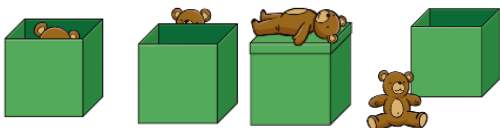

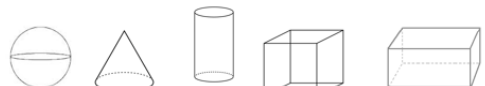

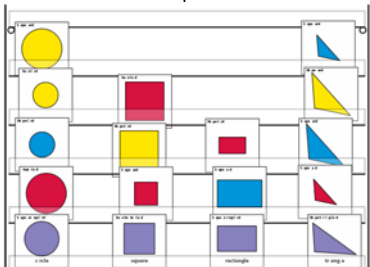
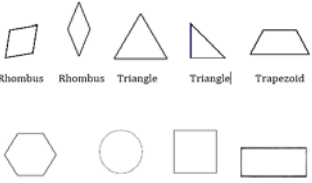




# Geometry

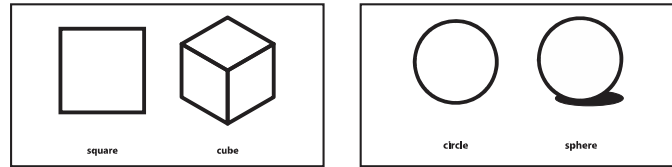
We are beginning Unit 2: Identifying, Describing, Comparing, Analyzing, Composing 2-dimensional and 3-dimensional Shapes. The purpose of this unit is to develop an understanding of shapes and positional language. Students will analyze and compare both 2-dimensional and 3-dimensional shapes to describe their similarities and differences. They will identify shapes within their environment and will trace and draw basic shapes in order to construct more complex shapes. Students will also use positional language such as above, beside, below and in front of, to describe the positions of objects.

Problem	Comments
<p>Where is the bear?</p> 	<p>Students will use pictures and manipulatives to learn positional language such as inside, behind, underneath, next to, on top of, right, left etc.</p>
<p>Find things that are shaped like a sphere.</p> 	<p>Geometric shapes are all around. The homes we live in, the schools we attend, toys we play with, and foods we eat are three-dimensional shapes. Within this unit, students go on a 3-D shape hunt looking for shapes in their environment.</p> <p>3D shapes that we will investigate include:</p>  <p>Sphere    Cone    Cylinder    Cube    Rectangular prism</p>
<p>How are the objects being sorted?</p>  <p><i>"The ones on the blue paper have straight sides, and the ones on the yellow paper have curved sides."</i></p>	<p>Several lessons in this unit are designed to help students think about the attributes or features of shapes. In sorting activities, students try to guess the "rule" as objects are sorted into two groups. In this example, the "secret attribute" is straight sides and curved sides. Other attributes could be 2-D or 3-D, or "has a triangle face" and "does not have a triangle face."</p>
<p>What do you notice about the shapes we sorted?</p>  <p><i>"Some of the circles are big and some are small. There are more circles than squares. I see 3 rectangles."</i></p>	<p>Students sort and classify shape cards based on attributes like number of sides, straight or curved sides, size, and color. As they name the shapes and discuss their attributes, they begin to realize that some features like size, color, or the way the card is turned does not change the shape's name. This helps them focus on the important or defining attributes, like number of sides and corners. Students will compose (create) and decompose larger shapes using smaller shapes. 2D shapes that we will investigate include:</p>  <p>Rhombus    Rhombus    Triangle    Triangle    Trapezoid</p> <p>Hexagon    Circle    Square    Rectangle</p>

## Frequently asked questions about unit 2

**Q:** My child calls 3-D objects by 2-D names. Why is this, and how can I help?

**A:** Children are generally taught the names of two dimensional shapes in their preschool years. When looking at 3-D items, young children are likely to talk about the faces of the objects, and will most likely refer to the sphere and cylinder as circles, the cube as a square, and so on. Help your child recognize the similarities and differences. For example, a square is a rectangle with equal side lengths, and it is flat. A cube is a rectangular prism with equal edge lengths, and it is solid. Learning the correct terms consistently both models the language of geometry accurately and avoids future misconceptions.



### Here is how you can help your child while our class is working on this unit:

- Identify shapes that are found at home. Ask: what shape is our table? Cabinets? Rug? Couch cushions?
- Identify shapes that make up other shapes at home; example: two triangles together can make up one square or rectangle.
- Ask your child to identify similarities and differences amongst shapes.
- Read shape books with your child.
- Continue with counting practice by asking your child to count how many squares, triangles, circles, etc. they can find in a game or around the house.