## Time Part 2

## STRAND: Measurement and Geometry

## STRAND CONCEPT: Time

## SOL 5.11 Part 2 of a 2 part lesson

## Remediation Plan Summary

Students determine an amount of elapsed time in hours and minutes within a 24 -hour period.

## Common Errors and Misconceptions

Students have a difficult time reading analog clocks. They confuse the hour and minute hands. They have a difficult time with elapsed time. Students want to line up the time and add or subtract. They do not realize the unit has changed to 60 minutes in an hour even though they can say there are 60 minutes, they do not know how to apply that to elapsed time.

## Materials

- "Elapsed Time Warm-up" sheets
- Clocks
- "Elapsed Time Practice" handouts
- Index Cards


## Introductory Activity

Have students fill in the chart on the warm-up. Allow them to use the time number line they created in part one of this lesson if they wish.

## Plan for Instruction

1. Discuss the warm-up, and have students share how they arrived at their answers.
2. Review part one of this lesson (the first time lesson), discussing elapsed time at $15-\mathrm{min} ., 30-\mathrm{min}$., 45min., and 1-hour intervals.
3. Have students move the hands of a clock to show how much time passes from start to finish of the school day. Discuss first counting hour by hour, then moving in 15-min., $5-\mathrm{min}$., or 1-min. intervals to calculate elapsed time.
4. Model using an open number line how to find elapsed time. Clocks are very good for students to understand how to read the clock but open numbers lines help them solve elapsed time problems.
5. Model some problems with the students. Kevin left for school at 8:15 am. He ate lunch at 11:55 am. How much time fell between leaving for school and lunch time? Write the beginning time and ending time. Then jump by hours and minutes to find the elapsed time.
$\mathrm{H}=$ hours $\quad \mathrm{M}=$ minute


Add up the hours and the minutes. You can do any minute increments you need. 3 hours 40 minutes.
6. Use a combination of clocks and empty number lines to find all the elapsed times.

## Pulling It All Together (Reflection)

Have students invent an elapsed time word problem of their own and write it on an index card. Have them write the answer on another index card. Collect these cards to use later as a matching game for review.

Note: The following pages are intended for classroom use for students as a visual aid to learning.

Virginia Department of Education 2018

Name: $\qquad$

## Elapsed Time Warm-up

Complete the following chart:

| Activity | Start Time | End Time | Elapsed Time |
| :--- | :--- | :--- | :--- |
| Take piano lesson | $9: 30$ a.m. |  | 45 minutes |
| Attend soccer practice |  | $6: 00$ p.m. | 1 hour, 15 minutes |
| Do homework | $3: 45$ p.m. | $4: 45$ p.m. |  |
| Watch television | $7: 30$ p.m. |  | Half an hour |
| Sleep | $9: 00$ p.m. | $6: 45$ a.m. |  |

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## Elapsed Time Practice

On your mark, get set, go! Four runners started a marathon at 8:00 a.m. Use each runner's finish time to calculate how long it took him/her to complete the marathon.

| Runner | Start Time | End Time | Hours <br> Passed | Extra Minutes <br> Passed | Elapsed Time |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Jack | 8:00 a.m. | 11:14 a.m. |  |  |  |
| Jill | 8:00 a.m. | 10:48 a.m. |  |  |  |
| Lisa | 8:00 a.m. | 12:30 p.m. |  |  |  |
| Bob | 8:00 a.m. | 12:27 p.m. |  |  |  |

1. Who won the race? $\qquad$
2. Which runners took more than 4 hours to complete the marathon? $\qquad$
3. Cathy is making brownies. They need to bake for 47 minutes. She put them in the oven at 6:30 p.m. What time should she take them out?
4. Mrs. Duncan set a timer at 9:15 a.m. to ring in 35 minutes for a practice quiz in her classroom. What time will it be when the timer rings?
5. Bill left home at 4:42 p.m. and rode his bike to his friend's house. It took him 23 minutes. What time did he arrive?
6. Dad began cutting grass on Saturday morning at 9:28 a.m. He finished the entire yard by 10:46 a.m. How long did it take him?
