoliosis—abnormal lateral curvature of the spine</p> <p>Muscle Imbalances:</p> <ul style="list-style-type: none"> Kyphosis / Lordosis: Facilitated/Hypertonic (Shortened)—hip flexors, lumbar extensors, anterior chest/shoulders, latissimus dorsi, neck extensors; Inhibited (lengthened)—hip extensors, external obliques, upper back extensors, scapular stabilizers, neck flexors Flat back: Facilitated/Hypertonic (Shortened)—rectus abdominus, upper back extensors, neck extensors, ankle plantarflexors; Inhibited (lengthened)—iliacus / psoas major, internal oblique, lumbar extensors, neck flexors Sway back: Facilitated/Hypertonic (Shortened)—hamstrings, upper posterior obliques, lumbar extensors, neck extensors; Inhibited (lengthened)—iliacus / psoas major, rectus femoris, external oblique, upper back extensors, neck flexors <p>Plumb Line Assessment—static assessment in which fitness professional / observer uses a centered line to look at alignment in the frontal,</p>	<p>Postural evaluations of another individual</p>

sagittal, and transverse planes to note asymmetries

- Frontal Plane

- Anterior view — position plumb line with feet equidistant from line, using inside of heels as a point of reference; an individual with good posture will have the line pass equidistant between the feet and ankles, and will intersect the pubis, umbilicus, sternum, chin, maxilla (face), and forehead.

- Posterior view — position plumb line behind client with the line equidistant from the inside of the heels; an individual with good posture will have the line bisecting the sacrum and overlapping with the spinous processes of the vertebrae.

- Sagittal Plane

- Position individual between plumb line and wall with individual facing sideways and line immediately anterior to the lateral malleolus (ankle); with good posture, the plumb line will pass through the anterior third of the knee, the greater trochanter of the femur, and the acromioclavicular joint, and will pass slightly anterior to the mastoid process of the temporal bone (in line with, or slightly behind the earlobe).

Postural Deviations

1— Ankle pronation / supination and the effect on tibial and femoral rotation

- Pronation with internal rotation: places additional stresses on knee ligaments; eversion of calcaneus; tightens calf muscles and may limit dorsiflexion

- Supination with external rotation: tightness of gluteal muscles

2— Hip adduction

- Progressively lengthens and weakens adductor muscles

3— Pelvic tilting

- Anterior pelvic tilt: indicative of tight hip flexors and erector spinae muscles; indicative of a sedentary lifestyle

- Posterior pelvic tilt: indicative of an over dominant rectus abdominus and tight hamstrings
- 4— Shoulder positioning and the thoracic spine
 - Non level shoulders: indicative of tight upper trapezius muscles, levator scapulae, rhomboids
 - Asymmetry to midline: indicative of tight lateral trunk flexors
 - Protracted (forward and rounded shoulders): indicates tight serratus anterior, anterior scapulo-humeral muscles, and upper trapezius
 - Medially rotated humerus: indicates tightness in pectoralis major, latissimus dorsi, and subscapularis
 - Kyphosis and depressed chest: indicates tightness in shoulder adductors, pectoralis minor, rectus abdominus, and internal obliques
- 5— Head position
 - Forward head position (ear forward of acromioclavicular joint or cheekbone anterior to collarbone in sagittal view): indicates tightness in cervical spine extensors, upper trapezius, and levator scapulae

Resources: VDOE Physical Education Instructional Resources <http://www.doe.virginia.gov/instruction/physed/index.shtml>;
<https://www.acefitness.org/blog/2909/set-it-straight>; <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4064851/>; <https://www.acefitness.org/blog/3771/posture-and-movement-assessments>; http://www.acefitness.org/groupfitnessresources/pdfs/GFI_Assessments.pdf; <https://www.nasm.org/docs/default-source/PDF/nasm-cpt-executive-summary-job-task-analysis.pdf?sfvrsn=2>

VA SOL Standard: FI.2 The student will apply knowledge of anatomy and movement principles and concepts to skill performance in strength training, conditioning, and fitness activities.

ESSENTIAL UNDERSTANDINGS

- Sophisticated vs. practical screening techniques, and ability to discern in which setting they are most appropriate.
- Impact of acute or chronic skeletal and muscular conditions on exercise testing and design.
- Identify skeletal and muscular factors or conditions that may require input from a qualified healthcare provider prior to exercise testing and design.

<p>Required VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>Suggested Assessments</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>Suggested Activities</p>
<p>FI.2.j Perform and analyze movement evaluation for stability and mobility of the joints of another individual.</p> <p>I can perform movement evaluations such as the bend and lift screen, hurdle step screen, shoulder push stabilization screen, and thoracic spine mobility screen.</p> <p>I can analyze performances of movement evaluations to determine muscular inefficiencies.</p> <p>FI.2.m Identify contraindications to assessments of movement.</p> <p>I can identify contraindications to movement assessment, such as pain, inability to complete the assessment, and low levels of health-related fitness.</p>	<p>Assessment for Learning Identification of movement evaluations that can assess and evaluate stability and mobility; identification of indications of stability and mobility evaluations</p> <p>Assessment of Learning Stability and mobility assessments/evaluations</p>	<p>Bend and Lift Screen: individual will bend and lift at the ankle, knee, and hip to pick up two dowels / broomsticks from the floor, measuring symmetrical lower body extremity mobility and stability and upper body stability</p> <ul style="list-style-type: none"> — Lack of foot stability indicates tight soleus, lateral gastrocnemius, and peroneals; indicates weak medial gastrocnemius, gracilis, Sartorius, and tibialis group — Inward moving knees indicate tight hip adductors and tensor fascia latae; indicate weak gluteal muscles — Lateral shifting to one side indicates a dominance and muscle imbalance due to potential lack of stability in lower extremity during joint loading — Heels lifting from floor indicates tight plantar flexors — Movement being initiated at knees indicates quadriceps and hip flexor dominance and insufficient activation of gluteal muscles — Being unable to achieve parallel between tibia and torso indicates poor mechanics and a lack of dorsiflexion due to tight plantar flexors — Hamstrings contacting calves indicates muscle weakness and poor mechanics — Excessively arched back indicates tightness in hip flexors, back extensors, and latissimus dorsi; indicates weakness in rectus abdominus, gluteal muscles, and hamstrings — Rounded back indicates tightness in latissimus dorsi, teres major, pectoralis major and minor muscles; indicates weakness in upper back extensors 	<p>Movement evaluations, such as the bend and lift screen, hurdle step screen, shoulder push stabilization screen, and thoracic spine mobility screen.</p>

		<ul style="list-style-type: none"> — Downward facing head indicates increased hip and trunk flexion — Upward facing head indicates compression and tightness in cervical extensor region <p><u>Hurdle Step Screen:</u> individual will step and raise one heel to and over a string placed at a height of the middle of the tibia to assess the mobility of one limb and the stability of the contralateral limb, while maintain hip and torso stabilization</p> <ul style="list-style-type: none"> — Lack of foot stability indicates tight soleus, lateral gastrocnemius, and peroneals; indicates weak medial gastrocnemius, gracilis, Sartorius, tibialis group, gluteal group; indicates inability to control internal rotation — Inward moving knees indicate tight hip adductors and tensor fascia latae; indicate weak gluteal muscles — Hip adduction indicates tight hip adductors and tensor fascia latae; indicates weak gluteal muscles — Inward rotation of the hip indicates tight internal rotators and weak external rotators — A lateral torso tilt indicates a lack of core stability — A lack of ankle dorsiflexion indicates tight ankle plantarflexors and weak ankle dorsiflexors — A limb deviating from sagittal plane indicates tight raised-leg hip extensors and weak raised-leg hip flexors — A hiking of the raised hip indicates tight stance-leg hip flexors — An anterior tilt with forward torso lean indicates tight stance-leg hip flexors and weak rectus abdominus and hip extensors — A posterior tilt with hunched torso indicates tight rectus abdominus and hip extensors and weak stance-leg hip flexors <p><u>Shoulder Push Stabilization Screen:</u> individual will execute several push-ups to full arm extension to examine stabilization of the scapulothoracic joint and core control during closed kinetic chain movements.</p> <ul style="list-style-type: none"> — Winging in the scapula indicates an inability of the serratus anterior, trapezius, levator scapula, and rhomboids to stabilize the scapulae against the rib cage — Collapsing of the low back indicates a lack of core, abdominal, and low back strength 	
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		<p><u>Thoracic Spine Mobility Screen</u>: individual will sit with a dowel/ broomstick across shoulders and will rotate bilaterally to examine the bilateral mobility of the thoracic spine.</p> <ul style="list-style-type: none">— A bilateral discrepancy can indicate biomechanical issues such as a side dominance, differences in paraspinal development, and issues with torso rotation (possibly associated with some hip rotation)	
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Resources: VDOE Physical Education Instructional Resources <http://www.doe.virginia.gov/instruction/physed/index.shtml>;
<https://www.acefitness.org/blog/3771/posture-and-movement-assessments>; <http://www.acefitness.org/groupfitnessresources/pdfs/GFI-Assessments.pdf>

VA SOL Standard: FI.2 The student will apply knowledge of anatomy and movement principles and concepts to skill performance in strength training, conditioning, and fitness activities.

ESSENTIAL UNDERSTANDINGS

- Measurement devices to analyze flexibility.

<p>Required VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>Suggested Assessments</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>Suggested Activities</p>
<p>FI.2.k Perform and analyze flexibility evaluation of another individual.</p> <p>I can perform assessments such as the sit and reach test, Thomas test, passive straight leg raise, and shoulder mobility assessments to evaluate the flexibility of another individual.</p> <p>I can analyze the results of a flexibility evaluation to determine flexibility needs of an individual.</p>	<p>Assessment for Learning Identification of flexibility evaluations; identification of indications from flexibility evaluations</p> <p>Assessment of Learning Perform flexibility evaluation on another individual</p>	<p>Thomas Test: assesses the length of muscles involved in hip flexion (hip flexors / iliopsoas and rectus femoris) through moving from a sitting position to a laying position while pulling one thigh towards the chest</p> <ul style="list-style-type: none"> ● Observations include whether the back of the lowered thigh touches the table, whether the knee of the lowered leg achieves 80 degrees of flexion, and whether the knee remains aligned straight or falls into internal or external rotation <p>Passive Straight-Leg Raise (PSL): assesses the length of the hamstrings by attempting to lift one leg from a lying position to a 90° position; inability to reach at least 80° indicates tight hamstrings</p> <p>Shoulder Flexion / Extension Assessment: assesses shoulder flexion and extension through an individual lying flat on the back with elevated knees and moving the arms simultaneously into shoulder flexion and down to the ground (flexion); individual will lay prone and bring shoulders into extension while lifting arms off of floor (extension)</p> <ul style="list-style-type: none"> ● Inability to flex to 170° or discrepancies in limbs indicates tightness in pectoralis major and minor, latissimus dorsi, teres minor, rhomboids, and subscapularis 	<p>Performance of multiple flexibility evaluations on another individual, including:</p> <ul style="list-style-type: none"> ● Sit and reach ● Thomas Test for Hip Flexion and Quadriceps length ● Passive Straight-leg (PSL) Raise ● Shoulder Mobility Assessments <ul style="list-style-type: none"> ○ Flexion ○ Extension ○ Internal / External Rotation ○ Apley's Scratch Test

— Inability to extend to 50° or discrepancies between limbs indicates tightness in pectoralis major, abdominals, subscapularis, anterior deltoid, coracobrachialis, and biceps brachii

Internal / External Rotation Assessments: assess the internal (medial) and external (lateral) rotation of the humerus at the shoulder joint through rotating shoulders while laying down and arms bent at elbow

- Inability to externally rotate forearms to floor (90°) overhead indicates potential tightness in subscapularis as well as tightness in joint capsule and ligaments
- Inability to internally rotate forearms forward to 70° indicates potential tightness in infraspinatus and teres minor, as well as tightness in joint capsule and ligaments

Apley's Scratch Test: assesses simultaneous movements of the shoulder girdle (scapulothoracic and glenohumeral joints). Shoulder flexion, external rotation, and scapular abduction are measured by the individual raising one arm overhead, bending the elbow, and reaching behind the head with palms inward in an attempt to touch the medial border of the contralateral scapula, or to touch the vertebrae as low as possible. Shoulder extension, internal rotation, and scapular adduction are measured by the individual reaching an arm behind the lat and rotating the arm inward with the palm facing outward in an attempt to touch the inferior angle of the contralateral scapula, or to reach up the spine as far as possible

- Inability to reach specific landmarks indicates a need for further evaluation to determine the source of the limitation

VA SOL Standard: — FI.2 — The student will apply knowledge of anatomy and movement principles and concepts to skill performance in strength training, conditioning, and fitness activities.

ESSENTIAL UNDERSTANDINGS

- — Apply methods of measuring core strength.

<p>Required VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>Suggested Assessments</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>Suggested Activities</p>
<p>FI.2.1 — Perform and analyze balance and core strength evaluations of another individual.</p> <p>I can perform evaluations such as the Sharpened Romberg Test and the Stork-Stand Balance Test to understand the balance and core strength abilities of another individual.</p> <p>I can analyze data from balance and core strength evaluations.</p>	<p>Assessment for Learning Identification of balance and core strength evaluations Identification of criteria for balance and core strength evaluations</p> <p>Assessment of Learning Perform an analysis of balance and core strength evaluations on another individual</p>	<p>Sharpened Romberg Test: Assessment in which individual stands with one foot in front of the other, with arms crossed and eyes closed in order to assess static balance by standing with a reduced base of support while removing visual sensory information; the individual will be timed and a time of less than 30 seconds is indicative of inadequate static balance and postural control.</p> <p>Stork-Stand Balance Test: assessment in which individual stands in a stork position with the heel elevated, meant to assess static balance; Rating Scale: — Excellent: Female: > 30 seconds, Male: > 50 seconds — Good: Female: 25-30 seconds; Male: 41-50 seconds — Average: Female: 16-24 seconds; Male: 31-40 seconds — Fair: Female: 10-15 seconds; Male: 20-30 seconds — Poor: Female: < 10 seconds; Male: < 20 seconds</p>	<p>Performance of balance and core strength evaluations, such as the Sharpened Romberg Test and the Stork-Stand Balance Test</p>

Resources: VDOE Physical Education Instructional Resources <http://www.doe.virginia.gov/instruction/phyped/index.shtml>;
<https://www.acefitness.org/blog/3771/posture-and-movement-assessments>; http://www.acefitness.org/groupfitnessresources/pdfs/GFI_Assessments.pdf

VA SOL Standard: FI.2 The student will apply knowledge of anatomy and movement principles and concepts to skill performance in strength training, conditioning, and fitness activities.

ESSENTIAL UNDERSTANDINGS

- Skill in administering fitness assessment tests.
- Terminology, purpose, and procedures and methods of assessing cardiorespiratory, strength, and flexibility fitness levels.
- Apply and interpret statistical norms to determine cardiorespiratory, strength, and flexibility fitness levels.
- Implement appropriate modifications for fitness testing based on known characteristics (obesity, balance problems, age, etc.).

