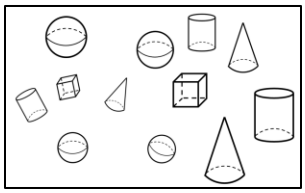
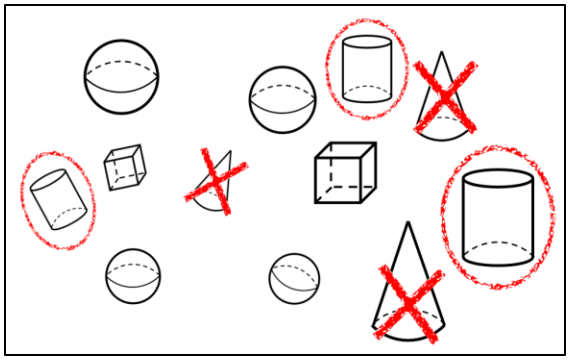
Kindergarten Important Math Information

3-D Geometry

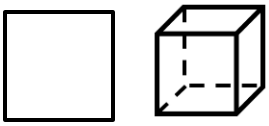
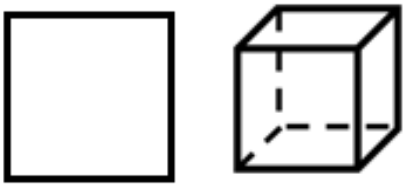
Dear Family,

We are beginning a new unit of study in mathematics called *3-D Geometry*. This unit of study focuses on three-dimensional shapes. Your student will identify, describe, build, and draw 3-D shapes. Your student will also use geometric language such as: *cone, cube, cylinder,* and *sphere.* Your student will also describe similarities and differences in two-dimensional and three-dimensional shapes. The specific learning goals your student will be working toward are listed below with examples of student work showing understanding of each learning goal.

Learning Goal: Identify, name, and describe 3-D shapes.

Example Problem	Example Student Solution
Circle the cylinders. Put an X on the cones. 	 *"I know that a cylinder has 2 flat faces that are shaped like a circle. Cones have 1 flat face that is circle shaped."*

Learning Goal: Compare 2-D and 3-D shapes.

Example Problems	Example Student Solutions
Look at the shapes. Explain how they are alike and how they are different 	*"They both have a square shape. The cube has 6 faces that are shaped like a square. The square is flat and has 4 sides and 4 corners, just like each of the faces of the cube."* 

Learning Goal: Build and draw 3-D shapes and put 3-D shapes together to form larger 3-D shapes.

Example Problems	Example Student Solutions
Use the clay to make a cylinder.	*"I rolled the clay out like a snake. I know that cylinders have 2 flat circle shaped faces. I flattened each side of my clay shape to make the faces of the cylinder."* 

Mathematical Thinking and Practices Learning Goal: Explain his/her thinking using pictures, numbers, and words.

Things you can do at home to support your student throughout this unit of study:

Shapes Around Us:

- Shapes can be found all around us. Ask your student to look for three-dimensional shapes around their home. Have your student describe the shape.
- Making shapes is a great way to learn about them. Use household items such as clay or toothpicks to make three-dimensional shapes. Have your student explain how they made their shape.