

Mapping the Bears' Cottage: Learning to Create and Use a Map with a Legend

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Grade Level K-2
Duration 2 class periods

National 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
2. How to use mental maps (a person's internalized picture of a part of Earth's surface) to organize information about people places, and environments in a spatial context
3. How to analyze the spatial organization of people, places, and environments on Earth's surface

AZ Standards

MATHEMATICS

Geometry

- 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 (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size); build and draw shapes to possess defining attributes.
- 2.G.A.1 Identify and describe specified attributes of two-dimensional and three-dimensional shapes, according to the number and shape of faces, number of angles, and the number of sides and/or vertices. Draw two-dimensional shapes based on the specified attributes (e.g., triangles, quadrilaterals, pentagons, and hexagons).

Arizona Social Science Standards

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.
- K.G1.2 Explore locations in stories shared.
- 1.G1.1 Use, explore and construct maps, graphs, and other geographical representations to support content focus. Key concepts include but are not limited to physical features (rivers, lakes, mountains, landforms, desert) and human features (dams, cities, parks, hospitals, schools, railroad tracks, farms, factories, houses).
- 2.G1.1 Use and construct maps, graphs, and other geographic representations of familiar and unfamiliar places in the world; and locate physical and human features. Key physical features include but are not limited to seven continents, oceans, lakes, rivers, mountain ranges, coasts, seas, and deserts. Key human features include but are not limited to equator, hemispheres, North and South Pole, cities, states, countries, regions, and landmarks
- 2.G1.2 Use maps, globes, and other simple geographic models to identify and explain cultural and environmental characteristics of places in the world based on stories shared.

Overview

Every map contains information to orient the reader such as a title, compass rose, and legend. It is important for students to begin to gain an understanding of basic map skills at an early age.

Purpose

In this lesson, students will use geometric shapes to make a map that includes a title, symbols, compass rose and legend.

Materials

Mapping the Bears' Cottage

- A copy of the Goldilocks story or knowledge of the story memory
 - A copy of The Three Little Pigs story or knowledge of the story from memory
 - Construction paper
 - Drawing paper and art supplies
 - Scissors
 - Doc cam or whiteboard
 - Tape/glue
 - Assessment Checklists for Kindergarten and Grades 1-2
 - Possible Questions to Ask Grade 1-2 Students
 - Bird's Eye View of a Classroom map
https://geoalliance.asu.edu/sites/default/files/maps/Classroom_c.pdf
 - Classroom map
https://geoalliance.asu.edu/sites/default/files/maps/Classroom_b.pdf
5. Decide the appropriate shape for the table (circle) and for the chairs (squares). Are they all the same size? Cut these out from construction paper as the students suggest the shapes and sizes.
 6. Now have the students suggest a shape and sizes for the bears' beds. Is there anything else the book mentioned? (door, etc.)
 7. Refer back to the bear's house and ask them which direction is north. Draw the compass rose on the map and explain what it means and how to use it.
 8. Now take the table and chair shapes that were cut out and ask a volunteer place it on the map and tape it. Do the same with the other items until a map of the bears' cottage is created.
 9. When the map is complete have the children come up with an appropriate title.
 10. Explain that a stranger looking at the map might not understand what the shapes represent and therefore students need to create a legend to explain each shape. Demonstrate how to make a legend. Have the children tell which items are needed in the legend.

Objectives

The student will be able to:

1. Demonstrate understanding of the use of shapes to represent objects on a map.
2. Create a map that demonstrates knowledge of shapes and map representations.
3. Explain or show the need for a legend and title when making a map.
4. Gather information using the legend and the map.

Procedures

Prior to this Lesson: Have students complete: Shape of My World: Mapping a Classroom to learn bird's eye view and learn basic mapping skills
<https://geoalliance.asu.edu/node/232>

SESSION ONE

1. Read or re-tell the Goldilocks story.
2. Review how a map is made from bird's eye view. Project Bird's Eye View of a Classroom map
https://geoalliance.asu.edu/sites/default/files/maps/Classroom_c.pdf and Classroom map
https://geoalliance.asu.edu/sites/default/files/maps/Classroom_b.pdf
3. Draw a large rectangle on the whiteboard or on paper and project it using a doc camera. Explain they are going to map the bear's house. Indicate to the children the directions in the classroom and the bear's house (north, east, south and west). Label these on your map.
4. Discuss with the children about how the bear's furniture would look from above (bird's eye view). Explain that mapmakers often use shapes to represent objects on a map.

SESSION TWO

1. Refer students back to the map made in Session One. Review how it was made. Then explain that today, they will be creating their own map. This time it will map the pigs' story. Read or tell the Three Little Pigs story.
2. For Kindergarten students: ask them to name five things that would need to be included in the pigs' map. They will need to know the names of the shapes they use for the items in the story. They will also have to draw the shapes correctly. (i.e. a circle will have to look like a circle) Then give them paper and art supplies for their maps.
3. For Grades 1-2 students, give the children a piece of paper on which to make a map of the Three Little Pigs' houses and the wolf's path after they have listened to the story. Tell them to use triangles, squares, rectangles, and circles (1st grade) and other shapes for (2nd) for their symbols. They need to have at least 5 items on their map. Their map must have a legend and symbols. They need to know the names of the shapes they are using. They need to be able to explain their shapes. (squares have 4 equal sides, etc.)
4. Grades K-2, when they are finished making their map, they should raise their hand. Use the Assessment Checklist to assess student learning.

Assessment

Mapping the Bears' Cottage

Geography and Mathematics

Kindergarten: Use the Assessment Checklist to determine students' knowledge of bird's eye view and mapmaking skills as well as geometric shapes. Mastery will be considered: Excellent--3 checks, Good--2 checks, Needs Improvement--0-1 checks.

Grades 1-2: Use the Assessment Checklist and Possible Questions to determine students' knowledge of bird's eye view and mapmaking skills as well as geometric shapes. Mastery will be considered: Excellent--4 checks, Good--3 checks, Needs Improvement--0-2 checks.

Extensions

Have the children create a map of a room in their house using shapes and include a legend, title and compass rose.

Sources

Marshall, James. *Goldilocks and the Three Bears* ISBN 061305069X

Kellogg, Steven. *The Three Little Pigs*. ISBN 0064437795