<p>Required VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>Suggested Assessments</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>Suggested Activities</p>
<p>FI.2.n—Perform assessments to evaluate the health-related components of fitness.</p> <p>I can perform assessments to evaluate an individual's cardiorespiratory endurance, muscular endurance, and muscular strength.</p> <p>FI.2.o—Perform assessments to evaluate the skill-related components of fitness.</p> <p>I can perform assessments to evaluate an individual's agility, balance, coordination, power, reaction time, and speed.</p> <p>FI.2.p—Identify contraindications to health-related and skill-related fitness assessments.</p>	<p>Assessment for Learning Identification of physiological assessments to measure cardiorespiratory endurance, muscular strength, muscular endurance, agility, balance, coordination, power, reaction time, and speed; Identification of contraindications to fitness assessments</p> <p>Assessment of Learning Perform fitness assessment evaluations for another individual</p>	<p>YMCA Submaximal Step Test—individual will step-up and down a 12-inch step at a rhythm of 96 beats per minute. At the conclusion, the individual will take their pulse for one minute, indicating relative levels of cardiorespiratory fitness.</p> <p><u>Contraindications to Fitness Assessments</u></p> <p>Cardiorespiratory Assessments</p> <ul style="list-style-type: none"> — Individuals who are extremely overweight — Individuals who are extremely deconditioned — Individuals with balance concerns — (YMCA) Individuals with balance concerns — (YMCA) Individuals that are short in stature <p>Assessments involving exertion (Cardiorespiratory, Muscular Strength, Muscular Endurance)</p> <ul style="list-style-type: none"> — Onset of angina or chest pain — Significant drop in systolic blood pressure — Significant increase in diastolic blood pressure 	<p>Criterion-referenced fitness assessments, such as the Fitnessgram @ assessments</p> <p>Cardiorespiratory assessments such as the YMCA Submaximal Step Test, YMCA Bike Test, Submaximal Talk Test, VT2 Threshold Test, Rockport Fitness Walking Test, and / or the 1.5 Mile Run Test</p> <p>Muscular endurance assessments such as the push-up test, curl up test, and body weight squat test</p> <p>Muscular strength assessments such as the 1 repetition max (RM), 3RM, Estimated 1RM strength assessments</p> <p>Agility assessments, e.g. shuttle run, pro-agility run, Illinois agility run</p> <p>Balance assessments, e.g. Romberg test</p> <p>Coordination assessments, e.g. stick test</p> <p>Body composition assessments, e.g. bioelectrical impedance analysis, BMI, skinfold measures</p> <p>Power assessments such as the vertical jump and broad jump</p> <p>Reaction time assessments, e.g. ruler drop test</p> <p>Speed assessments, e.g. 40 yard dash, 100 meter dash</p>

I can identify reasons to avoid certain fitness assessments.

- Excess fatigue
- Subject requests to stop

Resources: VDOE Physical Education Instructional Resources <http://www.doe.virginia.gov/instruction/physed/index.shtml>;
http://www.acefitness.org/groupfitnessresources/pdfs/GFI_Assessments.pdf; <http://www.exrx.net/Calculators/RiskClass.html>;
<http://www.exrx.net/Testing/YMCATesting.html>; <http://www.exrx.net/Testing.html>; <http://www.acefitness.org/blog/4842/physiological-assessments-muscular-fitness>; <http://www.acefitness.org/blog/4831/physiological-assessments-cardiovascular>;

VA SOL Standard: ~~Fl.2 The student will apply knowledge of anatomy and movement principles and concepts to skill performance in strength training, conditioning, and fitness activities.~~

ESSENTIAL UNDERSTANDINGS

- ~~Knowledge of various body fat measurement methods and the relative advantages/disadvantages of each method.~~
- ~~Ability to calculate and classify Body Mass Index results for men and women.~~

<p style="text-align: center;">Required VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p style="text-align: center;">Suggested Assessments</p>	<p style="text-align: center;">Terms (Vocabulary) and Content Information</p>	<p style="text-align: center;">Suggested Activities</p>
<p>Fl.2.q Identify and explain different methods for determining body composition.</p> <p>I can identify methods to determine body composition in a fitness setting.</p> <p>I can identify methods to determine body composition that are used in a laboratory setting.</p> <p>Fl.2.r Explain the benefits and challenges of different methods for determining body composition.</p> <p>I can analyze different methods of determining body composition and explain the benefits and challenges of multiple methods.</p>	<p>Assessment for Learning Identification of methods to determine body composition</p> <p>Assessment of Learning Create a Podcast about the benefits and challenges of multiple methods of determining body composition</p>	<p>Bioelectrical Impedance Analysis (BIA): measurement of the amount of impedance or resistance to electric current flow as it passes through the body. Impedance is greatest in fat tissue, giving an accurate assessment of fat mass in the body. BIA can be done using a device in a fitness setting; however, more accurate whole-body machines are found only in laboratory settings.</p> <p>Body Mass Index (BMI): Ratio of height to weight; easy to complete; does not take in to account lean mass and fat mass</p> <p>Dual-Energy X-Ray Absorptiometry (DEXA): whole-body scanning system that delivers low-radiation x-ray to determine bone and soft-tissue mass; very accurate, yet found only in laboratory settings</p> <p>Hydrostatic Weighing: Measurement that determines body fat through completely submerging an individual in water and measuring water displacement; seen as the gold standard of body composition measures, yet found primarily in laboratory settings</p> <p>Near-Infrared Interactance: Measurement of tissue composition through use of near-infrared</p>	<p>Instruction on multiple methods used to determine body composition, including:</p> <ul style="list-style-type: none"> ● Bioelectrical Impedance Analysis (BIA) ● Body Mass Index (BMI) ● Dual-Energy X-Ray Absorptiometry (DEXA) ● Hydrostatic Weighing ● Near-Infrared Interactance ● Skinfold Measurements ● Waist-to-Hip Ratio (WHR) ● Whole-Body Air Displacement Plethysmography (Bod-Pod) <p>Instruction should include methodology for body composition measurements, as well as benefits and challenges of each.</p>

		<p>light, usually at the biceps brachii. Easy to use in a fitness setting; however it is not seen to be as accurate as laboratory techniques</p> <p>Skinfold Measurements: Use of a caliper to pinch a fold of skin and fat at several sites on the body (see Jackson-Pollock for measurement sites), with measurements plugged in to an equation to calculate body fat percentage; easy to use in a fitness setting, and provides accurate measurements so long as the individual taking the measurements has been properly trained in this method.</p> <p>Waist to Hip Ratio (WHR): Measurement of the difference in body circumference at the waist and hip; ratios indicative of higher circumference in the waist are indicative of greater health risks.</p>	
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Resources: VDOE Physical Education Instructional Resources <http://www.doe.virginia.gov/instruction/physed/index.shtml>; <http://www.exrx.net/Testing.html>; <http://www.acefitness.org/blog/3815/physiological-assessments-anthropometric>; <http://www.exrx.net/Testing/BFTestComparisonStudy.html> <https://www.nasm.org/docs/default-source/PDF/nasm-cpt-executive-summary-job-task-analysis.pdf?sfvrsn=2>

VA SOL Standard: FI.2 The student will apply knowledge of anatomy and movement principles and concepts to skill performance in strength training, conditioning, and fitness activities.

ESSENTIAL UNDERSTANDINGS

- Knowledge of various fuel sources within the body and how they are mobilized during physical activity.
- Ability to use the energy balance equation to achieve goals (weight loss, weight management, weight gain) within an appropriately defined amount of time.
- Knowledge of characteristics of cardiorespiratory training (aerobic and anaerobic) and related physiological adaptations at rest and during submaximal and maximal exercise.
- Knowledge of the physiologic process for muscular strength gains and the adaptations that occur as a result of resistance training.

<p>Required VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>Suggested Assessments</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>Suggested Activities</p>
<p>FI.2.s Differentiate between recommendations for physical activity and training principles to meet goals for general health benefits, weight management, fitness improvements, and athletic performance enhancement.</p>	<p>Assessment for Learning Assess knowledge of recommendations for physical activity and training principles to meet goals for general health benefits, weight management, fitness improvements, and athletic performance enhancement</p> <p>Assessment of Learning Apply knowledge of anatomy and movement principles and concepts to skill performance in strength training, conditioning, and fitness activities planning</p>	<p>Review previous year's content and vocabulary as appropriate</p>	<p>Instruction on multiple methods used to determine body composition, including:</p> <ul style="list-style-type: none"> • Bioelectrical Impedance Analysis (BIA) • Body Mass Index (BMI) • Dual Energy X-Ray Absorptiometry (DEXA) • Hydrostatic Weighing • Near Infrared Interactance • Skinfold Measurements • Waist to Hip Ratio (WHR) • Whole Body Air Displacement Plethysmography (Bod Pod) <p>Instruction should include methodology for body composition measurements, as well as benefits and challenges of each.</p> <p>Analysis of basic and advanced skills in strength training, personal conditioning, and fitness activities for component skills and movement patterns applicable to skills specific to sports/activities</p>

Resources: VDOE Physical Education Instructional Resources <http://www.doe.virginia.gov/instruction/physed/index.shtml>; <https://www.nasm.org/docs/default-source/PDF/nasm-cpt-executive-summary-job-task-analysis.pdf?sfvrsn=2>

VA SOL Standard: FI.2 The student will apply knowledge of anatomy and movement principles and concepts to skill performance in strength training, conditioning, and fitness activities.

ESSENTIAL UNDERSTANDINGS

- Knowledge of impact of acute or chronic skeletal and muscular exercise on anaerobic or aerobic testing and design.
- Ability to recognize acute conditions that require referral to a healthcare provider.

<p>Required VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>Suggested Assessments</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>Suggested Activities</p>
<p>FI.2.t Explain the effects of acute and chronic exercise on aerobic and anaerobic energy systems.</p>	<p>Assessment for Learning</p> <ul style="list-style-type: none"> • Knowledge of impact of acute or chronic skeletal and muscular exercise on anaerobic or aerobic testing and design. <p>Assessment of Learning</p> <p>Ability to recognize acute conditions that require referral to a healthcare provider</p>	<p>Review previous year's content and vocabulary as appropriate</p>	<p>Review the body's response to an acute bout of exercise and long-term physiological adaptations to exercise training with an emphasis on endurance exercise. Provide an overview of skeletal muscle actions, muscle fiber types, and the major metabolic pathways involved in energy production. Discuss the importance of adequate fluid intake during exercise sessions to prevent impairments induced by dehydration on endurance exercise, muscular power, and strength. Review physiological adaptations that result from regular exercise training such as increases in cardiorespiratory capacity and strength. Emphasize the cardiovascular and metabolic adaptations that lead to improvements in maximal oxygen capacity.</p>
<p>Resources: VDOE Physical Education Instructional Resources http://www.doe.virginia.gov/instruction/physed/index.shtml; https://www.nasm.org/docs/default-source/PDF/nasm_cpt_executive_summary_job_task_analysis.pdf?sfvrsn=2</p>			

VA SOL Standard: FI.2 The student will apply knowledge of anatomy and movement principles and concepts to skill performance in strength training, conditioning, and fitness activities.

ESSENTIAL UNDERSTANDINGS

- Purpose and mechanisms of proper warm-up and cool-down techniques.
- Knowledge of components of a cardiorespiratory exercise program (mode, frequency, intensity, and duration)
- Provide appropriate cardiorespiratory training program progression.
- Skill in selection, proper application, and modification/amplification of resistance training exercises within abilities and goals.

<p align="center">Required VDOE Standard(s) Student Friendly Language</p> <p align="center">What will the student know and be able to do?</p>	<p align="center">Suggested Assessments</p>	<p align="center">Terms (Vocabulary) and Content Information</p>	<p align="center">Suggested Activities</p>
<p>FI.2.u Explain the body's response to cardiorespiratory exercise.</p> <p>FI.2.v Explain the body's response to resistance training.</p> <p>FI.2.w Explain the body's response to warm-up and cool-down.</p> <p>FI.2.x Explain blood pressure response related to acute exercise, chronic exercise, and changes in posture.</p>	<p>Assessment for Learning</p> <ul style="list-style-type: none"> • Knowledge of components of a cardiorespiratory exercise program (mode, frequency, intensity, and duration) and knowledge of components of a cardiorespiratory exercise program (mode, frequency, intensity, and duration). <p>Assessment of Learning</p> <p>Use an individual's current level of cardiorespiratory fitness to appropriately determine mode, intensity, and/or duration of cardiorespiratory training</p> <p>Incorporate an interval training program based on an individual's current fitness level and ability</p>		<p>Instruction concerning blood pressure response related to acute exercise, chronic exercise, and changes in posture.</p> <p>Systolic blood pressure increases linearly with increases in exercise intensity. In a healthy person with a 'normal' systolic pressure of 120 mmHg, vigorous aerobic fitness training can increase systolic pressure to 180 mmHg and take 10-20 minutes to return to resting levels. The higher the intensity of exercise, the greater the rise in heart rate will be, and consequently the larger the increase in systolic blood pressure</p> <p>With most types of exercise there is minimal change in diastolic blood pressure.</p>

Resources: VDOE Physical Education Instructional Resources <http://www.doe.virginia.gov/instruction/physed/index.shtml>; https://www.nasm.org/docs/default-source/PDF/nasm_cpt_executive_summary_job_task_analysis.pdf?sfvrsn=2; <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4914008/>

VA SOL Standard: FI.2 The student will apply knowledge of anatomy and movement principles and concepts to skill performance in strength training, conditioning, and fitness activities.

ESSENTIAL UNDERSTANDINGS

- Effect of reversibility or deconditioning on fitness and performance.

<p>Required VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>Suggested Assessments</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>Suggested Activities</p>
<p>FI.2.y Explain reversibility or deconditioning and the effect on fitness and performance.</p>	<p>Assessment for Learning Examine the many physiological changes that take place when one stops exercising.</p> <p>Assessment of Learning Investigate how reversibility or deconditioning effects fitness and performance for people of different age and levels of fitness.</p>	<p>Reversibility means that an athlete can lose the effects of training when they stop, and can gain the effects when they begin to train again.</p> <p>Deconditioning or detraining occurs once you stop exercising.</p> <p>Cardiovascular (aerobic) gains made with exercise— notably the heart's ability to pump blood more efficiently, the muscles' improved capacity to process oxygen, and the body's enhanced ability to use carbs for fuel.</p>	<p>Explore how quickly it takes for deconditioning to occur once an individual stops exercising factoring in age, fitness level, how long the individual has been exercising, and the type of exercise the individual was doing and at what level.</p> <p>Even two weeks of detraining can lead to a significant decline in cardio fitness, according to the American College of Sports Medicine. Not exercising for two to eight months leads to loss of virtually all fitness gains. In general, the loss of aerobic capacity occurs more rapidly than declines in muscle strength.</p>
<p>Resources: VDOE Physical Education Instructional Resources http://www.doe.virginia.gov/instruction/physed/index.shtml; https://www.nasm.org/docs/default-source/PDF/nasm-cpt-executive-summary-job-task-analysis.pdf?sfvrsn=2</p>			

VA SOL Standard: FI.2 The student will apply knowledge of anatomy and movement principles and concepts to skill performance in strength training, conditioning, and fitness activities.

ESSENTIAL UNDERSTANDINGS

- Types of exercise-related injuries such as strains, sprains, bursitis, shin splints, their signs/symptoms, and impact on exercise session.
- Safety rules and procedures for strength, and flexibility activities to prevent injury and/or overtraining.

