

Mapping II: Position and Size

Overview: Students will become familiar with different types of representations of a place, including maps, and what each is good for.



Monadnock Afternoon
Rockwell Kent

This is the second of three linked lessons:

(1) Mapping I: “The Mountain is...” (2) Mapping II: Position and Size, and (3) Mapping III: Topography. The paintings in the Museum can be viewed at any point during the unit, and you may want to visit more than once.

Goals: This lesson will

Support concepts & skills: interpretation of maps, different kinds of maps, getting information from different sources, evaluating information.

Fulfill Learning Standards: Science Strand 1 (gr.6-8) 1; History & Social Sciences 5.2; ELA 1-3, 9-11, 13, 17, 26; Visual Art 5.1-3, 6, 8, 12.

Practice: map reading skills; media literacy, analysis, synthesis

Familiarize students with: maps, visual literacy, media analysis

Objectives for Students: Students will

Be able to: “read” an object to decipher the information it is offering; distinguish among different kinds of maps, and the information they provide; “read” a topographical map.

Understand: that different representations give very different information.

Key Questions (to be answered by students):

1. What kinds of information about a place can we get from different representations of it? How does the media affect my interpretation?
2. How many ways can a place be represented?
3. In what situations would different representations be most appropriate?

Materials Needed: A set of simple geometric objects for each group; blocks will work, or other geometric forms, like cubes, boxes, cones, pyramids, spheres, etc. (or even thick cardboard shapes if you can’t get blocks); Large drawing paper and pencils; Many different kinds of maps for comparison.

Museum Objects: *Monadnock Afternoon* by Rockwell Kent, oil on canvas, 1909, Gift of Mrs. Paul Mellon in memory of her grandfather Arthur H. Lowe (1983.69)

Mapping II, Position and Size: How can we represent a “landscape” accurately?

In the Classroom: Ask the students to work in small groups, with a set of objects placed on a large piece of paper. “Look at the group of objects provided. Your challenge is to create a single two-dimensional image of this group of objects that accurately communicates the shape, position and size of each of the three objects. Do not put numbers on your drawing, but do provide a scale or some other device that will help us translate your image to determine actual size and position. When you have finished, your paper will be given to another group and they will use the information on your paper to attempt to describe the size, shape and placement your three objects as accurately as possible.”

Reflection: After each group has had a turn to describe another group's objects look at the actual objects and discuss the validity of each of the maps, and how they might be improved. "How would you like to adjust your map so that a map reader would have a more accurate picture of the shape and arrangement of your objects? Can you think of any other way to represent the position and size of objects? Discuss the information you can get from different representations." (bird's eye view, silhouette, perspective drawing) "If the shapes were taller, how would you have to alter your map to show this?"

Follow-up Activity – Look at a variety of maps, including historical maps, and discuss what kinds of information are provided by each. Discuss the meaning of "accuracy" and why it is elusive. Talk about the relationship of a map's purpose to its design. For example, a map from here to downtown would not necessarily have to be accurate to scale, but simply tell you names of streets and right or left.

Documentation and Assessment Options: Given a list of maps, students should be able to describe the kinds of information provided by each.

Other Works of Art in the Museum that can connect to this lesson: Any landscape painting can be discussed to determine how much information you can obtain about the terrain.

Links to Other Curriculum: See also the lesson "Then and Now: Historical Eras in North Central Massachusetts" on this CD-ROM for more information about Mt. Monadnock.

History and Social Sciences: map reading, history of map making and how it has changed.

Visual Art: perspective drawing, accuracy in representing objects.

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