Mathematical Background

Here is an overview of the content students will learn in this unit.

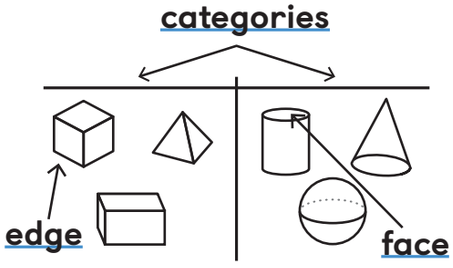
Solid Shapes All Around Us

Identify and sort solid shapes.

TEKS K.6.B, K.6.C, K.6.E, K.6.F

- A **solid shape** is three-dimensional.
  - » Solid shapes can be compared and sorted into **categories** using their attributes, such as **edges** or the shape of their **faces**.
- **Cones**, **cylinders**, **cubes**, and **spheres** can be identified in the real world.

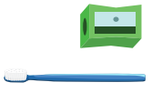
Some solid shapes can be sorted into 2 categories: those that can roll and those that cannot roll.



Describe and compare measurable attributes of objects.

TEKS K.7.A, K.7.B

- Objects can be described and compared using measurable attributes.
  - » Length can be described and compared using *shorter* and *longer*.
  - » Weight can be described and compared using **lighter** and **heavier**.
  - » Capacity can be described and compared by describing which object can *hold more* or *hold less*.



The pencil sharpener is shorter than the toothbrush.

The teacher is **taller** than the student.

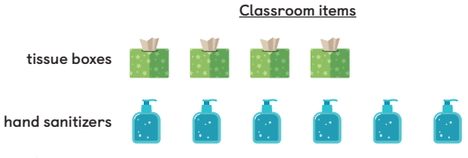
The cup holds less water than the bottle.

Understand data using real-object and picture graphs.

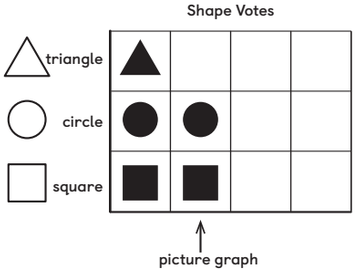
TEKS K.8.A, K.8.B, K.8.C

- **Real-object graphs** and **picture graphs** show data that has been organized into categories.
  - » Real-object graphs use actual objects to represent data.
  - » Picture graphs use pictures to represent data.
- Data can be described, counted, and added in order to draw conclusions.

Real-object graph



Picture graph



Unit Investigation

Lesson 1 is the Unit Investigation. Students build representations of drawings using solid shapes, such as cones, cubes, cylinders, spheres, and prisms to build curiosity and apply their own knowledge in a variety of ways. Use the **Caregiver Connection** to help students continue to explore the math they will see in the unit.

Caregiver Connection

Students may enjoy drawing their own shape designs on paper and using solid shapes to represent their drawings. For example, using a soccer ball or a can to represent a circle.

You can ask:

- "What do you notice about the shapes you drew and the shapes you built with?"
- "How are they the same? How are they different?"
- "Can you put your shapes into categories? What categories would you use for your shapes?"