Data Mapping

Objective:
Students will find or use data on contemporary Vermont issues and topics from the web. They will decide how to map the data on the Giant Map, and then look for the spatial patterns that are generated.

Grade Level: 7-12

Materials:
Computers with web access
Mega Bloks, Poker Chips and other props from the Giant Map trunk

Directions:

In addition to identifying locations and measuring distances, high school and middle school students can broaden their geographic awareness of Vermont by mapping data which they themselves generate. This lesson suggests contemporary topics and online data sets that students can represent on the Giant Map of Vermont.

When teaching this lesson, it is important to stress that geography is a discipline that provides a spatial perspective on data from many fields of study, and that that perspective often allows discovery of previously unseen relationships. Another way to think about this is that geography asks the question, "*Why are things located where they are?*" The topics suggested below give students the opportunity to analyze spatial patterns in a wide variety of data.

SUGGESTED TOPICS

Vermont's population distribution
1. Have students identify towns and municipalities with populations:
- Above 20,000
- Between 15,000 and 20,000
- Between 10,000 and 15,000
- Between 5,000 and 10,000

Have students find this information online. One good source is UVM's Center for Rural Studies website, which has a *Data and Information Resources* section with detailed statistics on Vermont: www.uvm.edu/crs. Or, another option is: www.virtualvermont.com/towns/RankPopulation.html.

2. Have students find a way to show Vermont's population distribution on the Giant Map. They may use any of the props included in the trunk (for example, the Mega Bloks could be stacked to represent different populations).

3. Ask students to make observations about Vermont's population patterns.

Vermont high school sports competition

1. Have students choose a Vermont high school sport, such as basketball or soccer. Then, have them find information on the four divisions and championship winners at the Vermont Principals' Association website: http://www.vpaonline.org/domain/11. (Students will need to scroll down to the bottom of the page, and look for links to Division Alignments and Champions/Awards.)

2. Have students use different color Mega Bloks (or other props in the trunk) to show the location of:
- Division I high schools
- Division II high schools
- Division III high schools
- Division IV high schools

3. Have students stack Mega Bloks to different heights to show 1st and 2nd place winners in their chosen sport.

4. Ask students what, if any, conclusions can be drawn from the visualization of this information.

OTHER TOPICS

What patterns do you see when you map these data sets?
Can you explain the patterns?

Crime rates among Vermont towns and cities
Try using: www.uvm.edu/crs, or try
www.neighborhoodscout.com/vt/crime/.

Vermont ski areas by number of lifts
Try using: www.onthesnow.com/vermont/lifts.html.
To find resort locations, click on the link "View Resort Map".

Vermont colleges by type and size
Why are they located where they are? Try using:
http://en.wikipedia.org/wiki/List_of_colleges_and_universities_in_Vermont.

Vermont race tracks
Try using: www.na-motorsports.com/Tracks/VT.

Vermont towns' average income levels
What are Vermont's five richest towns? What are Vermont's five poorest towns? Why are they located where they are?
Try using: www.uvm.edu/crs, or try
http://en.wikipedia.org/wiki/Vermont_locations_by_per_capita_income.

Vermont shopping malls
Why are they located where they are? Try using: www.usa-shoppingmalls.com/vermont-shopping-malls.html.