

Just In Time Quick Check
Standard of Learning (SOL) K.10a

Strand: Measurement and Geometry

Standard of Learning (SOL) K.10a

The student will identify and describe plane figures (circle, triangle, square and rectangle).

Grade Level Skills:

- Identify a circle, triangle, square, and rectangle.
- Describe the characteristics of triangles, squares, and rectangles, including number of sides and number of vertices.
- Describe a circle using terms such as *round* and *curved*.

Just in Time Quick Check

Just in Time Quick Check Teacher Notes

Supporting Resources:

- VDOE Mathematics Instructional Plans (MIPS)
 - [K.10 abc – Shape Detectives](#) (Word) / [PDF Version](#)
- VDOE Word Wall Cards: Kindergarten ([Word](#)) | ([PDF](#))
 - circle
 - square
 - triangle
 - rectangle

Supporting and Prerequisite SOL: [Foundation Blocks for Early Learning: Standards for Four-Year Olds – 4ac*](#)

*This links to the prerequisite standards found in Foundation Blocks for Preschool. Just in Time Quick Checks have not been created for Foundation Blocks.

SOL K.10a - Just in Time Quick Check: Student Interview

Provide students with the sheet of plane figures provided. Ask students to:

1. Point to all of the circles. How did you decide those figures were circles?

_____/2

Child's Description: _____

2. Point to all of the triangles.

_____/3

Record the student's response to each question:

How many sides does a triangle have? _____

How many vertices does a triangle have? _____

3. Point to all of the squares.

_____/3

Record the student's response to each question:

How many sides does a square have? _____

How many vertices does a square have? _____

4. Point to all of the rectangles.

_____/2

Record the student's response to each question:

How many sides does a rectangle have? _____

How many vertices does a rectangle have? _____

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Common Errors/Misconceptions and their Possible Indications

1. Point to all of the circles. How did you decide those figures were circles?

If students are unable to identify all of the circles, redirect students to sort the collection by shape only and check to see if they can name each set. If students are unable to sort figures according to shape, it may be because they are more familiar with sorting figures by size and/or color and are unable to make the connection and isolate them by shape. Additional practice is needed for these students to see and name circles in their environment and understand that circles can be various sizes but are all round or curved.

2. Point to all of the triangles. How many sides does a triangle have? Vertices?

If students are unable to identify all of the triangles or name the number of sides/vertices, they likely are not yet able to describe the characteristics of a triangle and may choose all the shapes with straight sides. Additional activities, to include shape hunts or shape sorts where the student sorts and discusses what they notice about the shapes that are similar, will help these students recognize that triangles are shapes that have only 3 sides and 3 vertices.

3. Point to all of the squares. How many sides does a square have? Vertices?

Some students may include rectangles as they identify the squares in the collection. This may indicate that they believe all four-sided figures are squares and do not recognize that squares are shapes with square corners and four sides that are the same length. They may also not choose squares that are turned onto one of their vertices (rotated), as they do not see that shape as a square because of its orientation. Students need to have experiences identifying and describing squares presented in various representations. Engaging students in instructional activities that have them locate and describe shapes in their environment will increase their ability to identify plane figures in different representations and orientations.

4. Point to all of the rectangles. How many sides does a rectangle have? Vertices?

Some students may confuse squares and rectangles because they both have 4 sides. Students need to have specific experiences comparing rectangles and squares and describing their similarities and differences (i.e., rectangles have 4 sides, but squares must have all 4 sides that are the same length).

Engaging students in games such as “Going on a Shape Hunt,” “I Spy,” or “Name My Shape” can be beneficial in providing practice identifying and describing shapes in their environment. Reading math-related literature that models plane figures in different sizes and positions will also help develop students’ ability to generalize the characteristics of these shapes. These activities will help students to identify shapes in different sizes and positions and allow for discussions about the characteristics of shapes.

K.10a – Plane Figures

