Mapping III: Topography

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

This is the third 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 Science 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: Topographical map of the Mount Monadnock area.


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At the Museum – Divide the class into two groups. One group looks at the map first, and the other looks at the painting first.

Group 1: “Look at a topographical map of Mount Monadnock. Find the marker on the map (sticker or push pin). Imagine a line drawn from that spot on the edge of the map to the summit.” (You could draw the line in pencil for the students.) “See if you can draw the profile (or silhouette) of the mountain described from this point of view. Don’t worry about detailed accuracy, just see if you can get the general profile, as though you were standing at the point marked at the edge of the map and looking toward the summit.”
“After you have finished your sketch, look at the painting in the exhibit, and compare your sketch to the image in the painting or photograph. How close were you?”

Group 2: “Look at the painting of Mt. Monadnock. Imagine a line from the place where the painter was standing all the way to the summit. Discuss in your group what you think the terrain is like from here to there. If you had to draw a bird’s eye view of this path, how could you show the ups and downs, and the incline to the summit? Try together as a group to find a way to show the path, with all its changes in elevation, all the way to the summit.”

“After you have completed your map, look at the topographical map to compare your representation with the topographical one. How close were you? What information was missing from the painting?”

Post-Museum Visit – Large Group Reflection: Which group had the easier job, and why? What did you learn about topographical maps? Do you think the painting accurately represents the terrain? Why or why not?

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: reading maps

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