### **MA.K.GR.1.4**

## Overarching Standard: MA.K.GR.1

Identify, compare, and compose two- and three-dimensional figures.

#### **Benchmark of Focus**

MA.K.GR.1.4: Find real-world objects that can be modeled by a given two- or three- dimensional figure. Figures are limited to circles, triangles, rectangles, squares, spheres, cubes, cones, and cylinders.

# Related Benchmark/Horizontal Alignment

- MA.K.M.1.1
- MA.K.DP.1.1

## **Vertical Alignment**

Previous Benchmarks <u>VPK</u>	Next Benchmarks MA.1.GR.1.4	
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#### Terms from the K-12 Glossary

- Circles
- Cones
- Cubes
- Cylinders
- Rectangles
- Spheres
- Squares
- Triangles

#### **Purpose and Instructional Strategies**

The purpose of this benchmark is to allow students an opportunity to apply understanding of classification and language they have learned regarding figures to the real world. (MTR.7.1)

- Instruction should include objects that may not be a perfect representation but are approximate models for representing appropriate figures.
- Instruction should include bringing in additional items that are familiar and can be modeled by appropriate figures (cans of soup, Rubik's Cube, cones, etc.).

### **Common Misconceptions or Errors**

• In real life, many objects can be appropriately modeled with both two-dimensional and three-dimensional figures. For the purpose of this benchmark, do not struggle with this. Allow students flexibility and rely on their justifications. (MTR.4.1, MTR.6.1)

### **Strategies to Support Tiered Instruction**

- Teacher provides paper pictures of real-world 3-dimensional objects to help students develop
  the understanding that some 3-dimensional objects can be modeled by using 2- dimensional
  shapes.
  - For example, teachers can show students a picture of a window and explain that it can be described as a rectangle. Or if the window has several sections it can be described as a figure being composed of several rectangles.



- For example, teachers can show students a picture of a face of a nickel and explain that it can be described as a circle. Then teachers can show students an actual nickel and ask "Is there any other shape they can be used to describe the coin?"
  - Teacher can explain and demonstrate how both a circle and a cylinder are both correct responses. If students have difficulty recognizing that the nickel is a cylinder, the teacher can stack several nickels on top of each other to provide further support.

### Questions to ask students:

- What real world object is the shape of a square?
  - Sample answer that indicates understanding: A tile on the floor is square because it is flat and has 4 sides that are the same length.
- What real world object is the shape of a cylinder?
  - Sample answer that indicates understanding: A soup can is an example of a cylinder because it has 1 curved surface and 2 flat circle sides.

#### **Instructional Tasks**

Instructional Task 1 (MTR.4.1, MTR.6.1, MTR.7.1)

Using a graphic organizer, allow students to observe objects they find around the classroom, providing students an opportunity to record their observations. After recording students can discuss in teams what they found, providing justifications for the choices they made. Encourage students to use language and criteria they have developed regarding identifying figures, such as the number of sides, two-dimensional versus three-dimensional, straight sides or curved sides.

#### **Instructional Items**

Instructional Item 1

Using the image below, draw a box around all the rectangles you see, draw a circle aroundall the circles you see and draw an "x" over all the spheres you see.



## **Additional Resources:**

CPALMS: MA.K.GR.1.4

Article: What are Examples of Geometric Shapes in Real Life?

Article: 3D Shapes in Real Life

Online Video: 3D Shapes in the Real World

### Resources/Tasks to Support Your Child at Home:

Have your child go on a hunt in your home, backyard, neighborhood park, etc. Have them search for examples of circles, triangles, rectangles, squares, spheres, cubes, cones, and cylinders. Have them draw and collect their examples in a journal.

MathWorksheets4Kids: Real-Life 2D Shapes

MathWorksheets4Kids: Coloring Everyday 2D Shapes

MathWorksheets4Kids: Real-Life 3D Shapes

MathWorksheets4Kids: 3D Shapes & Real-Life Objects Sort