<p style="text-align: center;">Required VDOE Standard(s) Student Friendly Language</p> <p style="text-align: center;">What will the student know and be able to do?</p>	<p style="text-align: center;">Suggested Assessments</p>	<p style="text-align: center;">Terms (Vocabulary) and Content Information</p>	<p style="text-align: center;">Suggested Activities</p>
<p>FI.2.z Define common musculoskeletal injuries.</p> <p>FI.2.aa Compare and contrast muscle fatigue and delayed onset muscle soreness (DOMS) with musculoskeletal injury/overuse.</p>	<p>Assessment for Learning Identify exercise-related injuries such as strains, sprains, bursitis, shin splints, their signs/symptoms, and impact on exercise session.</p> <p>Assessment of Learning</p> <ul style="list-style-type: none"> ○ Teach safety rules and procedures for strength, and flexibility activities to prevent injury and/or overtraining. ○ Identify cause and treatment for DOMS injuries. 	<p>Delayed-Onset Muscle Soreness (DOMS) is exercise-related muscle pain. It develops after excessive and unaccustomed exercise. It is particularly prevalent if that exercise has an eccentric component.</p> <p>A musculoskeletal injury affects the body's muscle or skeletal system and interferes with the body's ability to move freely and without pain.</p>	<p>Compare and contrast muscle fatigue and delayed onset muscle soreness (DOMS) with musculoskeletal injury/overuse</p> <p>Discuss the best treatment for DOMS</p>
<p>Resources: VDOE Physical Education Instructional Resources http://www.doe.virginia.gov/instruction/physed/index.shtml; https://www.ncbi.nlm.nih.gov/pubmed/12617692</p>			

VA SOL Standard: FI.2 The student will apply knowledge of anatomy and movement principles and concepts to skill performance in strength training, conditioning, and fitness activities.

ESSENTIAL UNDERSTANDINGS

Analyze the body's inflammatory response to exercise, upper-extremity injuries and lower-extremity injuries and manage the healing process.

<p>Required VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>Suggested Assessments</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>Suggested Activities</p>
<p>FI.2.bb— Explain inflammatory response and the healing process.</p> <p>FI.2.cc— Identify and describe upper-extremity injuries.</p> <p>FI.2.dd— Identify and describe lower-extremity injuries.</p>	<p>Assessment for Learning Explain inflammatory response and the healing process.</p> <p>Identify and describe upper-extremity injuries.</p> <p>Identify and describe lower-extremity injuries.</p> <p>Assessment of Learning Appropriately respond and treat injuries, and modify mode, frequency, intensity, and/or duration of exercise prescription.</p>	<p>Inflammatory response triggered by damage to living tissues</p>	
<p>Resources: VDOE Physical Education Instructional Resources http://www.doe.virginia.gov/instruction/physed/index.shtml;</p>			

VA SOL Standard: FI.2 The student will apply knowledge of anatomy and movement principles and concepts to skill performance in strength training, conditioning, and fitness activities.

ESSENTIAL UNDERSTANDINGS

- Modify program design for physical or functional limitations.

<p>Required VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>Suggested Assessments</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>Suggested Activities</p>
<p>FI.2.ee Identify and explain exercise modifications appropriate when participant is injured.</p>	<p>Assessment for Learning Explain exercise modifications appropriate when participant is injured.</p> <p>Assessment of Learning Appropriately modify exercise program design for physical or functional limitations.</p>	<p>Review previous year's vocabulary, as appropriate</p>	<p>Strength training activity skills may include:</p> <ul style="list-style-type: none"> — Free weight activities — Olympic lifts — Dumbbell / kettlebell activities — Manual resistance activities — Resistance band activities — Resistance machines <p>Specific physical conditioning and fitness activities referenced may include:</p> <ul style="list-style-type: none"> — Speed and agility activities — Endurance activities — Flexibility activities — Plyometric activities <p>Video feedback on basic and advanced skills in strength training, personal conditioning, and fitness activities</p> <p>Analysis of basic and advanced skills in strength training, personal conditioning, and fitness activities for component skills and movement patterns applicable to skills specific to sports/activities</p>

Resources: VDOE Physical Education Instructional Resources <http://www.doe.virginia.gov/instruction/phyped/index.shtml>;

VA SOL Standard: FI.3 The student will plan and describe a personalized fitness and conditioning program for others that includes skill-related and health-related fitness components to achieve and maintain a health-enhancing level of physical fitness for a lifetime.

ESSENTIAL UNDERSTANDINGS

- Limitations of health/medical history.
- Symptoms common for cardiovascular, metabolic, or pulmonary diseases.
- Conduct health and exercise history.

<p style="text-align: center;">Required VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p style="text-align: center;">Suggested Assessments</p>	<p style="text-align: center;">Terms (Vocabulary) and Content Information</p>	<p style="text-align: center;">Suggested Activities</p>
<p>FI.3.a Identify components of health/medical history</p> <p>FI.3.b Identify limitations of health/medical history.</p> <p>FI.3.c Identify signs and symptoms common for cardiovascular, metabolic, or pulmonary diseases.</p> <p>FI.3.d Conduct health and exercise history with another individual.</p>	<p>Assessment for Learning Identify the components of and limitations of a health/medical history.</p> <p>Assessment of Learning Evaluate clients' health/medical histories and identify signs and symptoms common for cardiovascular, metabolic, or pulmonary diseases.</p> <p>Investigate clients' exercise history and determine limitations.</p>	<p>Review previous year's vocabulary, as appropriate</p>	<p>Strength training activity skills may include:</p> <ul style="list-style-type: none"> — Free weight activities — Olympic lifts — Dumbbell / kettlebell activities — Manual resistance activities — Resistance band activities — Resistance machines <p>Specific physical conditioning and fitness activities referenced may include:</p> <ul style="list-style-type: none"> — Speed and agility activities — Endurance activities — Flexibility activities — Plyometric activities <p>Video feedback on basic and advanced skills in strength training, personal conditioning, and fitness activities</p> <p>Analysis of basic and advanced skills in strength training, personal conditioning, and fitness activities for component skills and movement patterns applicable to skills specific to sports/activities</p>

Resources: VDOE Physical Education Instructional Resources <http://www.doe.virginia.gov/instruction/physed/index.shtml>;

VA SOL Standard: FI.3 The student will plan and describe a personalized fitness and conditioning program for others that includes skill-related and health-related fitness components to achieve and maintain a health-enhancing level of physical fitness for a lifetime.

ESSENTIAL UNDERSTANDINGS

- Ability to recognize and translate desired outcomes into challenging, realistic, and measurable (SMART) fitness goals.

<p>Required VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>Suggested Assessments</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>Suggested Activities</p>
<p>FI.3.e Develop SMART fitness goals with another individual based on fitness assessments and personal desired outcomes.</p> <p>FI.3.f Apply FITT principle to improve or maintain cardiovascular and musculoskeletal fitness in healthy adults, seniors, youth, adolescents, and pregnant women.</p>	<p>Assessment for Learning Knowledge of the FITT principle to improve or maintain cardiovascular and musculoskeletal fitness in healthy adults, seniors, youth, adolescents, and pregnant women.</p> <p>Assessment of Learning Ability to provide appropriate cardiorespiratory training program progression, and use an individual's (adults, seniors, youth, adolescents, and pregnant women) current level of strength to appropriately determine mode, frequency, intensity, and progression of resistance training.</p>	<p>S.M.A.R.T. goal is a best practice framework for setting goals — they are Specific, Measurable, Achievable, Realistic/Relevant and Time-bound to clarify exactly what will be required for achieving success and to be able to share that clarification with others.</p> <p>The FITT principle is a set of rules that dictates the frequency, intensity, type and time of exercise.</p>	<p>Strength training activity skills may include:</p> <ul style="list-style-type: none"> — Free weight activities — Olympic lifts — Dumbbell / kettlebell activities — Manual resistance activities — Resistance band activities — Resistance machines <p>Specific physical conditioning and fitness activities referenced may include:</p> <ul style="list-style-type: none"> — Speed and agility activities — Endurance activities — Flexibility activities — Plyometric activities <p>Video feedback on basic and advanced skills in strength training, personal conditioning, and fitness activities</p> <p>Analysis of basic and advanced skills in strength training, personal conditioning, and fitness activities for component skills and movement patterns applicable to skills specific to sports/activities</p>

Resources: VDOE Physical Education Instructional Resources <http://www.doe.virginia.gov/instruction/physed/index.shtml>;

~~**VA SOL Standard:** FI.3 The student will plan and describe a personalized fitness and conditioning program for others that includes skill-related and health-related fitness components to achieve and maintain a health-enhancing level of physical fitness for a lifetime.~~

ESSENTIAL UNDERSTANDINGS

- ~~• Proper application, and modification/amplification of cardiorespiratory and resistance training exercises within abilities and goals.~~
- ~~• Progressive balance, speed, agility, and quickness training programs for clients at any level of training.~~
- ~~• Exercise testing for older adults before they begin engaging in a moderate to vigorous activity routine.~~

<p>Required VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>Suggested Assessments</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>Suggested Activities</p>
<p>FI.3.g—Develop functional programming for stability, mobility, and movement.</p> <p>FI.3.h—Develop a resistance-training program with appropriate progressions.</p> <p>FI.3.i—Develop a cardiorespiratory training program with appropriate progressions.</p> <p>FI.3.j—Evaluate fitness programming for others to determine effectiveness.</p> <p>FI.3.k—Identify contraindications of cardiorespiratory exercise.</p>	<p>Assessment for Learning Knowledge of how exercise testing provides a unique way of assessing physical capacity.</p> <p>Knowledge of acute cardiac contradictions to exercise, such as high blood pressure, unstable angina, uncontrolled abnormal heart rhythms, severe aortic stenosis, symptomatic heart failure and suspected or known dissecting aneurysm, pulmonary infarction, severe shortness of breath, inflammation or infection in the heart or any other systemic infection.</p> <p>Assessment of Learning Develop functional programming for cardiovascular, resistance exercise, stability, mobility, and movement training program with appropriate progressions for clients of various abilities.</p>	<p>Functional programming is an approach to training used a little or a lot to increase strength, correct imbalances, improve movement quality, and gain comfort and confidence in a variety of positions.</p> <p>Contraindications—there are two types of contraindications to exercise, absolute and relative. Absolute contraindications are risk of injury or even death, and far outweigh the benefits of exercise. Relative contraindications require accommodations for a person to safely exercise.</p>	<p>Strength training activity skills may include:</p> <ul style="list-style-type: none"> — Free weight activities — Olympic lifts — Dumbbell / kettlebell activities — Manual resistance activities — Resistance band activities — Resistance machines <p>Specific physical conditioning and fitness activities referenced may include:</p> <ul style="list-style-type: none"> — Speed and agility activities — Endurance activities — Flexibility activities — Plyometric activities <p>Video feedback on basic and advanced skills in strength training, personal conditioning, and fitness activities</p> <p>Analysis of basic and advanced skills in strength training, personal conditioning, and fitness activities for component skills and movement patterns applicable to skills specific to sports/activities</p>

Resources: VDOE Physical Education Instructional Resources <http://www.doe.virginia.gov/instruction/physed/index.shtml>;

VA SOL Standard: FI.3 The student will plan and describe a personalized fitness and conditioning program for others that includes skill-related and health-related fitness components to achieve and maintain a health-enhancing level of physical fitness for a lifetime.

ESSENTIAL UNDERSTANDINGS

- Mechanisms of flexibility training (muscle spindles, Golgi tendon organ, stretch reflex).
- Common assessments used to measure range of motion and to identify postural abnormalities and contraindications.

<p>Required VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>Suggested Assessments</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>Suggested Activities</p>
<p>FI.3.l— Define and explain exercises to improve range of motion, to include dynamic stretching, passive stretching, proprioceptive neuromuscular facilitation (PNF), and partner stretching.</p> <p>FI.3.m— Identify contraindications of range of motion exercises.</p>	<p>Assessment for Learning Knowledge of exercises to improve range of motion, to include dynamic stretching, passive stretching, proprioceptive neuromuscular facilitation (PNF), and partner stretching, and contraindications of range of motion exercises.</p> <p>Assessment of Learning Ability to teach and demonstrate flexibility exercises.</p> <p>Skill in selection, proper application, and modification/amplification of flexibility training exercises within abilities and goals for maintaining or improving range of motion/extensibility.</p>	<p>Dynamic stretching is the use of movement to stretch muscles before exercise, and relies on momentum to engage the muscles, rather than holding a stretch at a standstill.</p> <p>Static stretching is stretching to the farthest point and holding the stretch.</p> <p>Passive stretching, while also being a static stretch, where an external force is created by an outside force, such as a partner.</p> <p>Proprioceptive Neuromuscular Facilitation (PNF) involves both stretching and contracting. The muscle group to be stretched is positioned so muscles are stretched and under tension—then individual contracts the stretched muscle group for 5–6 seconds while a partner applies sufficient resistance to inhibit movement—contracted muscle group is then relaxed and a controlled stretch is applied for 20 to 30 seconds.</p>	<p>Explain the different types of stretching, and how stretches are either dynamic (meaning they involve motion) or static (meaning they involve no motion). Dynamic stretches affect dynamic flexibility and static stretches affect static flexibility (and dynamic flexibility to some degree).</p> <p>The different types of stretching are:</p> <ol style="list-style-type: none"> 1. ballistic stretching 2. dynamic stretching 3. active stretching 4. passive (or relaxed) stretching 5. static stretching 6. isometric stretching 7. PNF stretching
<p>Resources: VDOE Physical Education Instructional Resources http://www.doe.virginia.gov/instruction/physed/index.shtml;</p>			

VA SOL Standard: FI.3 The student will plan and describe a personalized fitness and conditioning program for others that includes skill-related and health-related fitness components to achieve and maintain a health-enhancing level of physical fitness for a lifetime.

ESSENTIAL UNDERSTANDINGS

- Indications and contraindications of exercise that combines body movement, mental focus, and controlled breathing to improve strength, balance, flexibility, and overall health.

<p>Required VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>Suggested Assessments</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>Suggested Activities</p>
<p>FI.3.n—Describe different forms of mind-body exercise (e.g. yoga, Pilates, tai chi).</p> <p>FI.3.o—Identify indications for use of mind-body exercise.</p> <p>FI.3.p—Identify contraindications for mind-body exercise.</p>	<p>Assessment for Learning</p> <p>Knowledge that when performed correctly, Yoga, Tai chi, and Pilates are traditional forms of mind-body exercises.</p> <p>Assessment of Learning</p> <p>Skill in recognizing pertinent abilities or physical limitations, and selecting and using appropriate training exercise that combines body movement, mental focus, and controlled breathing to improve strength, balance, flexibility, and overall health.</p>	<p>Yoga is a type of exercise in which you move your body into various positions in order to become more fit or flexible, to improve your breathing, and to relax your mind.</p> <p>Pilates is a system of exercises using special apparatus, designed to improve physical strength, flexibility, and posture, and enhance mental awareness.</p> <p>Tai chi is a Chinese martial art and form of stylized, meditative exercise, characterized by methodically slow circular and stretching movements and positions of bodily balance.</p>	<p>Instruction on mind-body exercises that combine body movement, mental focus, and controlled breathing to improve strength, balance, flexibility, and overall health.</p> <p>Explain how mind-body exercises are helpful in reducing stress, creating a sense of calm, decreasing chronic pain, and improving sleep patterns.</p> <p>Experience yoga, Pilates, and martial arts such as tai chi, tao kwan do, and qi gong which are the most commonly known types of physical activity classified as mind-body exercises.</p>

Resources: VDOE Physical Education Instructional Resources <http://www.doe.virginia.gov/instruction/physed/index.shtml>;

VA SOL Standard: FI.4 The student will accept responsibility for taking a leadership role as well as demonstrate the ability to follow, in order to accomplish group goals.

