



BUILDING WITH SHAPES

Overview

Book: *Goodnight, Goodnight, Construction Site* by Sherri Duskey Rinker and Tom Lichtenheld

Grades K-2

All kinds of shapes can be found in buildings around us. In this combination art and math lesson, students create an original construction using shapes and parts of a whole.

Standards

VA:Cr1.1.K	Engage in exploration and imaginative play with materials.
VA:Cr2.3.K	Create art that represents natural and constructed environments.
VA:Cr 1.2.1-2	Use observation and investigation in preparation for making a work of art.
VA:Cr 1.2.2	Make art or design with various materials and tools to explore personal interests, questions, and curiosity
VA:Cr2.1.1	Explore uses of materials and tools to create works of art.
K.G.1	Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as above, below, beside, in front of, behind, and next to.
K.G.6	Combine simple shapes to form larger shapes.
1.G.1	Distinguish between defining attributes versus non-defining attributes; build and draw shapes to possess defining attributes.
1.G.3	Partition circles and rectangles into two and four equal shares, describe the shares using the words halves, fourths, and quarters.

2.G.1	Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces. Identify triangles, quadrilaterals, pentagons, hexagons, and cubes.
2.G.3	Partition circles and rectangles into two, three, or four equal shares, describe the shares using the words halves, thirds, etc.

Objectives

Students will identify the names of shapes and their attributes.

Students will identify shapes of objects in the real world.

Students will name the correct fraction for a portion of a whole. (Gr. 1-2)

Students will create a work of “construction” art using various shapes.

Materials Required

Colored paper

Scissors

Glue sticks

Templates of shapes and fractions of shapes

Teacher Preparation

1. For younger students, you may want to precut a large variety of shapes in various sizes and colors.
2. Using cardboard or cardstock to create templates. The templates should be both whole and fractional sizes. Label each template with shape and fraction where needed.

Procedure

1. Hold up one of the templates. Ask students what it is called.
2. Have students locate something in the room that is the corresponding shape.
3. Ask another student if he/she agrees or disagrees with the match of shapes. Ask student to name attributes of the shape to support the

judgment. With older children encourage them to find fractions in the shapes, too. (A window may be divided in half, the floor tiles may be a fourth of a larger square on the floor, etc.)

4. You may also want to have names of shapes on word cards and allow students to attach these to the shapes they have found.
5. Point out that the building a set of many different shapes.
6. Tell the students they are going to create a building using the different shapes.
7. Show students how to trace the templates and cut them out; if this is age appropriate for your class.
8. Show older students how to fold shapes in order to then cut out fractional portions. Encourage students to use the vocabulary of fractions as they work.
9. Use formative assessment as you talk to the students about what shapes they are creating. You can also have students pair share with another student, having each name the various shapes they will use for the art work.
10. Allow plenty of time for students to glue the shapes into a creative piece of art. For older students, you might want to specify that a minimum number of wholes and fractions need to be part of the design.
11. Divide students into groups. Let each student explain their creations to the group. Encourage students to use the correct vocabulary of the shapes and their fractions.

Extensions

1. Use sticky notes with various shapes drawn on them. Have students go on a scavenger hunt through the book, *Goodnight, Goodnight, Construction Site*, to find examples of each shape. Students may place the sticky note on the page where the matching shape is located.
2. Provide a bin of blocks and other 3-D items (paper towel tubes, gelatin boxes, small cans, etc.) Set this up in an area where students can explore with the building materials.
3. Have students cut out shapes from images in magazines. Create a class collage using all the different shapes.

4. Go on a “Shape Walk” inside or outside. Use sticky notes to label shapes the shapes that students find.

Rubric

RUBRIC	Exceeds (3)	Meets (2)	Partially Meets (1)	Does Not Meet (0)
Shapes	Student is able to identify all the shapes/fractions in real world objects.	Student is able to identify most of the shapes/fractions in real world objects.	Student is able to identify few of the shapes/fractions in real world objects.	Student is able to identify none of the shapes/fractions in real world objects.
Attributes	Student is able to identify 3 or more attributes of a shape/fraction	Student is able to identify 2 attributes of a shape/fraction is able	Student is able to identify 1 attribute of a shape/fraction	Student is able to identify 0 attributes of a shape/fraction
Art work	Student used a wide variety of shapes and the result is a carefully constructed cohesive image	Student used a variety of shapes and the result is a cohesive image	Student used few shapes and the result is not a cohesive image	Student used only one shape and the result is not a cohesive image
Total N/12				

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