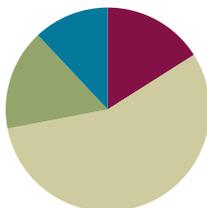


## Lesson 9

**Objective:** Find and describe solid shapes using informal language without naming.

### Suggested Lesson Structure

■ Fluency Practice	(4 minutes)
■ Application Problem	(4 minutes)
■ Concept Development	(14 minutes)
■ Student Debrief	(3 minutes)
<b>Total Time</b>	<b>(25 minutes)</b>



### Fluency Practice (4 minutes)

- Drum and Count to 6! **PK.CC.1** (4 minutes)

### Drum and Count to 6! (4 minutes)

Materials: (S) Plastic or metal lid

Note: This fluency activity anticipates the work of Module 3 wherein students work with numbers through 10, preparing them with knowledge of the number word sequence.

- T: Let's play the drums! Here are my drumsticks and drum (hold up your 2 index fingers and show how to hit them on the lid). Show me your drumsticks.
- S: (Show index fingers.)
- T: Let's count to 4 and hit the drum with our sticks each time we say a number!
- T: (Demonstrate playing the drum and counting. Pause slightly between each set.) Join in when you are ready! 1, 2, 3, 4. 1, 2, 3, 4. 1, 2, 3, 4. 1, 2, 3, 4. (Continue until all are playing.)
- T: Now, let's play and count to 5. Join in when you are ready. 1, 2, 3, 4, 5. 1, 2, 3, 4, 5. 1, 2, 3, 4, 5. 1, 2, 3, 4, 5. (Continue until all are playing.)
- T: Now, let's play and count to 6. Join in when you are ready. 1, 2, 3, 4, 5, 6. 1, 2, 3, 4, 5, 6. 1, 2, 3, 4, 5, 6. 1, 2, 3, 4, 5, 6. (Continue until all are playing.)

### Application Problem (4 minutes)

Materials: (T) Rectangle, square, triangle (Lesson 1 Template 2) (S) 5 straws or craft sticks

Show the rectangle. Say, “Sophia wants to build a rectangle and use one stick to make each side. Show me the sticks she needs to build a rectangle. How many sticks does she need?”

Repeat with the square and triangle.

Note: This activity focuses children on the parts of a shape and asks them to connect number to geometry.

### Concept Development (14 minutes)

#### Part 1: Concept Introduction

Materials: (T) Mystery bag containing foam or wooden 3-D shapes (cylinders, spheres, cubes, rectangular blocks, and cones, a few of each in different sizes if available), 4 shallow lids for sorting (e.g., shoe box lids, plastic container lids, shallow boxes), a variety of real world 3-D objects (soup cans, small balls, unsharpened pencils, party hats, etc.) placed strategically around the room to be found on the shape hunt

Note: If the mathematical names of the solid shapes come out during the lesson, acknowledge them and use them as one type of descriptor. Pre-kindergarten students will not be expected to use or master the names of three-dimensional shapes.

1. Say, “Let’s see what’s inside the mystery bag!” Pull out a 3-D shape.
2. Ask students to discuss what they see and what they know about the shape. (If students say the name of the shape, remind them that it is just one way to describe the shape.)
3. Invite students to pull shapes from the bag, sorting them by placing the shapes into the various lids. Accept all informal reasons as to why each shape belongs in a group: “I’m putting this shape (cube) here, because it has lots of pointy parts, which is the same as these other shapes. But all the sides are the same, and they’re flat.” Repeat for all shapes in the mystery bag.
4. Say, “You and your partner are going to be shape detectives and go on a shape hunt in our classroom! When you see a shape that looks like one of the shapes in our boxes, tell your partner about it.”
5. Allow students to explore, and then discuss and compare some of the shapes they found. “The balls look like this **round** shape (sphere).” “The soup can and this shape (cylinder) both have flat sides on the top and bottom!”



#### NOTES ON MULTIPLE MEANS FOR ACTION AND EXPRESSION:

Use parallel talk to model the vocabulary needed to describe the shapes for students who struggle with vocabulary and expressive language.

MP.3

**Part 2: Practice**

Materials: (T) 4 foam or wooden 3-D shapes (cylinder, sphere, cube, and cone) in the mystery bag  
(S) 4 foam or wooden 3-D shapes (cylinder, sphere, cube, and cone)

Give each student a set of 3-D shapes. Have students work in pairs if needed.

1. To play the mystery bag game, put your hand in the bag and feel a shape. “I’m holding a shape that is round and smooth. I don’t feel anything flat or pointy.”
2. Say, “When you know what shape I am holding, hold it in the air (repeat clue). It’s one of the shapes in front of you.”
3. Provide wait time. Then, reveal the sphere.
4. Repeat with the other three shapes in the bag using the clue sentences below.
  - I’m holding a shape that has a flat circle on the bottom. It has a point on the top.
  - I’m holding a shape that has lots of flat squares. There are lots of pointy corners. It feels like a box.
  - I’m holding a shape that has two flat circles on the top and the bottom. It is round in the middle.

**Student Debrief (3 minutes)**

**Lesson Objective:** Find and describe solid shapes using informal language without naming.

The Student Debrief is intended to invite reflection and active processing of the total lesson experience. It is also an opportunity for informal assessment. Consider taking anecdotal notes or using a simple checklist to note each child’s progress towards meeting the lesson objective.

As students complete the Practice portion of the Concept Development, listen for misconceptions or misunderstandings that can be addressed in the Debrief. You may choose to use any combination of the questions below to help students express ideas, make connections, and use new vocabulary (**round**).

- When you went on the shape hunt, what looked like this shape (hold up sphere)? What looked like this shape (hold up cylinder)? (Continue with other shapes.)
- When we sorted our shapes, did all the shapes in this box look exactly the same? How were they different? How were they the same?
- What words did you use to talk about our shapes today?

**CENTER CONNECTION:**

Put each 3-D shape on a lid in a central location in the classroom. At the beginning or end of centers, invite each child to bring a shape from their center and place it on the appropriate lid. There are many possibilities throughout the centers:

- Cone party hats from the dramatic play center.
- Cans from the home center.
- Cylindrical paint jars from the art center.