VERMONT

Giant Traveling Map Lesson

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Vermont ACADEMIC STANDARDS / SUITABLE DISCIPLINES:

Civics: *Students act as productive citizens by understanding the history, principles and foundations of our American democracy, and by acquiring the ability to become engaged in civic and democratic processes.*

Grade 5
d. Explain the origins, functions, and structure of different systems of government, including those created by the U.S. and state constitution. (D2.Civ.5)

Grade 12
a. Distinguish the powers and responsibilities of local, state, tribal, national, and international civic and political institutions. (D2.Civ.1)
c. Explain how the U.S. Constitution establishes a system of government that has powers, responsibilities, and limits that have changed over time and that are still contested. (D2.Civ.4)

Geography: *Students use geographic inquiry and reasoning to propose solutions to local, national and global issues.*

Grade 2
b. Use maps, graphs, photographs, and other representations to identify features and describe places. (D2.Geo.2)
a. Explain why and how people, goods and ideas move from place to place by describing the connections between the physical environment and economic activity. (D2. Geo. 7, 9)

Grade 5
b. Use maps, satellite images, photographs, and other representations to explain relationships between the locations of places and regions and their environmental characteristics. (D2.Geo.2)
b. Describe how environmental, economic and cultural characteristics influence population distribution in specific places or regions and explain how the characteristics change over time. (D2.Geo.5, 6 ,11)
a. Explain how cultural, economic, technological and environmental characteristics affect the distribution and movement of people, goods and ideas. (D2.Geo.7, 9)

Grade 8
a. Explain how cultural patterns and economic decisions influence environments and the daily lives of people in both nearby and distant places. (D2.Geo.4) b. Analyze the combinations of cultural, environmental and economic characteristics that make places both similar to and different from other places. (D2.Geo.5, 6, 10)
a. Evaluate the influences of human-induced environmental change on spatial patterns of settlement, movement, conflict and cooperation. (D2. Geo. 7, 9)

Grade 12
a. Use geospatial and related technologies to create maps to display and explain the spatial patterns of cultural and environmental characteristics. (D2.Geo.1)

b. Use maps, satellite images, photographs, and other representations to explain and analyze relationships between the locations of places and regions and their political, cultural, and economic dynamics. (e.g., population density, air quality) (D2.Geo.2)

History: *Students understand and evaluate change and continuity over time by making appropriate use of historical evidence in answering questions and developing arguments about the past.*

Grade 5
b. Compare life in specific historical time periods to life today; explore individuals and groups who have shaped significant historical changes and continuities. (D2.His.2, 3)

OBJECTIVES:
Participants will:
- Learn about major cities in Vermont during three different historical periods
- Practice using grids and cardinal directions to locate cities in the state
- Practice using latitude and longitude lines (if appropriate for grade level)
- Analyze change over time
- Discuss topics such as the census (source of data), distribution of resources in the state, physical features associated with settlements, and implications of changes in population for political representation at various levels of government

RECOMMENDED GRADES: Fourth through adult

TIME NEEDED: 20 to 25 minutes, depending on whether discussion is held as part of the map visit or at a later time

MATERIALS:
- Compass rose
- 15 flat markers
- 15 tall cones
- 15 shorter, flexible cones
- 3 to 4 plastic chains for dividing the state
- List of Vermont cities by population for 1810/1910/2010

PREPARATION:
- Discuss reasons why people choose to live in different places
- Review historical settlement patterns in Vermont
- Review Vermont era info [SOURCE]
- Develop predictions by participants about where they think people might live
- Consider push and pull factors in migration

RULES:
- Shoes are not allowed on the map. Please have participants remove shoes before walking on the map.
- Participants should wear socks on the map
- No writing utensils on the map.
- No sliding on the map.

DIRECTIONS:
Using the list of cities and colored cones, participants will locate the fifteen most populous cities in Vermont for the years 1810, 1910, and 2010. They will then look for trends based on the east/west axis and north/south axis, waterways adjacent to and within Vermont, and defensive settlements from the 18th century. Encourage speculation about the factors that contributed to population development among the various regions of the state.