ESSENTIAL UNDERSTANDINGS

- Ability to interact effectively with people of different cultures.

<p>Required VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>Suggested Assessments</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>Suggested Activities</p>
<p>FI.4.a—Define and explain cultural competence and its importance in developing rapport with another individual.</p>	<p>Assessment for Learning Explain cultural competence and its importance in developing rapport with all clients.</p> <p>Assessment of Learning Skilled communicator with the ability to respond respectfully and effectively in a manner that recognizes, affirms, and values diversity and equity.</p>	<p>Cultural competence describes the ability of an individual or organization to interact effectively with people of different cultures.</p>	<p>Instruction on cultural competence improves sustainability by reinforcing the value of diversity, flexibility, and responsiveness in addressing the current and changing needs of clients, communities, and the personal fitness training environments.</p>
<p>Resources: VDOE Physical Education Instructional Resources http://www.doe.virginia.gov/instruction/physed/index.shtml;</p>			

VA SOL Standard: FI.4 The student will accept responsibility for taking a leadership role as well as demonstrate the ability to follow, in order to accomplish group goals.

ESSENTIAL UNDERSTANDINGS

- Effective teaching techniques for working with individuals of different learning styles, motivation levels, and physical activity levels

<p>Required VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>Suggested Assessments</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>Suggested Activities</p>
<p>FI.4.b—Demonstrate effective teaching techniques for working with individuals of different learning styles, motivation levels, and physical activity levels.</p> <p>FI.4.c—Explain learning styles and instructional strategies, to include visual, auditory, and kinesthetic.</p> <p>FI.4.d—Demonstrate effective and varied teaching techniques for a variety of exercises.</p>	<p>Assessment for Learning Knowledge of different teaching methods, teaching strategies, and levels in order to reach all clients effectively.</p> <p>Assessment of Learning Builds trusting relationships with clients by creating a safe, positive, and productive learning environment, and uses assessment and reflection strategies, and instructional rigor and relevance to improve physical performance.</p>	<p>Individual learning style refers to the preferential way in which the person absorbs, processes, comprehends and retains information</p>	<p>Explore intrinsic motivators that may include fascination with the subject, a sense of its relevance to life and the world, a sense of accomplishment in mastering it, and a sense of calling to it. Intrinsic motivation can be long lasting and self-sustaining when compared to extrinsic motivators that may include following doctors' or family members' advice.</p> <p>Discuss how deep learners respond well to the challenge of mastering a difficult and complex subject, and are intrinsically motivated students.</p> <p>Explain how every client learns differently.</p>

Resources: VDOE Physical Education Instructional Resources <http://www.doe.virginia.gov/instruction/physed/index.shtml>;

VA SOL Standard: FI.4 The student will accept responsibility for taking a leadership role as well as demonstrate the ability to follow, in order to accomplish group goals.

ESSENTIAL UNDERSTANDINGS

- Monitoring and recognizing signs of discomfort/distress during physical activity and responding appropriately.
- Ability to develop and follow established injury and/or emergency procedures including CPR, complete injury report form(s), and refer injured persons to an appropriate healthcare professional.

<p>Required VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>Suggested Assessments</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>Suggested Activities</p>
<p>FI.4.e Demonstrate and explain how to respond in an emergency situation.</p> <p>FI.4.f Identify signs of cardiac emergency.</p> <p>FI.4.g Demonstrate CPR and AED procedures for adults and children.</p> <p>FI.4.h Identify emergency situations requiring first aid.</p> <p>FI.4.i Demonstrate first aid techniques used in emergency situations.</p> <p>FI.4.j Identify and describe universal precautions and personal protection used during CPR and first aid.</p>	<p>Assessment for Learning Knowledge of first aid techniques and how to respond to a cardiac or other emergency.</p> <p>Assessment of Learning</p> <ul style="list-style-type: none"> ● Skill in monitoring and recognizing signs of discomfort/distress during physical activity and responding appropriately. ● Ability to develop and follow established injury and/or emergency procedures including CPR, complete injury report form(s), and refer injured persons to an appropriate healthcare professional. 	<p>Universal precautions refers to the practice, in medicine, of avoiding contact with patients' bodily fluids, by means of the wearing of nonporous articles such as medical gloves and face shields.</p>	<p>Discuss why client safety is a priority.</p> <p>Develop an Emergency Action Plan (EAP) that includes the identification of an Emergency Response Team (ERT), is specific to each fitness venue and reflects the following important considerations related to managing emergency situations:</p> <ul style="list-style-type: none"> ● emergency personnel ● emergency communication ● emergency equipment ● medical emergency transportation

Resources: VDOE Physical Education Instructional Resources <http://www.doe.virginia.gov/instruction/physed/index.shtml>;

VA SOL Standard: FI.5 The student will explain energy balance.

ESSENTIAL UNDERSTANDINGS

- Essential nutrients; and ability to list caloric value, function, major food sources, and RDA.
- Public healthy eating tools such as current US Dietary Guidelines for Americans and MyPlate.

<p><u>Required</u> <u>VDOE Standard(s)</u> <u>Student Friendly Language</u> What will the student know and be able to do?</p>	<p><u>Suggested</u> <u>Assessments</u></p>	<p><u>Terms (Vocabulary) and</u> <u>Content Information</u></p>	<p><u>Suggested</u> <u>Activities</u></p>
<p>FI.5.a Identify and explain dietary guidelines based on USDA recommendations.</p>	<p>Assessment for Learning Knowledge of dietary guidelines and healthy eating tools based on USDA recommendations.</p> <p>Assessment of Learning Skilled at recommending general nutritional guidelines for clients to gain general health benefits according to US Dietary Guidelines within scope of practice.</p>	<p>Dietary Guidelines reflects the current body of nutrition science, helps health professionals and policymakers guide Americans to make healthy food and beverage choices, and serves as the science-based foundation for vital nutrition policies and programs across the United States.</p>	<p>Explain how dietary Guidelines provides food-based recommendations to promote health, help prevent diet-related chronic diseases, and meet nutrient needs, and review all topics; https://www.cnpp.usda.gov/about-dietary-guidelines</p>
<p>Resources: VDOE Physical Education Instructional Resources http://www.doe.virginia.gov/instruction/physed/index.shtml;</p>			

VA SOL Standard: ~~FI.5 The student will explain energy balance.~~

ESSENTIAL UNDERSTANDINGS

- ~~• Roles and mechanisms of carbohydrate, fat, and protein with regard to aerobic and anaerobic metabolism.~~
- ~~• Diet macronutrient composition affects satiety, compliance, daily energy expenditure and weight control.~~

<p><u>Required</u> <u>VDOE Standard(s)</u> <u>Student Friendly Language</u> What will the student know and be able to do?</p>	<p><u>Suggested</u> <u>Assessments</u></p>	<p><u>Terms (Vocabulary) and</u> <u>Content Information</u></p>	<p><u>Suggested</u> <u>Activities</u></p>
<p>FI.5.b—Identify macronutrients used by the body for energy.</p> <p>FI.5.c—Identify the number of kilocalories found in macronutrients that provide energy.</p>	<p>Assessment for Learning Knowledge of general nutritional guidelines, how to analyze diet to achieve favorable body composition.</p> <p>Assessment of Learning Skill in recommending general nutritional guidelines for weight control/management, or to enhance sports performance.</p>	<p>Macronutrient—an essential nutrient that has a large minimal daily requirement, including proteins, fats, carbohydrates, and water.</p> <p>A calorie (or thermochemical calorie) is a unit of energy. There are 1,000 calories in a kilocalorie. The number of calories a person needs depends on age, height, weight, gender, and activity level. People who consume more calories than they burn off in normal daily activity or during exercise are more likely to be overweight.</p> <p>Gram of fat contains 9 calories.</p> <p>Protein and carbohydrates contain 4 calories per gram.</p>	<p>-Describe the three macronutrients required by humans: carbohydrates (sugar), lipids (fats), and proteins. Each of these macronutrients provides energy in the form of calories.</p> <p>Discuss the number of calories a person needs depends on a host of factors, including gender, age and activity level. For both genders and in all age groups, calorie recommendations go up by 200 per day for those who are moderately active and 400 for those who are very active. Moderate activity means the equivalent of walking 1.5 to 3 miles daily at a pace of 3 to 4 miles per hour, while an active person walks more than 3 miles day at that same pace or does an equivalent activity.</p>

Resources: VDOE Physical Education Instructional Resources <http://www.doe.virginia.gov/instruction/physed/index.shtml>;

VA SOL Standard: FI.5 The student will explain energy balance.

ESSENTIAL UNDERSTANDINGS

- Reliable sources of nutrition and weight management information.
- Answer questions, handle issues, and dispel myths regarding relationship of macronutrients to successful alteration of body composition.
- Resting or basal metabolic rate and its relevance to weight management.

<p>Required VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>Suggested Assessments</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>Suggested Activities</p>
<p>FI.5.d Explain energy balance and relationship to weight gain, weight loss, or weight maintenance.</p>	<p>Assessment for Learning Knowledge of resting metabolic rate and basal metabolic rate and its relevance to nutrition and weight management.</p> <p>Assessment of Learning Ability to use the energy balance equation to achieve goals (weight loss, weight management, weight gain) within an appropriately defined amount of time.</p> <p>Ability to perform basic calculations related to nutrient intake and caloric expenditure.</p>	<p>Resting metabolic rate refers to the minimal amount of caloric energy required to maintain basic physiological needs, such as breathing, heart rate, thinking and sleeping.</p>	<p>Instruction includes an explanation that energy balance is the relationship between “energy in” (food calories taken into the body through food and drink) and “energy out” (calories being used in the body for our daily energy requirements). This relationship, which is defined by the laws of thermodynamics, dictates whether weight is lost, gained, or remains the same. According to these laws, energy is never really created and it’s never really destroyed. Rather, energy is transferred between entities. We convert potential energy that’s stored within our food (measured in Calories or kcals) into three major “destinations”: work, heat and storage.</p>
<p>Resources: VDOE Physical Education Instructional Resources http://www.doe.virginia.gov/instruction/physed/index.shtml;</p>			

VA SOL Standard: FI.5 The student will explain energy balance.

ESSENTIAL UNDERSTANDINGS

- Influences of nutrition and physical activity on lipid and lipoprotein profiles.
- Clinical approach for reducing cardiovascular disease risk due to dyslipidemia is to prescribe changes in diet and physical activity.

<p>Required VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>Suggested Assessments</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>Suggested Activities</p>
<p>FI.5.e—Explain lipid and lipoprotein profiles.</p> <p>FI.5.f—Explain the influences of nutrition and physical activity on lipid and lipoprotein profiles.</p>	<p>Assessment for Learning Knowledge about the influences of nutrition and physical activity on lipid and lipoprotein profiles.</p> <p>Assessment of Learning Design individualized physical activity programs to enhance lipid lipoprotein profiles by reducing triglycerides (TG), increasing HDL, and lowering LDL/HDL for clients.</p>	<p>Lipid profile: A pattern of lipids in the blood. A lipid profile usually includes the levels of total cholesterol, high-density lipoprotein (HDL) cholesterol, triglycerides, and the calculated low-density lipoprotein (LDL) 'cholesterol.</p> <p>Lipoproteins are molecules that have a globular shape and are a combination of lipid and protein.</p> <p>The standard clinical approach for reducing cardiovascular disease risk due to dyslipidemia is to prescribe changes in diet and physical activity.</p>	<p>Students should understand that total blood cholesterol as a measure of the cholesterol components LDL (low-density lipoprotein) cholesterol, HDL (high-density lipoprotein) cholesterol, and VLDL (very low-density lipoprotein, which is the triglyceride-carrying component of lipids). Explain that triglycerides are the chemical form in which most fat exists in food and the body. Triglycerides are mostly carried in VLDL and chylomicrons. VLDL comes from the liver and also has cholesterol. Chylomicrons come from dietary fat.</p> <p>Along with cholesterol, triglycerides form plasma lipids. Excess triglycerides in plasma have been linked to the occurrence of coronary artery disease in some people. Like cholesterol, increases in triglyceride levels can be detected by plasma measurements. These measurements should be made after an overnight food and alcohol fast.</p>

Resources: VDOE Physical Education Instructional Resources <http://www.doe.virginia.gov/instruction/physed/index.shtml>;

VA SOL Standard: FI.5 The student will explain energy balance.

ESSENTIAL UNDERSTANDINGS

- Recommend appropriate hydration methods dependent on type and length of physical activity.
- Recognize dehydration symptoms and provide appropriate response(s).

<p><u>Required</u> <u>VDOE Standard(s)</u> <u>Student Friendly Language</u> What will the student know and be able to do?</p>	<p><u>Suggested</u> <u>Assessments</u></p>	<p><u>Terms (Vocabulary) and</u> <u>Content Information</u></p>	<p><u>Suggested</u> <u>Activities</u></p>
<p>FI.5.g—Explain the importance of hydration.</p> <p>FI.5.h—Explain how to maintain hydration in a physically active lifestyle, including effective methods to rehydrate after exercise.</p>	<p>Assessment for Learning Understand the importance of hydration and effective ways to rehydrate after exercise.</p> <p>Assessment of Learning Ability to identify and recommend appropriate hydration methods dependent on type and length of physical activity.</p>	<p>Dehydration happens when your body does not have as much water as it need to function properly.</p>	<p>-Instruction includes understanding that good hydration means getting the right amount of water before, during, and after exercise. Water regulates your body temperature and lubricates your joints. It helps transport nutrients to give you energy and keep you healthy. Your body cannot perform at its highest level if you are not hydrated,</p>
<p>Resources: VDOE Physical Education Instructional Resources http://www.doe.virginia.gov/instruction/physed/index.shtml;</p>			

VA SOL Standard: ~~FI.5 The student will explain energy balance.~~

ESSENTIAL UNDERSTANDINGS

- ~~• Effects of megadosing with certain vitamins and minerals.~~
- ~~• Knowledge of ergogenic aids' effects on physical performance and their potential risks.~~

<p>Required VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>Suggested Assessments</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>Suggested Activities</p>
<p>FI.5.i Identify and describe common supplements and ergogenic aids used by individuals in training programs.</p> <p>FI.5.j Explain potential risks, benefits, and contraindications associated with the use of supplements and ergogenic aids.</p>	<p>Assessment for Learning Knowledge of common supplements and ergogenic aids used by individuals in training programs, and potential risks, benefits, and contraindications associated with the use of supplements and ergogenic aids.</p> <p>Assessment of Learning</p> <ul style="list-style-type: none"> • Respond to questions and guide clients about the use of dietary supplements, the effects of ergogenic aids on physical performance and their potential risks based on objective scientific facts. 	<p>Dietary supplements are an umbrella for a wide range of products, including weight loss pills and substances that promise to increase physical performance.</p> <p>Ergogenic aids are classified as nutritional, pharmacologic, physiologic, or psychological; methods to enhance athletic performance range from use of accepted techniques, such as carbohydrate loading to illegal and unsafe approaches such as use of anabolic androgenic steroids.</p>	<p>Instruction includes potential risks, benefits, and contraindications associated with the use of supplements and ergogenic aids.</p> <p>Have students investigate dietary supplements used to enhance exercise and athletic performance that come in a variety of forms, including tablets, capsules, liquids, powders, and bars. Many of these products contain numerous ingredients in varied combinations and amounts. Among the more common ingredients are amino acids, protein, creatine, and caffeine.</p>
<p>Resources: VDOE Physical Education Instructional Resources http://www.doe.virginia.gov/instruction/physed/index.shtml;</p>			

VA SOL Standard: FI.5 The student will explain energy balance.

