Shape of My World: Mapping a Classroom

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Grade Level	K-1
Duration	2 class periods

National Standards	AZ Standards	Arizona Social Science Standards
GEOGRAPHY **Element 1: The World in Spatial Terms** 1. How to use maps and other geographic representations, geospatial technologies, and spatial thinking to understand and communicate information	**MATHEMATICS** **Geometry** K.G.A.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.A. 2. Correctly name shapes regardless of their orientations or overall size. K.G.B.5. Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes. 1.G.A.1 Distinguish between defining attributes (triangles are closed and 3 sided) versus non-defining attributes (color, orientation, overall size) for two-dimensional shapes; build and draw shapes that possess defining attributes. **Standards for Mathematical Practice** K.MP.4. and 1.MP.4 Model with mathematics.	**GEOGRAPHY** **The use of geographic representations and tools help individuals understand their world.** K.G1.1 Use, explore, and construct maps, graphs and other geographical representations to support content focus. Key concepts include but are not limited to graphing local weather and mapping the classroom. 1.G1.1 Use, explore and construct maps, graphs, and other geographical representations to support content focus.

Overview

Mapping the classroom environment, using large shapes to represent items in that environment, will help students build the mental framework on which to base an understanding of both mapping and shapes.

Purpose

In this lesson, students will identify shapes of large furniture and structures in the classroom. They will trace the appropriate number of each shape, using templates provided by the teacher. These shapes will be placed in the appropriate location on an outline map of the classroom.

Materials

- Templates of shapes appropriate for your classroom and in proportion to the outline map you will be giving the students to use (8.5 X 11 or larger)
- Outline map of classroom with doors and windows identified
- Chart paper or whiteboard
- Scissors, pencils, and glue
- Scoring Rubric
- Large envelopes with student names on the front
- Projection device
- Classroom from Above map https://geoalliance.asu.edu/sites/default/files/maps/Classroom_a.pdf
- Classroom map https://geoalliance.asu.edu/sites/default/files/maps/Classroom_b.pdf

Objectives

Students will be able to:

1. Correctly identify the shapes of structures, and count the number of shapes.
2. Trace and cut out shapes.
3. Create a map of the classroom.

The Shape of My World: Mapping a Kindergarten Classroom

Procedures

Prior Knowledge: Students should have experience with basic shapes.
Prior to the Lesson: It may be necessary to provide shapes (templates) for students to trace. Look at the shapes in your classroom and create the appropriate shapes (rectangles, squares, circles, etc.,) in the right proportion to each other. Decide if students will work independently or in partners on making the classroom map.

SESSION ONE

1. Begin the lesson by discussing the concept that mapmakers make maps as if they were looking down on the world (bird's eye view). Project and explain Classroom From Above map (items that a bird might see if looking into a classroom) *https://geoalliance.asu.edu/sites/default/files/maps/Classroom_a.pdf* and Classroom Map (only shapes representing the items are used by mapmakers) *https://geoalliance.asu.edu/sites/default/files/maps/Classroom_b.pdf*.
2. Discuss the layout of your classroom. Identify the shapes of furniture and structures in the classroom. Make a list of shapes on the board or chart paper.
3. Count how many of each shape there are in the classroom. Show the number of each shape, using tally marks or numbers.
4. Model for students how to use a shape template.
5. Provide construction paper, templates, and time to trace and cut needed shapes. Have students place the materials they have been working on in large envelopes and collect.

SESSION TWO

Prior to this session create a map of your classroom the same size as the paper you will be giving the students. The map needs to have the door(s) and window(s) marked.

1. Review the idea of bird's eye view, the layout of their classroom, and which shapes would best represent the structures in the classroom.
2. On your classroom map, model for students how to place shapes on the background.
3. Distribute student envelopes, glue, and classroom map to students/partners.
4. **Kindergarten:** Model putting the shapes on the map and gluing them down. As you proceed, ask questions that show spatial thinking: What is next to the door? How many desks do I need in the first row? Where should we put the teacher desk? It is near _____? What is in front of the reading rug? Complete the whole map together.
Grade 1: Model the first 5 or so shapes. (See Kindergarten directions.) Then have students independently or in partners complete the map.
Go from student to student and ask spatial questions. (See Kindergarten direction.)
5. Collect finished maps.

Assessment

Mathematics and Geography
Assess the map using the Scoring Rubric. A score of 3 or higher in each category on the rubric is considered mastery.

Sources

Thanks to the Triangle by Leroy Taylor, ISBN #0-7922-4624-1
Round Like a Circle by Matthew Taylor, ISBN 0-7922-4621-7