On the map:
1. Provide participants with an overview about exploring the top fifteen populated places in Vermont in 1810, 1910, and 2010 using U.S. Census data as a source of information.
2. Ask participants about the kinds of jobs they imagine people were doing in Vermont in 1810. Ask them to predict where people might be living. (If needed, ask the participants to consider where they live and why? What does a location need for people to live there?)
3. Take 15 of the round makers. Pass them out to 15 of the participants (usually just ask them to take one and pass the remainder along).
4. Read the 15 largest cities one at a time, going down the row of participants and asking the participants to place the marker on the dot identifying the town (star in the case of Montpelier).
5. Remind the participants that they can provide assistance to their classmates or colleagues about the location of a city based on cardinal directions or the grid. They should avoid shouting "over there", "this way", "left/right", etc. From the beginning of the lesson, model the use of cardinal directions or the grid. Students may use the compass. Place NSEW labels on the walls or around the map.
6. After the flat, round markers are all on the map, ask the participants to interpret the new information that has been added to the map. Remind them that this is similar to adding a layer to a geographic information systems map.
7. Move on to the 1910 census and ask participants what jobs people were doing then. Ask them to predict where people might be living.
8. Pass out the 15 larger cones. Assign individual participants to place their cones on the 15 cities. For cities in the top 15 list by population in both 1810 and 1910, have participants pick up the flat marker and place it on top of the cone.
9. After the larger cones are all on the map, repeat Item 6 above, asking participants to think about what has changed and why.
10. Repeat process with 2010 census data and smaller or flexible orange cones. Have participants put the orange cone on top of the flat, round marker creating a pyramid, or on top of the large cone if the city was previously in the top 15 only in 1910.
11. Discuss where most of the people live and why. What areas of the state have no large settlements? Why? This is also an opportunity to review the concentration of people in the state in terms of electoral districts.

NOTES:
Review the Major Eras in Vermont History for contextual information for the time periods highlighted in this lesson.

GUIDING QUESTIONS:

Q. What factors influence where people settle(d)?
A. Water, safety, transportation routes, physical geography, cultivatable land.

Q. How many of the fifteen largest cities are located along a river or lake in 1810? 1910? 2010?
A.

1810	1910	2010
13	14	13

Q. How many of the cities were in the various regions? Are they spread evenly or grouped together?
A.

1810	1910	2010
Champlain Valley – 6 Vermont Valley – 1 Southern Piedmont – 7 Green Mountains - 1	Champlain Valley – 5 Vermont Valley – 1 Southern Piedmont – 5 Northern Piedmont - 2 Green Mountains - 2	Champlain Valley – 8 Taconic Mountains - 1 Vermont Valley – 1 Southern Piedmont – 3 Green Mountains - 2

Q. For what reasons did this pattern exist?
A. Transportation and employment opportunities, including woolen mills and light industry, granite production, agricultural cultivation, and artistic pursuits.

Q. How did Vermont compare with the rest of the United States?
A. Consider how much the population of Vermont increased compared to the increase in the United States. What percentage of the population has lived in Vermont over these time periods?

	1810	1910	2010
Vermont	217,895	355,956	625,741
United States	7,239,881	92,228,531	308,745,538

Q. How many cities in the new top fifteen in 1910 were also in the top fifteen in 1810? What percentage is that?
A. 8 , 53%, just over half

Q. How many cities in the new top fifteen in 2010 were also in the top fifteen in 1810? In 1910?
A. 1810: 7 of 15; 1910: 8 of 15

Q. Where are most of the large cities in Vermont located in 2010? Why?
A. The cities are located in the Champlain Valley near Burlington, which is a large employment center.

Q. Are major cities and suburbs significantly more concentrated than they were in 1910?
A. Yes, because of changes in the kinds of jobs people are doing and the mechanization of agriculture.

Q. Generally speaking, how would you describe the majority of population movement and growth in the Vermont over the past one hundred years?
A. The majority of the population lives in cities and towns in the various valleys throughout the state. The Burlington area has about a third of the state's population. There is division between the northern and southern parts of the state, as well as between more urban and more rural areas.