ESSENTIAL UNDERSTANDINGS

- Methods of measuring body composition (BMI, skinfold calipers and waist circumference measurement).
- Ability to calculate and classify Body Mass Index results for men and women.

<p>Required VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>Suggested Assessments</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>Suggested Activities</p>
<p>FI.5.k Explain the relationship between body composition and health.</p> <p>FI.5.l Define terms related to body composition including <i>body mass index (BMI)</i>, <i>lean body mass</i>, and <i>fat mass</i>.</p>	<p>Assessment for Learning Knowledgeable about the relationship between body composition and health.</p> <p>Assessment of Learning Skillfully convey relevant and reputable information and resources regarding nutrition, weight control, and lifestyle issues.</p>	<p>Body mass index (BMI) is a measure of body fat based on height and weight.</p> <p>Lean body mass, refers to all of your body components except fat—it includes your body's water, bone, organs and muscle content. However, when it comes to weight management and body composition, fat-free mass refers primarily to muscle mass.</p> <p>Fat mass is total body fat, and can be measured with dual energy absorptiometry or bioelectrical impedance techniques.</p>	<p>Discuss benefits of having a healthy body composition:</p> <ul style="list-style-type: none"> Normal blood pressure level Improved quality of sleep Improved mood and self-confidence Increased energy and endurance throughout the day Reduced pain in joints, hips, and lower back Improved blood circulation—leading to lower risk for heart disease Higher fertility rates and lower risk for pregnancy-related complications Improved breathing, respiration, and lung function Improved glucose tolerance and insulin sensitivity <p>Review factors that can lead to altered body composition:</p> <ul style="list-style-type: none"> Lack of exercise and physical activity Eating large portion sizes and overeating in general High fat, high-sugar diet Lack of whole foods in the diet such as fruits, vegetables, nuts, seeds, legumes Excessive alcohol intake

Resources: VDOE Physical Education Instructional Resources <http://www.doe.virginia.gov/instruction/physed/index.shtml>;

VA SOL Standard: FI.5 The student will explain energy balance.

ESSENTIAL UNDERSTANDINGS

- Influences on body composition.
- Inappropriate weight loss methods.
- Effective goal setting and behavior reinforcement techniques.

<p style="text-align: center;">Required VDOE Standard(s) Student Friendly Language</p> <p style="text-align: center;">What will the student know and be able to do?</p>	<p style="text-align: center;">Suggested Assessments</p>	<p style="text-align: center;">Terms (Vocabulary) and Content Information</p>	<p style="text-align: center;">Suggested Activities</p>
<p>FI.5.m—Explain influences on body composition, including diet, exercise, and behavior modification.</p> <p>FI.5.n—Identify and explain inappropriate weight loss methods.</p>	<p>Assessment for Learning Knowledge of influences on body composition, including diet, exercise, and behavior modification, and inappropriate weight loss methods.</p> <p>Assessment of Learning Ability to help an individual identify their barrier(s) to making positive behavior changes; and skill in assisting them to address/remove barrier(s).</p> <p>Ability to identify and use adherence strategies for long-term maintenance of healthy behaviors.</p>	<p>Influences on body composition include gender, age, diet, activity level, and genes. Men tend to have more muscle mass than women and women tend to have more fat mass than men. As people age, lean muscle mass decreases, making it somewhat more difficult to maintain optimal body composition.</p>	<p>Provide instruction concerning healthy and unhealthy ways to lose weight.</p> <p>Have students research starvation, fasting, or very low-calorie diets.</p>
<p>Resources: VDOE Physical Education Instructional Resources http://www.doe.virginia.gov/instruction/physed/index.shtml;</p>			

VA SOL Standard: ~~Fl.5~~ The student will explain energy balance.

ESSENTIAL UNDERSTANDINGS

- ~~Common eating disorders and factors related to the female athlete triad.~~
- ~~Inappropriate weight loss methods.~~

<p><u>Required</u> <u>VDOE Standard(s)</u> <u>Student Friendly Language</u> What will the student know and be able to do</p>	<p><u>Suggested</u> <u>Assessments</u></p>	<p>Terms (Vocabulary) and Content Information</p>	<p><u>Suggested</u> <u>Activities</u></p>
<p>Fl.5.o—Identify and explain eating disorders including anorexia nervosa and bulimia nervosa.</p> <p>Fl.5.p—Explain the female athlete triad.</p>	<p>Assessment for Learning Knowledge about disordered eating and the female athlete triad.</p> <p>Assessment of Learning Skill in understanding and leveraging an individual's actions/reactions to bring about positive behavior change and recognize acute conditions that require referral to a healthcare provider.</p>	<p>The Female Athlete Triad is a syndrome of three interrelated conditions that exist on a continuum of severity including energy deficiency with or without disordered eating, menstrual disturbances/amenorrhea, and bone loss/osteoporosis.</p> <p>Anorexia Nervosa is a psychological and possibly life-threatening eating disorder defined by an extremely low body weight relative to stature, extreme and needless weight loss, illogical fear of weight gain, and distorted perception of self-image and body.</p> <p>Bulimia nervosa is a psychological and possibly life-threatening eating disorder in which people (bulimics) consume large amounts of food (binge) and then trying to rid themselves of the food and calories (purge) by fasting, excessive exercise, vomiting, or using laxatives.</p>	<p>-Explain eating disorders including anorexia nervosa and bulimia nervosa.</p> <p>Discuss the female athlete triad.</p>

Resources: VDOE Physical Education Instructional Resources <http://www.doe.virginia.gov/instruction/physed/index.shtml>; https://www.nasm.org/docs/default-source/PDF/nasm_cpt_executive_summary_job_task_analysis.pdf?sfvrsn=2

VA SOL Standard: FI.6 The student will identify and explain professional and legal responsibilities to manage a personal business and be employed as a personal fitness instructor.

ESSENTIAL UNDERSTANDINGS

- Requirements to become a certified personal fitness instructor and maintain certification, to include certification requirements, and requirements to maintain certification.
- Engage in professional development to increase knowledge and skill and maintain certification.

<p>Required VDOE Standard(s) Student Friendly Language What will the student know and be able to do</p>	<p>Suggested Assessments</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>Suggested Activities</p>
<p>FI.6.a Identify and explain requirements to become a certified personal fitness instructor and maintain certification, to include certification requirements, requirements to maintain certification, and resources for professional development to increase knowledge and skill and maintain certification.</p>	<p>Assessment for Learning Knowledge about requirements to become a certified personal trainer (CPT) or fitness instructor, and how to maintain the credential through continuous professional development.</p> <p>Assessment of Learning Become and maintain a certified personal trainer or fitness instructor credential.</p>	<p>A NASM certified personal trainer has obtained certification from the National Academy of Sports Medicine, which means that they have taken a course and passed an exam on a broad range of personal training topics, including anatomy, physiology, and fitness basics.</p>	<p>Explain the requirements to become a certified personal fitness instructor and maintain certification, to include certification requirements, requirements to maintain certification, and resources for professional development to increase knowledge and skill and maintain certification.</p>
<p>Resources: VDOE Physical Education Instructional Resources http://www.doe.virginia.gov/instruction/physed/index.shtml; https://www.nasm.org/docs/default-source/PDF/nasm-cpt-executive-summary-job-task-analysis.pdf?sfvrsn=2</p>			

<p>VA SOL Standard: FI.6 The student will identify and explain professional and legal responsibilities to manage a personal business and be employed as a personal fitness instructor.</p> <p>ESSENTIAL UNDERSTANDINGS</p> <ul style="list-style-type: none"> Knowledge of boundaries that determine scope of practice for personal trainers and Knowledge of confidentiality practices Knowledge of current research in physical activity and exercise and their effects on various health conditions/outcomes 			
<p>Required VDOE Standard(s) Student Friendly Language What will the student know and be able to do</p>	<p>Suggested Assessments</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>Suggested Activities</p>
<p>FI.6.b Identify and explain the role, scope of practice, and code of ethics of a personal fitness instructor.</p> <p>FI.6.c Identify and describe professional responsibilities of a personal fitness instructor.</p>	<p>Assessment for Learning Knowledge of ethics and professional practices and maintain certification (continuing education, CPR, etc.) Knowledge of basic communication skills and characteristics necessary for effective teaching/exercise leadership</p> <p>Assessment of Learning http://www.csub.edu/reccenter/employment%20opportunities/Job%20Description%20-%20Personal%20Trainer.pdf Ability to discuss the importance of the health-related components of fitness Ability to provide relevant and reputable information and resources regarding nutrition, weight control, and lifestyle issues</p> <p>Provide clients with exercise and nutritional recommendations to meet their desired fitness goals.</p>	<p>Review previous year's vocabulary, as appropriate</p>	<p>Explain the role, scope of practice, and code of ethics of a personal fitness instructor.</p> <p>Describe professional responsibilities of a personal fitness instructor</p>
<p>Resources: VDOE Physical Education Instructional Resources http://www.doe.virginia.gov/instruction/phyped/index.shtml; https://www.nasm.org/docs/default-source/PDF/nasm_cpt_executive_summary_job_task_analysis.pdf?sfvrsn=2</p>			

VA SOL Standard: FI.6 The student will identify and explain professional and legal responsibilities to manage a personal business and be employed as a personal fitness instructor.

ESSENTIAL UNDERSTANDINGS

- Knowledge of safety rules and procedures for using exercise equipment
- Prevent worksite injuries or illnesses by both identifying workplace hazards and creating guidelines to mitigate risks
- Facility maintenance deals with proper staff education and training on handling bloodborne pathogens. Responsibility for proper OSHA adherence lies mainly with the fitness center manager/owner. †

<p>Required VDOE Standard(s) Student Friendly Language What will the student know and be able to do</p>	<p>Suggested Assessments</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>Suggested Activities</p>
<p>FI.6.d Identify and describe necessary facility maintenance.</p> <p>FI.6.e Explain and describe appropriate inspection and care of equipment to maintain safety and maximize use.</p> <p>FI.6.f Identify and describe appropriate facility supervision to maintain safety of users.</p>	<p>Assessment for Learning Educate clients and enforce policies regarding safe and proper use of equipment and facilities.</p> <p>Assessment of Learning Instruct clients on basic exercise physiology and inform them as to proper lifting and exercise technique. Ability to inspect and maintain fitness equipment and physical activity surroundings to ensure safety Ability to teach and demonstrate use of resistance training equipment (weight machines, free weights, small apparatuses, resistance tubing, others) using proper exercise form and technique</p>	<p>Review previous year's vocabulary, as appropriate</p>	<p>Describe necessary facility maintenance.</p> <p>Explain appropriate inspection and care of equipment to maintain safety and maximize use.</p> <p>Identify appropriate facility supervision to maintain safety of users.</p>

Resources: VDOE Physical Education Instructional Resources <http://www.doe.virginia.gov/instruction/physed/index.shtml>; <https://www.nasm.org/docs/default-source/PDF/nasm-cpt-executive-summary-job-task-analysis.pdf?sfvrsn=2>

VA SOL Standard: FI.6 The student will identify and explain professional and legal responsibilities to manage a personal business and be employed as a personal fitness instructor.

ESSENTIAL UNDERSTANDINGS

- liability types and issues related to health history review, fitness assessment, and program design/implementation and methods of minimizing liability/risk.
- Liability waivers, general liability insurance
- Negligent acts defined as an act of omission or an act of commission.

<p>Required VDOE Standard(s) Student Friendly Language What will the student know and be able to do</p>	<p>Suggested Assessments</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>Suggested Activities</p>
<p>FI.6.g Identify and describe legal considerations of working as a personal fitness instructor.</p>	<p>Assessment for Learning Describe legal considerations of working as a personal fitness instructor</p> <p>Assessment of Learning Attained a level of competency and to adhere to the established standard of care</p>	<p>Act of Omission: Failing to act responsibly. Example: A trainer who fails to spot a client who is lifting a considerable amount of weight.</p> <p>Act of Commission: Performing an act or allowing an individual to perform an act that causes harm. Example: A trainer who asks a client to perform a squat jump, knowing that the client has a knee injury.</p> <p>–Liability waivers potentially provide protection for trainers, in the event a client sustains injury, preventing the client from recovering for damages.–</p> <p>General Liability Insurance is specific to the industry and protects in the case of injury due to slips and falls in fitness facilities.</p>	<p>–Provide instruction concerning the legal considerations of working as a personal fitness instructor</p>
<p>Resources: VDOE Physical Education Instructional Resources http://www.doe.virginia.gov/instruction/physed/index.shtml; https://www.nasm.org/docs/default-source/PDF/nasm-cpt-executive-summary-job-task-analysis.pdf?sfvrsn=2</p>			

VA SOL Standard: 11/12.1 — The student will study in depth and demonstrate mastery of movement skills and patterns in at least one lifetime physical activity per nine-week period.

ESSENTIAL UNDERSTANDINGS

- Demonstrating mastery in all basic skills and movement patterns allows for lifelong participation in selected activities.
- Demonstrating and combining advanced movement patterns allows for effective participation in selected lifelong activities.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>Suggested/Sample Assessments</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>Suggested/Sample Activities</p>
<p>11/12.1.a — Demonstrate mastery in all basic skills and movement patterns for the selected activity and the ability to use the skills with consistency in the appropriate setting.</p> <p>11/12.1.c — Demonstrate advanced movement patterns in self-selected movement or activity.</p> <p>11/12.1.e Analyze movement activities to identify component skills and movement patterns.</p> <p>I can demonstrate advanced movement patterns to effectively participate in (lifetime activity).</p>	<p>Assessment for Learning</p> <ul style="list-style-type: none"> • Skill rubric — Perform basic skills and advanced movement patterns correctly • Written — evaluation of basic skills and advanced movement pattern and indicators for success • Teacher observation with feedback <p>Assessment of Learning</p> <ul style="list-style-type: none"> • Cognitive Assessment — evaluation of basic skills and advanced movement patterns, indicators of success • Skill rubric — mastery of basic skills, demonstrating and combining advanced movement patterns <p style="text-align: center;">Sample rubric</p> <p>4 (<i>Beyond what was taught</i>) Displays mastery of advanced movement patterns while creatively manipulating others involved in game</p> <p>3 (<i>What was explicitly taught</i>) Demonstrates mastery of basic skills and movement patterns; applies advanced movement patterns effectively in dynamic situations</p> <p>2 (<i>Identify basic elements</i>) Performs critical elements of basic skills and advanced movement patterns in isolation</p> <p>1 (<i>With help/prompts/cues</i>) With teacher cues, student can demonstrate some/most of the critical elements</p>	<p>Review previous years' content as appropriate</p> <p>Content dependent upon activities offered or selected by student.</p>	<p>Movement activities in dynamic settings for each skill</p> <p>Display cues with visuals</p> <p>Display assessment rubrics when new skills are introduced</p>

VDOE Physical Education Instructional Resources <http://www.doe.virginia.gov/instruction/phyped/index.shtml>

VA SOL Standard: 11/12.1 — The student will study in depth and demonstrate mastery of movement skills and patterns in at least one lifetime physical activity per nine-week period.

