

Geometric Figures in Our Classroom

Reporting Category Geometry

Topics Identifying, describing, and tracing circles, triangles, squares, and rectangles
Distinguishing between examples and non-examples of identified geometric figures

Primary SOL K.11 The student will
a) identify, describe, and trace plane geometric figures (circle, triangle, square, and rectangle); and
b) compare the size (larger, smaller) and shape of plane geometric figures (circle, triangle, square, and rectangle).

Related SOL K.12

Materials

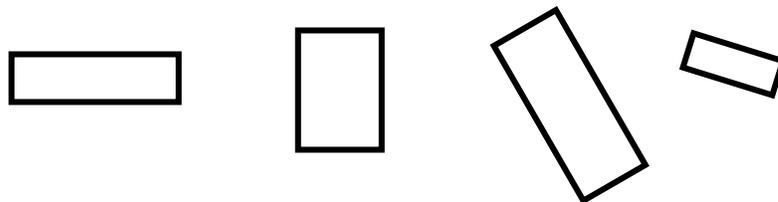
- Set of geometric figures (circles, squares, triangles, and rectangles) in different sizes made from tag board
- Chart paper
- “Shape Hunt” recording sheet (attached)

Vocabulary

shape, square, rectangle, circle, triangle, trace, compare, alike, different, smaller, larger, describe, angle, round, curved, above, below, next to

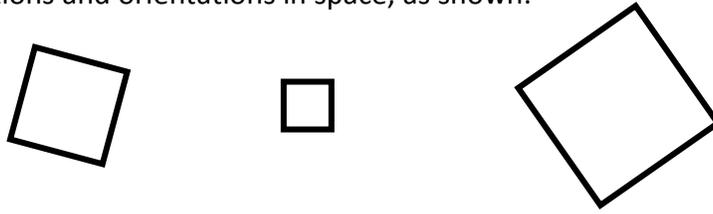
Student/Teacher Actions (what students and teachers should be doing to facilitate learning)

1. Display a rectangle, and tell students this shape is called a “rectangle.” Let them take turns naming characteristics of the figure. (Possible responses: “It has four sides, two long and two short.” “It has four square corners.”) Be sure to display several different examples of rectangles and change their positions and orientations in space, as shown:



2. Use this as an opportunity to introduce mathematics vocabulary and list the characteristics on chart paper (e.g., number of sides, number of corners/angles). Read the list of characteristics to the students, and have them choose from a set of geometric figures the figure that has those characteristics. Allow them to trace the figure on paper.
3. Display a square, and tell students this shape is called a “square.” Have them trace the figure in the air with their fingers. Have them describe the figure (four sides that are all the same length, four square corners). Explain to students that the square is a special kind of rectangle. Ask them how this figure is like the other rectangle. Then, ask them how it is

different from the other rectangle. Be sure to display several different examples of squares and change their positions and orientations in space, as shown:



4. Use the same process to introduce and discuss the triangle and the circle. Be sure to introduce several different kinds of triangles, include equilateral, obtuse, and acute, and change their positions and orientations in space, as shown:



5. Tell students that they will be playing a search game to find things shaped like a rectangle, a square, a triangle, or a circle. Bring the students together in a circle. Tell them, “I see something in the room that has the same shape as a square.” Have the students ask “yes” and “no” questions until someone identifies the object. Once students understand the game, select a student to be the leader.
6. Place the students in small groups for the next activity. Explain that the groups will now hunt for additional things shaped like a rectangle, a square, a triangle, or a circle—things they could not see before when sitting together in a circle. Review each geometric figure, and have students again point to examples of each one. As students move around the room, have one student record the number of each geometric figure found, using the attached “Shape Hunt” recording sheet.
7. At the end of the lesson, review the geometric figures and objects that the groups have found, and again emphasize the basic characteristics of each figure.
8. A final activity for this concept involves a “field trip” through the school and outdoors. Tell students that they will take a field trip through the school and playground to hunt for things shaped like these four geometric figures. As you move around, point out at least one example of each figure, and discuss the students’ finds as they are made. The “Shape Hunt” recording sheet can be used for this activity as well.

Assessment

- **Questions**
 - “How are a square and a rectangle the same? How are they different?”
 - “What real-life objects are shaped like a triangle? A circle? A square? A rectangle?”
- **Journal/Writing Prompts**
 - “Draw a design using only rectangles. Describe your picture and the shapes in it.” Repeat with other figures or a combination of figures.
 - “Complete this sentence, and draw a picture. ‘I am most like a (circle, square, rectangle, triangle) because _____.”
 - Have students choose a figure from a set of provided two-dimensional figures. “Write or draw two interesting things about your shape.”

- “Draw a shape that is not a circle. Tell why your shape is not a circle.” Repeat with other shapes.
- **Other**
 - Have students sort sets of two-dimensional figures and describe how they sorted the figures.
 - Distribute copies of a sheet showing multiple examples of circles, squares, triangles, rectangles in random arrangement. Have the students select a particular figure to color. Assign a color for this student-selected figure, and have students color with the assigned color the selected figure and *all* other examples of that figure. Repeat the process three times, each time with a different figure and a different color.
 - Provide students with toothpicks and yarn, and have them create the geometric figures with the art supplies. Alternatively, spread shaving cream on the tabletop and have students draw geometric figures in the shaving cream.

Extensions and Connections (for all students)

- Provide students with pattern blocks, attribute blocks, and/or objects from everyday life (e.g., soup can, slice of bread) that illustrate geometric figures.
- Give students the opportunity to create their own pictures by tracing figures.
- Have students use a drawing program on the computer to practice drawing geometric figures. Allow them to print their drawings.

Shape Hunt

	How Many?