Q. Why? What factors have encouraged people to move and live in cities?
A. Many people have moved to Vermont from other states. They like being close to recreation areas, but also want to have amenities found in cities.

MODIFICATIONS:

For younger participants, focus on the map key and compass rose. For older participants, invite them to have more autonomy in the lesson and incorporate additional mathematical concepts.

EXTENSIONS:

Consider using the census data in math lessons. How much larger is Burlington today than in 1810? How much larger is Burlington than the 15th largest city? How concentrated is the population in Burlington over time? How did the population of your city change?

For use with the GeoCivics activities (https://www.uccs.edu/geocivics/), invite participants to think about the current configuration of United States Congressional Districts in the state. Ask them to remember the key characteristics of how districts are drawn (equal population and contiguous). Invite them to pretend that their state has just two Congressional Districts; ask two people to pick up one of the chains and divide the state generally in half by population; invite two more people to divide the state into four districts (they may choose to move the original chain, or not). Discuss why some districts would likely be smaller in area than others. If appropriate, determine how to divide the state into state senate districts.

Consider when a giant floor map is a good tool for understanding geographic phenomena and when other tools (paper maps, online maps) might be more appropriate.

NOTE:

Thanks to National Geographic's Giant Traveling Maps team for the inspiration for this lesson, which is based on "People on the Move", a lesson for the North America Giant Map.

RESOURCES:

State of Vermont Agency of Education
https://education.vermont.gov/student-learning/content-areas

Physiographic Regions of Vermont
http://academics.smcvt.edu/vtgeographic/textbook/physiographic/physiographic_regions_of_vermont.htm

Vermont Historical Society
https://vermonthistory.org/digital-resources/
https://vermonthistoryexplorer.org/discover-vermont/facts-figures/census-records/census-by-towns

	City	1810	√		City	1910	√		City	2010	√
	State	217,895			State	355,956			State	625,741	
1	Windsor	2,757		1	Burlington	20,468		1	Burlington	42,417	
2	Woodstock	2,672		2	Rutland	13,546		2	Essex	19,587	
3	Springfield	2,556		3	Barre	10,734		3	South Burlington	17,904	
4	Bennington	2,524		4	Bennington	8,698		4	Colchester	17,067	
5	Chester	2,370		5	Saint Johnsbury	8,098		5	Rutland	16,495	
6	Middlebury	2,138		6	Montpelier	7,856		6	Bennington	15,764	
7	Rockingham	1,954		7	Brattleboro	7,541		7	Brattleboro	12,046	
8	Brattleboro	1,891		8	Colchester	6,450		8	Milton	10,352	
9	Hartford	1,881		9	Saint Albans	6,381		9	Hartford	9,952	
10	Montpelier	1,877		10	Rockingham	6,207		10	Springfield	9,373	
11	Burlington	1,690		11	Bellows Falls	4,883		11	Essex Junction	9,271	
12	Charlotte	1,679		12	Springfield	4,784		12	Barre	9,052	
13	Swanton	1,657		13	Winooski	4,520		13	Williston	8,698	
14	Saint Albans	1,609		14	Barton	4,194		14	Middlebury	8,496	
15	Milton	1,548		15	Hartford	4,170		15	Montpelier	7,855	

	City	2020*	√
	State	643,077	
1	Burlington	44,743	
2	South Burlington	20,292	
3	Rutland	15,807	
4	Essex Junction	10,590	
5	Bennington	8,795	
6	Barre	8,491	
7	Montpelier	8,074	
8	Winooski	7,997	
9	Brattleboro	7,352	
10	Middlebury	7,304	
11	St. Albans	6,877	
12	Shelburne	6,178	
13	St. Johnsbury	5,994	
14	Newport	4,455	
15	Springfield	4,189	

*2020 Census data is from Redistricting Data Hub using the State and Place level PL 94-171 datasets.
https://redistrictingdatahub.org/data/download-data/#state-menu