ESSENTIAL UNDERSTANDING

- ~~Mastery of skills and advanced movement patterns requires meaningful analysis of skill level and well thought-out practice~~

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>Suggested/Sample Assessments</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>Suggested/Sample Activities</p>
<p>11/12.1.b Identify and apply appropriate skill practice and strategies of the selected activity at an advanced level.</p> <p>11/12.1.h Select and apply appropriate practice procedures to learn skills and movement patterns on activities of personal interest</p> <p>I can identify and apply effective ways to practice skills and movement patterns.</p> <p>11/12.1.f Conduct observations and skill analyses of others to improve skill performance.</p> <p>I can observe other students to help them improve their performance.</p>	<p>Assessment for Learning</p> <ul style="list-style-type: none"> • Written—Components of an appropriate practice plan for skills associated with (selected activity) • Peer observation of skills and movement concepts • Teacher observation with feedback <p>Assessment of Learning</p> <ul style="list-style-type: none"> • Written—Creation of practice plan for skills associated with (selected activity) • Peer observation of skills and movement concepts 	<p>Activity-specific terminology, dependent on activities offered or selected by students.</p>	<p>Participation in a variety of self-selected tactical, net/wall, striking/fielding, individual, fitness, outdoor, and/or lifetime activities</p>

Resources: VDOE Physical Education Instructional Resources <http://www.doe.virginia.gov/instruction/physed/index.shtml>;

VA SOL Standard: 11/12.1 – The student will study in depth and demonstrate mastery of movement skills and patterns in at least one lifetime physical activity per nine-week period.

ESSENTIAL UNDERSTANDINGS

- Demonstrating mastery in all basic skills and movement patterns allows for lifelong participation in selected activities.
- Demonstrating and combining advanced movement patterns allows for effective participation in selected lifelong activities.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>Suggested/Sample Assessments</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>Suggested/Sample Activities</p>
<p>11/12.1.d. Demonstrate the ability to use combined movement skills and strategies in self-selected movement activities.</p> <p>I can combine skills learned to participate in (selected activity) at a high level.</p>	<p>Assessment for Learning</p> <ul style="list-style-type: none"> • Skill rubric—Ability to demonstrate and combine movement patterns and strategies in dynamic settings • Written—evaluation of skills and strategies • Teacher observation with feedback <p>Assessment of Learning</p> <ul style="list-style-type: none"> • Cognitive Assessment—evaluation skill combination, skill strategies • Skill rubric—combining advanced movement patterns <p style="text-align: center;">Sample rubric</p> <p>4 <i>(Beyond what was taught)</i> Creatively manipulates others involved in game through combination of skills and strategies</p> <p>3 <i>(What was explicitly taught)</i> Combines advanced movement patterns and strategies effectively in dynamic situations</p> <p>2 <i>(Identify basic elements)</i> Demonstrates ability to combine basic movement patterns; exhibits some errors in combination of advanced movement patterns / strategies</p> <p>1 <i>(With help/prompts/cues)</i> With teacher cues, student can demonstrate some/most of the critical elements</p>	<p>Content dependent upon activities offered or selected by student</p>	<p>Movement activities in dynamic settings for each skill</p> <p>Display cues with visuals</p> <p>Display assessment rubrics when new skills are introduced</p>
<p>VDOE Physical Education Instructional Resources http://www.doe.virginia.gov/instruction/phyped/index.shtml</p>			

VA SOL Standard: 11/12.1—The student will study in-depth and demonstrate mastery of movement skills and patterns in at least one lifetime physical activity per nine-week period.

ESSENTIAL UNDERSTANDING

- Mastery of skills and advanced movement patterns requires meaningful analysis of skill level and well thought-out practice

<p>VDOE Standard(s) <u>Student Friendly Language</u> What will the student know and be able to do?</p>	<p><u>Suggested/Sample Assessments</u></p>	<p>Terms (Vocabulary) and Content Information</p>	<p><u>Suggested/Sample Activities</u></p>
<p>11/12.1.g—Create practice and game plans for optimal performance of movement patterns in self-selected sport/activity from the perspective of a coach, personal trainer, athlete, or other sport-related role.</p> <p>I can create practice plans and game plans, tactics, and strategies from the perspective of a (coach) for (selected activity).</p>	<p>Assessment for Learning</p> <ul style="list-style-type: none"> • Written—Components of an appropriate practice plan for (selected activity); components of a strategic / tactical plan • Peer observation of practice plans, skills and movement concepts • Teacher observation with feedback <p>Assessment of Learning</p> <ul style="list-style-type: none"> • Written—Creation of practice plans and game plans; Development of tactical performance plans for effective participation in (selected activity) 	<p>Tactic—an action or strategy carefully planned to achieve a specific end</p> <p>Activity-specific terminology, dependent on activities offered or selected by students.</p>	<p>Participation in tactical, net/wall, or striking/fielding activities utilizing offensive and defensive strategies</p>

Resources: VDOE Physical Education Instructional Resources <http://www.doe.virginia.gov/instruction/physed/index.shtml>;

VA SOL Standard: 11/12.1 — The student will study in depth and demonstrate mastery of movement skills and patterns in at least one lifetime physical activity per nine-week period.

ESSENTIAL UNDERSTANDING

- Analysis of skills and strategies used at high levels of performance or competition assists in the development of appropriate tactical strategies and allows for student success.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>Suggested/Sample Assessments</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>Suggested/Sample Activities</p>
<p>11/12.1.i — Apply appropriate strategies during performance, to include offensive and defensive strategies, game-specific situational strategies, and strategies for working more effectively with team members/partners.</p> <p>I can utilize appropriate tactics and strategies to be successful in (selected activity) and to work effectively with team members/partners.</p> <p>11/12.1.j — Compare and contrast strategies used in class performance of activities with college-level, pre-professional, or professional levels of activity.</p> <p>I can analyze tactics used and compare with tactics used at a high level of performance or competition.</p>	<p>Assessment for Learning</p> <ul style="list-style-type: none"> • Written — indicators of strategies used in game play; reflection on strategies, tactics • Skill rubric — utilizing appropriate strategies (self and/or peer analysis and feedback) • Teacher observation and feedback <p>Assessment of Learning</p> <ul style="list-style-type: none"> • Written — comparison of strategies used at a high level of performance or competition (college-level, pre-professional, professional) to the strategies used in (selected activity). • Skill rubric — application of appropriate tactics and strategies <p style="text-align: center;">SAMPLE RUBRIC</p> <p>4 <i>(Beyond what was taught)</i> Demonstrates mastery of advanced tactics and strategies in multiple settings/situations</p> <p>3 <i>(What was explicitly taught)</i> Appropriately applies tactics and strategies in dynamic and unpredictable situations</p> <p>2 <i>(Identify basic elements)</i> Applies some tactics and strategies in isolation.</p> <p>1 <i>(With help/prompts/cues)</i> With cues, can identify and demonstrate some tactics.</p>	<p>Activity-specific terminology; dependent on activities offered or selected by students.</p>	<p>Participation in tactical, net/wall, or striking/fielding activities utilizing offensive and defensive strategies</p>

Resources: VDOE Physical Education Instructional Resources <http://www.doe.virginia.gov/instruction/physed/index.shtml>;

VA SOL Standard: 11/12.1—The student will study in-depth and demonstrate mastery of movement skills and patterns in at least one lifetime physical activity per nine-week period.

ESSENTIAL UNDERSTANDINGS

- Utilizing movement principles such as physiological and biomechanical principles will assist in the improvement of performance.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>Suggested/Sample Assessments</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>Suggested/Sample Activities</p>
<p>11/12.1.k—Apply physiological and biomechanical principles to improve performance in sport/activity.</p> <p>I can identify physiological principles and apply to help improve performance in (selected activity).</p> <p>I can identify biomechanical principles and apply to help performance in (selected activity).</p>	<p>Assessment for Learning</p> <ul style="list-style-type: none"> Written description of biomechanical and physiological principles; self and peer assessment on physiological and biomechanical deficiencies <p>Assessment of Learning</p> <ul style="list-style-type: none"> Written description of biomechanical and physiological principles; self and peer assessment on physiological and biomechanical deficiencies; practice / improvement plans to correct deficiencies in movement principles 	<p>See Standard 11/12.2 for terms and information</p>	<p>May want to meet this standard in conjunction with 11/12.2.a and 11/12.2.b.</p> <p>Participation in a variety of self-selected tactical, net/wall, striking/fielding, individual, fitness, outdoor, and/or lifetime activities</p>

Resources: VDOE Physical Education Instructional Resources <http://www.doe.virginia.gov/instruction/physed/index.shtml>

VA SOL Standard: 11/12.2 The student will apply knowledge of body systems and movement principles, and concepts that aid in the improvement of movements skills and performance to specialized movement forms.

ESSENTIAL UNDERSTANDINGS

- Utilizing physiological and biomechanical principles will assist in the improvement of performance.
- Multiple factors can assist in the improvement of skills and performance in specialized movement forms.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>Suggested/Sample Assessments</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>Suggested/Sample Activities</p>
<p>11/12.2.a Explain and apply biomechanical and physiological principles that aid in the improvement of skills and performance in specialized movement forms, to include laws of motion, leverage, balance, weight transfer, speed, timing, accuracy, force, cardiac output, maximal oxygen consumption (VO₂ max), energy systems (aerobic and anaerobic) heart rate (resting, target, and recovery), caloric cost of activity, muscle contraction, static versus dynamic flexibility, and muscular strength versus muscular endurance.</p> <p>I can explain biomechanical and physiological principles.</p> <p>11/12.2.b Analyze performance to identify physiological and biomechanical deficiencies to</p>	<p>Assessment for Learning</p> <ul style="list-style-type: none"> • Written description of biomechanical and physiological principles; self and peer assessment on physiological and biomechanical deficiencies • Self and peer evaluation of skill performance to identify physiological and biomechanical deficiencies • Teacher observation with feedback <p>Assessment of Learning</p> <ul style="list-style-type: none"> • Written description of biomechanical and physiological principles; self and peer assessment on physiological and biomechanical deficiencies; practice / improvement plans to correct deficiencies in movement principles 	<ul style="list-style-type: none"> • Aerobic— with oxygen; aerobic system produces the largest amounts of energy, at the lowest intensity; used for long term, steady paced exercise and day to day activities • Anaerobic— without oxygen; the body relies on anaerobic processes for the first couple of minutes of activity; produces fast bursts of energy for short, powerful bursts; • Balance— created through center of gravity and center / base of support; • Caloric cost— amount of calories expended in a given activity • Cardiac output— volume of blood pumped by the heart per minute • Laws of motion— an object at rest tends to stay at rest or moves at continuous velocity unless external force is applied to it; force is equal to the mass of an object multiplied by the acceleration of the object (force causes change in velocity); for every action, there is an equal and opposite reaction. 	<ul style="list-style-type: none"> • Incorporate instruction of biomechanical and physiological principles warm up activities, instant activities, and skill practice during a variety of lifetime activities • Movement activities in isolated and dynamic movements for each skill

<p>include self-evaluation, peer evaluation, and teacher evaluation.</p> <p>I can analyze performance to indicate deficiencies in movement principles and apply movement principles to aid in the improvement and performance of (tennis).</p>	<ul style="list-style-type: none"> • Self and peer evaluation of skill performance to identify physiological and biomechanical deficiencies 	<ul style="list-style-type: none"> • Leverage—the exertion of force by means of a lever or an object used in the manner of a lever. • Muscle contraction—muscle fibers generating tension (traction); concentric contraction: contraction in which force causes muscle to shorten and change angle of a joint; eccentric contraction: muscle elongates while under tension due to an opposing force greater than the muscle generates; isometric contraction:—muscular force precisely matches the load, and no movement results • Recovery heart rate—heart's ability to return to a normal rate after a specific period of time after physical activity • Resting heart rate—number of contractions of the heart while the body is at complete rest • Static stretching—flexibility displayed without movement • VO₂ Max—the maximum amount of oxygen that the body can use 	
<p>Resources: VDOE Physical Education Instructional Resources http://www.doe.virginia.gov/instruction/physed/index.shtml; Caloric Cost—http://www.acefitness.org/updateable/update_display.aspx?pageID=593; Laws of Motion—https://www.nbclearn.com/portal/site/learn/science-of-nfl-football; VO₂ Max—http://www.teachpe.com/anatomy/vo2max.php;</p>			

VA SOL Standard: 11/12.2 The student will apply knowledge of body systems and movement principles, and concepts that aid in the improvement of movements skills and performance to specialized movement forms.

ESSENTIAL UNDERSTANDING

- To participate effectively in structured activities, students need to know and apply the rules and appropriate tactics.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>Suggested/Sample Assessments</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>Suggested/Sample Activities</p>
<p>11/12.2.c Explain the rules, safety protocols, relevant markings/lines for the field of play, offensive and defensive tactics, and common penalties and violations for selected activities.</p> <p>I can explain the rules and tactics of selected activities.</p>	<p>Assessment for Learning</p> <ul style="list-style-type: none"> Written—identification of safety protocols, field markings, tactics, penalties, and violations Observation on the application of rules and tactics <p>Assessment of Learning</p> <ul style="list-style-type: none"> Written—identification of safety protocols, field markings, tactics, penalties, and violations Observation on the application of rules and tactics 	<p>Activity-specific terminology, dependent on activities offered or selected by students.</p>	

Resources: SHAPE America National Standards and Grade-Level Outcomes; VDOE Physical Education Instructional Resources
<http://www.doe.virginia.gov/instruction/physed/index.shtml>

VA SOL Standard: 11/12.2 The student will apply knowledge of body systems and movement principles, and concepts that aid in the improvement of movements skills and performance to specialized movement forms.

ESSENTIAL UNDERSTANDINGS

- Effective warm-up and cool-down sequences allow students to safely and effectively participate in physical activity.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>Suggested/Sample Assessments</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>Suggested/Sample Activities</p>
<p>11/12.2.d Design, justify, and evaluate warm-up and cool-down sequences for selected activities.</p> <p>I can design warm-up and cool-down sequences to allow for safe and effective participation in selected activities.</p> <p>I can justify the need for appropriate warm-up and cool-down sequences.</p> <p>I can evaluate warm-up and cool-down sequences for their effectiveness.</p>	<p>Assessment for Learning</p> <ul style="list-style-type: none"> Written: identification of components in an appropriate warm-up and cool-down; justification for warm-up and cool-down; evaluation of warm-up and cool-down sequences Teacher observation with feedback <p>Assessment of Learning</p> <ul style="list-style-type: none"> Written: design warm-up and cool-down plan for selected activities; justification for warm-up and cool-down; evaluation of warm-up and cool-down sequences Teacher observation with feedback 	<p>See previous year's content</p>	
<p>Resources: SHAPE America National Standards and Grade Level Outcomes; VDOE Physical Education Instructional Resources http://www.doe.virginia.gov/instruction/physed/index.shtml</p>			

VA SOL Standard: 11/12.2 The student will apply knowledge of body systems and movement principles, and concepts that aid in the improvement of movements skills and performance to specialized movement forms.

