

RESOURCE LIBRARY
ACTIVITY : 30 MINS

Exploring Maps and Models of Earth

Students compare miniature models to real things. Then they explore maps and globes as miniature versions of places and the Earth.

GRADES

Pre-K, K, 1

SUBJECTS

Geography

CONTENTS

5 Images, 1 Link, 1 PDF

OVERVIEW

Students compare miniature models to real things. Then they explore maps and globes as miniature versions of places and the Earth.

For the complete activity with media resources, visit:

<http://www.nationalgeographic.org/activity/exploring-maps-and-models/>

Program



DIRECTIONS

1. Introduce the concept of a model.

Help students understand the concept of a model of something real. Show students miniature items representing things from their daily lives, such as a toy car or animal. Help students to describe the difference between the real objects and their miniature versions. Ask: *How are these like a real car or animal? How are they different from a real car or animal?* Provide students with sentence starters, such as:

- They are alike because ___.
- They are different because ___.

Make sure students describe how the miniature version may look like the real object, but people cannot use it the way they use the real object.

2. Activate students' prior knowledge about why we use maps.

Show students the three provided maps: the Park Map, the Neighborhood Map, and the Community Map. As you project each, read its title aloud. Explain that maps are miniature versions of places on the Earth. Ask students to name what they see on the map. Explain that the small pictures are "symbols." These are like the miniature version of the real things. Instead of a model of a house, there is a small picture.

3. Zoom out from students' school and community on an interactive map.

Locate the students' school using the search feature on a satellite map application such as Google Maps. Point out places on the map as in Step 2. Ask: *Where are the roads? Where are the buildings? Where do you see water?* Zoom out very slowly. Explain that the views of the land and water students are seeing are getting smaller as we see them from farther away. Have students imagine looking down at the ground from a rocket or shuttle going straight up in space. At different points ask students to describe what they are seeing. Zoom out until students can see the continents.

4. Compare a picture of Earth and a globe.

Show students the picture of Earth from space. Ask them to describe the shape (a ball). Talk about how the details on this image look similar to what they saw on the map before, for example, they may recognize the shapes of the continents and oceans. Next show the picture of the globe, and pass around a globe. Explain that globes are miniature models of Earth. Ask: *What shape is a globe? (a ball) How is a globe like Earth? How is a globe different from Earth?*

Modification

If students are having difficulty understanding the maps, help them to think about looking at a place from above it. For example, show students a photo of a car that looks like the toy car. Then show a photo of the car from the top. Explain how we can look at things and also places from above, as if we were up high looking down.

Tip

To help ground this activity in students' own experiences, invite them to talk about how people they know use maps. Ask them if they see people use paper maps, maps on cell phones, maps on computers, or all of these.

Informal Assessment

Have each student complete the provided Earth Shapes worksheet to check for understanding. Provide crayons for each student and reading assistance as needed for younger students.

Extending the Learning

Have students work collaboratively to build a model of their classroom using blocks, clay, or precut paper shapes. Students can then "teach lessons" in their model classroom to their stuffed animal students or imaginary friends.

OBJECTIVES

Subjects & Disciplines

Geography

Learning Objectives

Students will:

- describe the difference between a model of something and the real thing
- describe places they see on different maps
- explain the difference between a photograph of Earth and a globe

Teaching Approach

- Learning-for-use

Teaching Methods

- Demonstrations
- Discussions
- Visual instruction

Skills Summary

This activity targets the following skills:

- 21st Century Student Outcomes
 - Learning and Innovation Skills
 - Communication and Collaboration
- Critical Thinking Skills
 - Understanding
- Geographic Skills
 - Organizing Geographic Information

National Standards, Principles, and Practices

NATIONAL COUNCIL FOR SOCIAL STUDIES CURRICULUM
STANDARDS

- **Theme 3:**

People, Places, and Environments

NATIONAL GEOGRAPHY STANDARDS

- **Standard 1:**

How to use maps and other geographic representations, geospatial technologies, and spatial thinking to understand and communicate information

- **Standard 3:**

How to analyze the spatial organization of people, places, and environments on Earth's surface

COMMON CORE STATE STANDARDS FOR ENGLISH LANGUAGE ARTS & LITERACY

- **Reading Standards for Informational Text K-5:**

Key Ideas and Details, RI.K.2

- **Reading Standards for Informational Text K-5:**

Integration of Knowledge and Ideas, RI.1.7

THE COLLEGE, CAREER & CIVIC LIFE (C3) FRAMEWORK FOR SOCIAL STUDIES STATE STANDARDS

- **Geographic Representations: Spatial Views of the World: D2.Geo.2.K-2:**

Use maps, graphs, photographs, and other representations to describe places and the relationships and interactions that shape them.

- **Geographic Representations: Spatial Views of the World: D2.Geo.3.K-2:**

Use maps, globes, and other simple geographic models to identify cultural and environmental characteristics of places.

Preparation

What You'll Need

MATERIALS YOU PROVIDE

- Crayons
- Blocks, clay, or precut paper shapes (optional)
- Globe (optional)

- Miniature items, such as cars or plastic animals
- Photos described in the activity modification (optional)
- Scissors (optional)
- Stuffed animals (optional)

REQUIRED TECHNOLOGY

- Internet Access: Required
- Tech Setup: 1 computer per classroom, Projector

PHYSICAL SPACE

- Classroom

GROUPING

- Large-group instruction

OTHER NOTES

If you plan to do the activity extension, make sure you precut paper shapes of the large furniture, rugs, and other permanent items in the classroom.

BACKGROUND & VOCABULARY

Background Information

Introducing students to the concept of maps as representations of places at a young age is important. Modeling the use of maps in and out of school can help students to recognize the value of maps and gain confidence with them. Using maps of places that are familiar to students will strengthen their spatial thinking skills before learning about states, countries, and continents.

Prior Knowledge

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Recommended Prior Activities

- [Using the Language of Location](#)

Vocabulary

Term	Part of Speech	Definition
globe	noun	scale model of the Earth, or sometimes used to mean the Earth itself.
map	noun	symbolic representation of selected characteristics of a place, usually drawn on a flat surface.
map skills	noun	skills for reading and interpreting maps, from learning basic map conventions to analyzing and comprehending maps to address higher-order goals.
model	noun	image or impression of an object used to represent the object or system.

For Further Exploration

Books

- [Sobel, David. *Mapmaking With Children: Sense of Place Education for the Elementary Years*. Portsmouth, NH: Heinemann, 1998.](#)

