<table>
<thead>
<tr>
<th>Standard of Learning (SOL) 2.13</th>
</tr>
</thead>
<tbody>
<tr>
<td>The student will identify, describe, compare, and contrast plane and solid figures (circles/spheres, squares/cubes, and rectangles/rectangular prisims).</td>
</tr>
</tbody>
</table>

**Strand:** Measurement and Geometry

**Grade Level Skills:**
- Determine similarities and differences between related plane and solid figures (circles/spheres, squares/cubes, rectangles/rectangular prisims), using models and cutouts.
- Trace faces of solid figures (cubes and rectangular prisims) to create the set of plane figures related to the solid figure.
- Identify and describe plane figures (circles, squares, and rectangles), according to their characteristics (number of sides, vertices, and angles). Squares and rectangles have four right angles.
- Identify and describe solid figures (spheres, cubes, and rectangular prisims), according to the shape of their faces, number of edges, and number of vertices, using models.
- Compare and contrast plane and solid figures (circles/spheres, squares/cubes, and rectangles/rectangular prisims) according to their characteristics (number and shape of their faces, edges, vertices, and angles).

**Supporting and Prerequisite SOL:** 1.11a, 1.11b, K.10a, K.10b
SOL 2.13 - Just in Time Quick Check

Use the word bank to name the shapes in each question.

Word Bank:

<table>
<thead>
<tr>
<th>Circle</th>
<th>Cube</th>
<th>Rectangle</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rectangular Prism</td>
<td>Sphere</td>
<td>Square</td>
</tr>
</tbody>
</table>

1. Write the name of the shape below each picture.

Write about how these shapes are the same. Then write about how they are different. Use these vocabulary words in your explanation: angles, edges, faces, sides, vertices.

Same: __________________________________________________________

________________________________________________________________________

Different: __________________________________________________________

________________________________________________________________________
2. Write the name of the shape below each picture.

__________________________  ____________________________

Write about how these shapes are the same. Then write about how they are different. Use these vocabulary words in your explanation: angles, edges, faces, sides, vertices.

Same: ____________________________________________________________

________________________________________________________________________

Different: __________________________________________________________

________________________________________________________________________
3. Write the name of the shape below each picture.

- Circle
- Sphere

Write about how these shapes are the same. Then write about how they are different.

Same: ________________________________________________________________

________________________________________________________________________

Different: ____________________________________________________________

________________________________________________________________________
SOL 2.13 - Just in Time Quick Check Teacher Notes
Common Errors/Misconceptions and their Possible Indications

Use the word bank to name the shapes in each question.

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1. Write the name of the shape below each picture.

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Write about how these shapes are the same. Then write about how they are different. Use these vocabulary words in your explanation: angles, edges, faces, sides, vertices.

Same: __________________________________________________________________________

________________________________________________________________________

Different: ______________________________________________________________________

________________________________________________________________________

Students may describe the rectangular prism as having three faces, seven vertices, and nine edges. This indicates students are only counting faces, vertices, and edges that they can see. These students will benefit from more experiences with physical models to manipulate, hold, and count as they consider attributes and compare and contrast figures. Building polygons and solids with materials like toothpicks and marshmallows, or folding nets of solid figures, can help students conceptualize the attributes of solid and plane figures.

Students may misuse or confuse some 2-D and 3-D vocabulary, especially “sides” and “edges” and/or “angles” and “vertices,” or they may refer to both figures as rectangles. More experience hearing and using the vocabulary for attributes of plane and solid figures during classroom discussions will help students acquire this vocabulary.
2. Write the name of the shape below each picture.

__________________________  ________________________

Write about how these shapes are the same. Then write about how they are different. Use these vocabulary words in your explanation: angles, edges, faces, sides, vertices.

Same: ______________________________________________________________________________________________________________________________
__________________________________________________________________________________________

Different: ______________________________________________________________________________________
__________________________________________________________________________________________

*Students may identify both figures as squares. This may indicate that students are considering the faces of the cube rather than the cube as a whole. These students would benefit from more experiences with physical models of cubes. Both tracing faces of the cube (deconstructing, in a sense) and constructing a cube from the six square faces will help students develop understanding for the similarities and differences among these 2-D and 3-D figures. Students may also benefit from additional modeling of the use of the mathematical vocabulary used to describe plane and solid figures.*
3. Write the name of the shape below each picture.

![Shape 1](image1.png)  ![Shape 2](image2.png)

Write about how these shapes are the same. Then write about how they are different.

Same: __________________________________________________________
__________________________________________________________________________

Different: __________________________________________________________
__________________________________________________________________________

*Students may name both figures as circles, or they may have difficulty explaining how the figures are related. Activities using real-world examples may be helpful. For example, cutting a spherical piece of fruit like an orange in half and using that half as a circular “stamp” may build connections between the attributes of these figures.*