ESSENTIAL UNDERSTANDING

- The principles of FITT and specificity, overload, and progression help students achieve the greatest possible benefit from physical activity.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>Suggested/Sample Assessments</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>Suggested/Sample Activities</p>
<p>11/12.2.e Apply the FITT (frequency, intensity, time, and type) principle to improve performance.</p> <p>I can apply the principles of frequency, intensity, time, and type to improve my performance and achieve the greatest benefit possible.</p> <p>11/12.2.f Apply the specificity, overload, and progression (SOP) principle to the design and performance of a physical activity program to achieve physical benefits.</p> <p>I can apply the principles of specificity, overload, and progression when designing a physical activity program to achieve the greatest benefit possible.</p>	<p>Assessment for Learning</p> <ul style="list-style-type: none"> Development of physical activity plans including FITT and SOP <p>Assessment of Learning</p> <ul style="list-style-type: none"> Analysis of physical activity plans including FITT and SOP 	<p>See previous year's content for information on FITT and SOP</p>	<p>Incorporate in to development of a personal fitness plan</p>
<p>Resources: SHAPE America National Standards and Grade-Level Outcomes; VDOE Physical Education Instructional Resources http://www.doe.virginia.gov/instruction/physed/index.shtml;</p>			

<p>VA SOL Standard: 11/12.2—The student will apply knowledge of body systems and movement principles, and concepts that aid in the improvement of movements skills and performance to specialized movement forms.</p> <p>ESSENTIAL UNDERSTANDING</p> <ul style="list-style-type: none"> Understanding the way that the body works in component skills and movement patterns assists in the improvement of skill performance. 			
<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>Suggested/Sample Assessments</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>Suggested/Sample Activities</p>
<p>11/12.2.g Analyze movement activities to identify component skills and movement patterns.</p> <p>I can identify the component skills and associated movement patterns of (golf) through self and peer evaluation.</p> <p>11/12.2.h Analyze feedback about personal performance to improve skills including self evaluation, peer evaluation, and teacher evaluation.</p> <p>I can analyze feedback from self, peer, and teacher evaluations and use that feedback to improve skill performance and movement patterns in (golf).</p>	<p>Assessment for Learning</p> <ul style="list-style-type: none"> Written—identification of component skills and movement patterns Self and peer evaluations Teacher observation with feedback <p>Assessment of Learning</p> <ul style="list-style-type: none"> Written—identification of component skills and movement patterns Analysis of feedback from evaluations to improve performance 	<p>Activity-specific terminology, dependent on activities offered or selected by students.</p>	
<p>Resources: VDOE Physical Education Instructional Resources http://www.doe.virginia.gov/instruction/physed/index.shtml;</p>			

VA SOL Standard: 11/12.3 The student will design, implement, and evaluate a personal fitness program for self, a college student, or an employee in a selected field of work.

ESSENTIAL UNDERSTANDINGS

- It is important to have an understanding of the baseline levels of fitness in order to create an individualized fitness plan.
- Appropriate and criterion-referenced assessments are vital in accurately determining present levels of fitness.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>Suggested/Sample Assessments</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>Suggested/Sample Activities</p>
<p>11/12.3.a Assess individual level of health-related fitness using a variety of appropriate measures (e.g. criterion-referenced wellness tests, BMI, Fitnessgram ®) and technology (heart rate monitors, pedometers, accelerometers, and bioelectrical impedance).</p> <p>I can use appropriate assessments to understand my level of health-related fitness.</p>	<p>Assessment for Learning</p> <ul style="list-style-type: none"> Baseline fitness / criterion-referenced assessments In-class measures utilizing technology Student analysis of personal levels of fitness <p>Assessment of Learning</p> <ul style="list-style-type: none"> Student analysis of personal levels of fitness 	<p>Bioelectrical impedance: a measurement used to calculate body composition through measuring the opposition of electrical flow in body tissues</p> <p>Criterion-referenced: assessments designed to measure student performance against a fixed set of predetermined criteria</p> <p>Five components of fitness: Body Composition Cardiorespiratory Endurance Flexibility Muscular Endurance Muscular Strength</p>	<p>Note: While students should experience fitness tests by the end of third grade, emphasis should be placed on form and tests should be used to understand importance of health-related fitness components; there should not be a focus on test results/scores (it is an inappropriate practice to grade students on fitness test results)</p>

Resources: SHAPE America National Standards and Grade-Level Outcomes; VDOE Physical Education Instructional Resources <http://www.doe.virginia.gov/instruction/physed/index.shtml>; Fitnessgram ® : <http://www.fitnessgram.net>;

VA SOL Standard: 11/12.3 The student will design, implement, and evaluate a personal fitness program for self, a college student, or an employee in a selected field of work.

ESSENTIAL UNDERSTANDING

- Having a proper fitness goal, using proper activity levels, and tracking progress are vital to the success of a personal fitness program.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>Suggested/Sample Assessments</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>Suggested/Sample Activities</p>
<p>11/12.3.b Evaluate and adjust activity levels to meet personal fitness goals.</p> <p>11/12.3.c Design and critique a personal fitness program, using available technology (e.g. electronic portfolios, tracking applications) and resources, to improve or maintain personal fitness levels in relation to the five components of fitness.</p> <p>I can design a personal fitness program, including present level of fitness, fitness goals, activities specific to meeting those goals, and a way of tracking progress.</p> <p>I can critique a personal fitness program to ensure that it is aligned with an individual's fitness goals.</p>	<p>Assessment for Learning</p> <ul style="list-style-type: none"> • Components of fitness program (baseline data, SMART goals) • Fitness tracking information <p>Assessment of Learning</p> <ul style="list-style-type: none"> • Personal fitness program • Critique of another individual's personal fitness program 	<p><u>Activity/Intensity Levels (such as)</u></p> <ul style="list-style-type: none"> • Intensity Level 1—Not moving (seated) • Intensity Level 2—Slow (walking) • Intensity Level 3—Medium (skipping, galloping) • Intensity Level 4—Fast (jogging/running) • Intensity Level 5—Very fast (sprinting) 	<p>Plan elements may include—goals (short and long term), measures, timeline, work plans, intensity levels, time, documentation of daily activities, documentation of conditioning activities (evidence of use of RPE and pacing), reassessments, reflection, revisions to goals and action plans as needed.</p> <p>Participate in a variety of physical activities at different intensity levels.</p> <p>Participate in a variety of physical activities to help students understand levels of intensity.</p>

Resources: SHAPE America National Standards and Grade-Level Outcomes; VDOE Physical Education Instructional Resources
<http://www.doe.virginia.gov/instruction/physed/index.shtml>; CDC <http://www.cdc.gov/physicalactivity/everyone/measuring/exertion.html>

VA SOL Standard 11/12.3 The student will design, implement, and evaluate a personal fitness program for self, a college student, or an employee in a selected field of work.

ESSENTIAL UNDERSTANDING

- Physical activity benefits the whole body and promotes wellness.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>Suggested/Sample Assessments</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>Suggested/Sample Activities</p>
<p>11/12.3.d Explain the physical and mental (emotional, social) benefits of physical fitness for lifelong health and wellness.</p> <p>I can justify participation in physical activity through explaining the physical, emotional, and social benefits that promote wellness.</p>	<p>Assessment of Learning</p> <ul style="list-style-type: none"> Written: List physical, emotional, social benefits of physical fitness and physical activity (exit tickets, short answer reflection activities) <p>Assessment for Learning</p> <ul style="list-style-type: none"> Written: List physical, emotional, social benefits of physical fitness and physical activity 	<p>See previous year's information on benefits of physical activity</p>	<p>May be incorporated in to fitness planning</p>
<p>Resources: ; VDOE Physical Education Instructional Resources http://www.doe.virginia.gov/instruction/physed/index.shtml;</p>			

VA SOL Standard 11/12.3—The student will design, implement, and evaluate a personal fitness program for self, a college student, or an employee in a selected field of work.

ESSENTIAL UNDERSTANDING

- Fitness plans should be differentiated to meet the specific needs of individuals.

<p>VDOE Standard(s) <u>Student Friendly Language</u> What will the student know and be able to do?</p>	<p><u>Suggested/Sample Assessments</u></p>	<p>Terms (Vocabulary) and Content Information</p>	<p><u>Suggested/Sample Activities</u></p>
<p>11/12.3.e Create fitness plans for a variety of individuals based on needs and goals.</p> <p>I can create a variety of differentiated fitness plans based on the needs and goals of individuals.</p>	<p>Assessment for Learning</p> <ul style="list-style-type: none"> • Components of fitness plans • Differentiation methods <p>Assessment of Learning</p> <ul style="list-style-type: none"> • Development of multiple fitness plans that are differentiated to meet the needs of individuals 	<p>See previous year's information for vocabulary</p>	<p>Participation in a variety of strength training, physical conditioning, and fitness activities to be able to differentiate activities to meet the goals of individuals</p>

Resources: VDOE Physical Education Instructional Resources <http://www.doe.virginia.gov/instruction/physed/index.shtml>;

VA SOL Standard 11/12.3— The student will design, implement, and evaluate a personal fitness program for self, a college student, or an employee in a selected field of work.

ESSENTIAL UNDERSTANDINGS

- In order to access opportunities for physical activity outside of the school setting, it is important to know what opportunities exist within the community
- To lead physically active lifestyles, one must understand ways to overcome barriers to activity

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>Suggested/Sample Assessments</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>Suggested/Sample Activities</p>
<p>11/12.3.f Identify and evaluate community resources for selected physical and/or lifetime activities to include recreation centers, local fitness centers, adult leagues, and other fitness clubs/groups.</p> <p>I can find ways to participate in (selected activity) in my community.</p> <p>11/12.3.g Identify barriers to physical activity, to include those related to time, motivation, or energy, skill confidence, fear of injury, resources, and social influences/peer pressure, and identify strategies to overcome these barriers.</p> <p>I can identify why people don't engage in physical activity in my community and provide solutions to these barriers.</p>	<p>Assessment of Learning</p> <ul style="list-style-type: none"> • Written: Identification of community resources for physical activity; barriers to physical activity; solutions to barriers of physical activity <p>Assessment for Learning</p> <ul style="list-style-type: none"> • Written: Evaluation of community resources available for physical activity; Plan to overcome barriers to physical activity 	<p>Barrier—a circumstance or obstacle that keeps people or things apart or prevents communication or progress</p>	<p>Evaluation of community resources available for participation in physical activity</p> <p>Creation of a plan to get more people to overcome physical activity barriers and become physically active</p>
<p>Resources: VDOE Physical Education Instructional Resources http://www.doe.virginia.gov/instruction/physed/index.shtml; CDC http://www.cdc.gov/physicalactivity/basics/adding_pa/barriers.html</p>			

VA SOL Standard: 11/12.4 The student will evaluate and implement a safe environment for skill practice and play and demonstrate social competency skills for lifetime activity participation.

ESSENTIAL UNDERSTANDING

- Safe practices, rules, and etiquette contribute to a safe environment for physical activity.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>Suggested/Sample Assessments</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>Suggested/Sample Activities</p>
<p>11/12.4.a Evaluate, create, and implement a plan for safe practice, to include responsible safety practices, rules and procedures, avoidance of dangerous situations, and strategies for decreasing risk of injury.</p> <p>I can create a plan to stay safe while participating in physical activity.</p> <p>11/12.4.b Demonstrate appropriate etiquette as a participant and spectator in physical activity/sport.</p> <p>11/12.4.d Demonstrate safe behavior when participating in or watching physical activity/sport.</p> <p>I can follow rules to demonstrate etiquette and safety when I participate in or watch an activity.</p> <p>11/12.4.c Demonstrate proper care of athletic/activity equipment.</p> <p>I can take care of athletic equipment to participate safely in physical activity.</p>	<p>Assessment for Learning</p> <ul style="list-style-type: none"> Written: Identification of safe practices (rules, procedures, avoidance of dangerous situations, strategies for decreasing risk of injury) for selected activity Observation (self/peer) on demonstration of rules, etiquette, and proper care of equipment Teacher observation with feedback <p>Assessment of Learning</p> <ul style="list-style-type: none"> Written: Creation and implementation of a safety plan Observation on demonstration of rules, etiquette, and proper care of equipment 	<p>Terms/vocabulary dependent on activities offered to or chosen by students.</p>	<p>Participation in a variety of self-selected tactical, net/wall, striking/fielding, individual, fitness, outdoor, and/or lifetime activities</p>

Resources: VDOE Physical Education Instructional Resources <http://www.doe.virginia.gov/instruction/physed/index.shtml>;

VA SOL Standard: 11/12.4 The student will evaluate and implement a safe environment for skill practice and play and demonstrate social competency skills for lifetime activity participation.			
ESSENTIAL UNDERSTANDING • Success in many physical activities requires cooperation and communication.			
VDOE Standard(s) Student Friendly Language What will the student know and be able to do?	Suggested/Sample Assessments	Terms (Vocabulary) and Content Information	Suggested/Sample Activities
<p>11/12.4.e Explain and demonstrate leadership skills of problem solving, communication, and conflict resolution.</p> <p>I can demonstrate effective leadership through using effective problem solving, communication, and conflict resolution skills.</p> <p>11/12.4.f Demonstrate the ability to work cooperatively to accomplish a group goal.</p> <p>I can work with others to accomplish a goal.</p>	<p>Assessment for Learning</p> <ul style="list-style-type: none"> Written explanation of leadership skills such as problem solving skills, effective communication skills, and conflict resolution skills; identification of skills to work with others to accomplish a goal <p>Assessment of Learning</p> <ul style="list-style-type: none"> Demonstration of leadership skills and cooperation 	<p><u>Conflict Resolution Process</u></p> <ul style="list-style-type: none"> Talk about problem without assigning blame Use active listening Identify and clarify issues and needs Brainstorm solutions Choose and apply solution Evaluate solution <p><u>Problem Solving Skills</u></p> <ul style="list-style-type: none"> Clarify problem Analyze causes Identify alternatives Assess alternatives Choose and implement an alternative Evaluate choice 	<p>Any outdoor pursuit activities, fitness activities, dance and rhythmic activities, aquatics, selected individual performance activities, and net/wall and target games/ activities that utilize leadership skills/ strategies and requires students to work with others to accomplish a goal.</p>
<p>Resources: VDOE Physical Education Instructional Resources http://www.doe.virginia.gov/instruction/physed/index.shtml; Leadership: http://www.teachpe.com/sports_psychology/leadership.php;</p>			

VA SOL Standard: 11/12.4 The student will evaluate and implement a safe environment for skill practice and play and demonstrate social competency skills for lifetime activity participation.			
ESSENTIAL UNDERSTANDINGS <ul style="list-style-type: none"> Activities can be modified to make them safer or more accessible for all individuals Advocates can promote change in policy or rules 			
VDOE Standard(s) Student Friendly Language What will the student know and be able to do?	Suggested/Sample Assessments	Terms (Vocabulary) and Content Information	Suggested/Sample Activities
11/12.4.g Advocate for rule change or modification in a sport or activity to facilitate safety or inclusion of individuals from the point of view of an athlete, coach, parent, or referee. I can become an advocate for safety and/or inclusion through promoting rule changes in (sport) from the perspective of a (parent).	Assessment for Learning <ul style="list-style-type: none"> Written: Identification of modifications or rule changes that can promote safety or inclusion Assessment of Learning <ul style="list-style-type: none"> Advocacy plan for rule change or inclusion 	Inclusion:--the action or state of including or of being included within a group or structure	Can be incorporated in to any physical activity opportunity
Resources: VDOE Physical Education Instructional Resources http://www.doe.virginia.gov/instruction/physed/index.shtml ; https://www.njea.org/news-and-publications/njea-review/march-2012/inclusion-in-physical-education			

VA SOL Standard: 11/12.4 The student will evaluate and implement a safe environment for skill practice and play and demonstrate social competency skills for lifetime activity participation.

ESSENTIAL UNDERSTANDING

- Health promotion and physical activity for the community requires individuals to be respectful of and include people of diverse backgrounds and abilities.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>Suggested/Sample Assessments</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>Suggested/Sample Activities</p>
<p>11/12.4.h Demonstrate respect for differences among people in physical activity settings. I can show respect for all, regardless of individual differences.</p> <p>11/12.4.i Develop and demonstrate strategies for inclusion of persons of diverse backgrounds and abilities. I can include all people in physical activity settings, regardless of individual differences.</p>	<p>Assessment of Learning</p> <ul style="list-style-type: none"> Written: identification of ways to demonstrate respect and inclusion of people with differences <p>Assessment for Learning</p> <ul style="list-style-type: none"> Written: development of a plan to respect others and include people of diverse backgrounds and abilities <p>Demonstration of respect and inclusion of persons of diverse backgrounds and abilities</p>	<p>See previous year's content information for terms and vocabulary</p>	<p>May be incorporated in to any activity</p>

Resources: <http://www.choosemyplate.gov/> See education resources and curriculum ideas; VDOE Physical Education Instructional Resources <http://www.doe.virginia.gov/instruction/physed/index.shtml>;

VA SOL Standard: 11/12.4 The student will evaluate and implement a safe environment for skill practice and play and demonstrate social competency skills for lifetime activity participation.

ESSENTIAL UNDERSTANDING

- Participation in physical activity promotes social interaction.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>Suggested/Sample Assessments</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>Suggested/Sample Activities</p>
<p>11/12.4.j Identify ways that physical activities can provide social interaction, such as the benefits of team involvement and an individual's role as a positive member of a group.</p> <p>I can show how participating in physical activity promotes social health and interaction with others.</p>	<p>Assessment for Learning</p> <ul style="list-style-type: none"> • Identification of ways that participation in physical activities promotes social interaction <p>Assessment of Learning</p> <ul style="list-style-type: none"> • Written: documentation of social interaction through participation in physical activity opportunities 	<p>social interaction</p>	<p>May be incorporated in to any physical activity.</p>

Resources: VDOE Physical Education Instructional Resources <http://www.doe.virginia.gov/instruction/physed/index.shtml>;

~~VA SOL Standard: 11/12.4 The student will evaluate and implement a safe environment for skill practice and play and demonstrate social competency skills for lifetime activity participation.~~

~~ESSENTIAL UNDERSTANDING~~

- ~~• Promotion of physical activity opportunities can increase participation.~~

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do</p>	<p>Suggested/Sample Assessments</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>Suggested/Sample Activities</p>
<p>11/12.4.k Create and implement a strategy to promote peer involvement in physical activity, such as social networking campaign, a video announcement, or physical activity Web presence.</p> <p>I can promote physical activity opportunities within my community.</p>	<p>Assessment for Learning</p> <ul style="list-style-type: none"> • Identification of strategies to promote participation in physical activities within the community <p>Assessment of Learning</p> <ul style="list-style-type: none"> • Development of strategy to promote peer involvement in physical activity which depicts the physical, social, and mental benefits of participation in physical activity 	<p>See previous year's information on the physical, social, and mental benefits of participation in physical activity</p>	<p>Development of strategy to promote peer involvement in any form of physical activity</p> <p>Strategy can include development of social media campaigns, video or audio commercials, development of websites or blogs</p>

Resources: VDOE Physical Education Instructional Resources <http://www.doe.virginia.gov/instruction/physed/index.shtml>;

VA SOL Standard: 11/12.5 The student will explain the importance of energy balance and demonstrate understanding of the nutritional needs of the body to maintain optimal health and prevent chronic disease for a lifetime.

ESSENTIAL UNDERSTANDING

- Healthy behaviors allow for optimal participation in selected physical activities and for optimal personal health.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>Suggested/Sample Assessments</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>Suggested/Sample Activities</p>
<p>11/12.5.a Analyze the relationship among physical activity, nutrition, body composition, and sleep that are optimal for personal health and/or for participation in a self-selected physical activity.</p> <p>I can analyze how practicing healthy behaviors (participating in regular physical activity, good nutritional habits, and getting enough sleep) allows for optimal participation in (selected activity).</p>	<p>Assessment for Learning</p> <ul style="list-style-type: none"> • Identification of physical activity, caloric, and sleep needs for participation in self-selected activity <p>Assessment of Learning</p> <ul style="list-style-type: none"> • Analysis of personal nutrition and sleep behaviors in order to reach optimal levels of participation in self-selected activity 	<p>Review vocabulary and requirements/guidelines from previous grade levels.</p> <p>Refer to CDC for adolescent and adult guidelines for caloric expenditure and intake.</p>	<p>Student logs on physical activity, nutritional, and sleep habits.</p> <p>Identification of physical activity, nutrition, and sleep needs for optimal participation in a self-selected physical activity.</p>
<p>Resources: http://www.choosemyplate.gov/ See education resources and curriculum ideas; VDOE Physical Education Instructional Resources http://www.doe.virginia.gov/instruction/physed/index.shtml;</p>			

VA SOL Standard: 11/12.5 The student will explain the importance of energy balance and demonstrate understanding of the nutritional needs of the body to maintain optimal health and prevent chronic disease for a lifetime.

ESSENTIAL UNDERSTANDING

- Levels of physical activity can change through different stages of life.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>Suggested/Sample Assessments</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>Suggested/Sample Activities</p>
<p>11/12.5.b Analyze current and changing activity and exercise levels for high school and college students or for employees in a chosen field.</p> <p>I can analyze physical activity levels through different stages in life (e.g. high school students vs. college students or employees in the workforce).</p>	<p>Assessment for Learning</p> <ul style="list-style-type: none"> Identification of physical activity needs for high school students, college students, and adults <p>Assessment of Learning</p> <ul style="list-style-type: none"> Components of fitness plans <p>Analyze the amounts of physical activity participation of high school students, college students, and adults and the health impact of each</p> <p>Explanation of future physical activity needs</p>	<p>See previous year's content for information on physical activity needs</p> <p>Occupational and leisure time physical activity for adults: http://bmjopen.bmj.com/content/2/1/e000556.full</p>	<p>Compare and contrast a variety of ages, weight, and activity levels using an application such as one available from the Mayo Clinic—calculator http://www.mayoclinic.org/calorie-calculator/ITT-20084939</p>

VA SOL Standard: 11/12.5 The student will explain the importance of energy balance and demonstrate understanding of the nutritional needs of the body to maintain optimal health and prevent chronic disease for a lifetime.

ESSENTIAL UNDERSTANDING

- Nutritional needs change as individual's age.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>Suggested/Sample Assessments</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>Suggested/Sample Activities</p>
<p>11/12.5.c Analyze current and future nutritional needs in relation to changes in growth/aging.</p> <p>I can determine my current nutritional needs.</p> <p>I can determine how my nutritional needs will change over time.</p> <p>11/12.5.g Explain energy balance in relation to changing lifestyle needs from adolescence to adulthood.</p> <p>I can explain how changing nutritional and physical activity needs impact energy balance in adulthood.</p>	<p>Assessment for Learning</p> <ul style="list-style-type: none"> Identification of nutritional needs for adolescents into adulthood <p>Assessment of Learning</p> <ul style="list-style-type: none"> Explain the caloric needs for before, during, and after (selected activities). Explain current and future energy balance for a variety of ages, weight, and activity levels. 	<p>See previous year's content information for vocabulary and caloric needs</p>	<p>Compare and contrast a variety of ages, weight, and activity levels using an application such as one available from the Mayo Clinic—calculator.</p> <p>http://www.mayoclinic.org/calorie-calculator/ITT-20084939</p>

VA SOL Standard: 11/12.5 The student will explain the importance of energy balance and demonstrate understanding of the nutritional needs of the body to maintain optimal health and prevent chronic disease for a lifetime.

ESSENTIAL UNDERSTANDING

- Nutrition is essential to physical, emotional, and social health.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>Suggested/Sample Assessments</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>Suggested/Sample Activities</p>
<p>11/12.5.d Explain the benefits of nutrient dense, low sodium foods versus high-calorie, nutrition-poor, and high-sodium foods.</p> <p>I can explain the benefits eating nutrient dense, low-sodium foods and explain the negative effects of consuming high-calorie and high-sodium foods.</p>	<p>Assessment for Learning</p> <ul style="list-style-type: none"> • Identification of nutrient-dense, low-sodium, nutrition-poor, and high-sodium foods • Identification of benefits of eating nutrient-dense and low-sodium foods <p>Assessment of Learning</p> <ul style="list-style-type: none"> • Explain how eating nutrient-dense, low-sodium foods benefits personal health 	<p>Nutrient-Dense Foods: http://www.nhlbi.nih.gov/health/educational/wecan/eat-right/choosing-foods.htm</p>	<p>May be incorporated in to any physical activity</p>

VA SOL Standard: 11/12.5 The student will explain the importance of energy balance and demonstrate understanding of the nutritional needs of the body to maintain optimal health and prevent chronic disease for a lifetime.			
ESSENTIAL UNDERSTANDING • Sleep needs change over time.			
VDOE Standard(s) Student Friendly Language What will the student know and be able to do?	Suggested/Sample Assessments	Terms (Vocabulary) and Content Information	Suggested/Sample Activities
11/12.5.e Analyze current and future sleep needs for positively impacting academic and career success. I can determine how much sleep I need for physical and academic success and analyze current habits. I can determine how sleep needs will change over time to allow for academic and career success.	Assessment for Learning <ul style="list-style-type: none"> • Identify current sleep needs • Identify future sleep needs Assessment of Learning <ul style="list-style-type: none"> • Explain and determine current and future sleep needs for academic and career success 	National Heart, Lung, and Blood Institute Recommended Amount of Sleep Teens 9-10 hours a day Adults 7-8 hours a day (including the elderly)	May be incorporated in to any physical activity
Resources: http://www.choosemyplate.gov/ See education resources and curriculum ideas; VDOE Physical Education Instructional Resources http://www.doe.virginia.gov/instruction/physed/index.shtml ; http://www.heart.org/HEARTORG/Educator/Educator_UCM_001113_SubHomePage.jsp			

VA SOL Standard: 11/12.5 The student will explain the importance of energy balance and demonstrate understanding of the nutritional needs of the body to maintain optimal health and prevent chronic disease for a lifetime.

ESSENTIAL UNDERSTANDING

- Measures such as RPE allow an individual to be successful in a self-selected activity.

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>Suggested/Sample Assessments</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>Suggested/Sample Activities</p>
<p>11/12.5.f Apply rate of perceived exertion and pacing to a conditioning plan that meets the needs of a self-selected physical activity.</p> <p>I can plan for, monitor, and record my pacing during conditioning activities using RPE and time/distance/other measures to be successful in (selected activity).</p>	<p>Assessment for Learning</p> <ul style="list-style-type: none"> Written: Review of vocabulary and RPE scale(s); drafts of conditioning program/plan; documentation of conditioning activities and RPE/pacing <p>Assessment of Learning</p> <ul style="list-style-type: none"> Written: Conditioning program/plan <p>Sample Rubric</p> <p>4 (<i>Beyond what was taught</i>): All elements of score 3 and evaluates plan effectiveness to meet goals; identifying and addressing barriers</p> <p>3 (<i>What was explicitly taught</i>): Program plan includes all elements for conditioning (goals (short and long term), measures, timeline, work plans, intensity levels, documentation of conditioning activities (evidence of use of RPE and pacing), reassessments, reflection</p> <p>2 (<i>Identify basic elements</i>): Plan includes some basic elements: goals, measures, work plans, intensity levels, some documentation of activities, reassessments, reflection</p> <p>1 (<i>With help/prompts/cues</i>): With teacher cues, student can demonstrate ability to create a plan with a goal and activities to meet the goal</p>	<ul style="list-style-type: none"> Rate of perceived exertion (RPE) Pacing Conditioning activities <p><u>Berg Scale (CDC)</u></p> <p>6 No exertion at all</p> <p>7 Extremely light (7.5)</p> <p>8</p> <p>9 Very light</p> <p>10</p> <p>11 Light</p> <p>12</p> <p>13 Somewhat hard</p> <p>14</p> <p>15 Hard (heavy)</p> <p>16</p> <p>17 Very hard</p> <p>18</p> <p>19 Extremely hard</p> <p>20 Maximal exertion</p> <p><u>Intensity Levels (such as)</u></p> <ul style="list-style-type: none"> Intensity Level 1 – Not moving (seated) Intensity Level 2 – Slow (walking) Intensity Level 3 – Medium (skipping, galloping) Intensity Level 4 – Fast (jogging/running) Intensity Level 5 – Very fast (sprinting) 	<p>Application of RPE or other measures to meet physical activity needs of a self-selected physical activity</p>

Resources: <http://www.choosemyplate.gov/> — See education resources and curriculum ideas; VDOE Physical Education Instructional Resources <http://www.doe.virginia.gov/instruction/physed/index.shtml> ; CDC <http://www.cdc.gov/physicalactivity/everyone/measuring/exertion.html>

VA SOL Standard: 11/12.5 The student will explain the importance of energy balance and demonstrate understanding of the nutritional needs of the body to maintain optimal health and prevent chronic disease for a lifetime.

ESSENTIAL UNDERSTANDINGS

- The body burns more calories in physical activity than it does at rest
- Balancing calories in versus calories out is key to weight management and maintaining personal health

<p>VDOE Standard(s) Student Friendly Language What will the student know and be able to do?</p>	<p>Suggested/Sample Assessments</p>	<p>Terms (Vocabulary) and Content Information</p>	<p>Suggested/Sample Activities</p>
<p>11/12.5.h Explain the relationship between caloric intake and caloric expenditure while at work and while at rest.</p> <p>I can determine the impact of calories in and calories out when the body is at rest and when the body is at work.</p>	<p>Assessment for Learning</p> <ul style="list-style-type: none"> • Determining the number of calories consumed as well as the number of calories burned off <p>Assessment of Learning</p> <ul style="list-style-type: none"> • Explanation of caloric balance in the body 	<p>Isocaloric balance — the calories in and calories out are equal, resulting in weight maintenance</p> <p>Negative caloric balance — the calories in is lower than the calories out, resulting in weight loss</p> <p>Positive caloric balance — the calories in is higher than calories out, resulting in weight gain</p> <p>See http://www.health.harvard.edu/diet-and-weight-loss/calories-burned-in-30-minutes-of-leisure-and-routine-activities for a variety of physical activities and the calories burned through 30 minutes of participation</p>	<p>Determine the number of calories consumed versus the number of calories burned off in physical activity or while at rest</p>

Resources: <http://www.choosemyplate.gov/> — See education resources and curriculum ideas; VDOE Physical Education Instructional Resources <http://www.doc.virginia.gov/instruction/physed/index.shtml>; http://www.heart.org/HEARTORG/Educator/Educator_UCM_001113_SubHomePage.jsp; <http://www.health.harvard.edu/diet-and-weight-loss/calories-burned-in-30-minutes-of-leisure-and-routine-activities>