NEW HAMPSHIRE

Giant Traveling Map Lesson

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New Hampshire ACADEMIC STANDARDS / SUITABLE DISCIPLINES:

<u>Elementary</u>
SS:CV:4:1.2: Analyze how government addresses social, political, and geographic issues.
           e.g., local land use decisions or decisions involving human rights.
SS:GE:4:4.1: Recognize the distribution of a population and its underlying causes, e.g.,
           rural, suburban or urban.
SS:GE:4:4.2: Describe the types and historical patterns of human migration, e.g., chain
           migration or slave trade.
SS:GE:4:5.2: Examine the ways in which the physical environment provides opportunities
           or limitations, e.g., natural resources that first attracted settlers or natural
           hazards that threaten life.
SS:CV:6:1.3: Apply criteria for evaluating the effectiveness and fairness of rules and laws at
           the local, state, or federal levels.
SS:CV:8:4.1: Describe and analyze ways Americans can effectively participate in civic and
           political life at the local, state, and federal levels, e.g., problem solving, public
           engagement, or voting.
SS:GE:6:1.3: Utilize maps, globes, graphs, charts, models, and databases to analyze spatial
           distributions and patterns, e.g., climate zones, natural resources, or
           population density.
SS:HI:8:1.2: Describe the role New Hampshire voters have played in our nation's
           presidential primaries and elections.

<u>Secondary</u>
SS:CV:12:4.2: Investigate how knowledgeable and engaged citizens have acted to preserve
           and extend their liberties, e.g., writing letters to the editor or participating
           in town meetings.

Note: New Hampshire Social Studies academic standards are currently under
development. New Hampshire has embedded the Common Core State Standards in their
College and Career Ready Standards.

OBJECTIVES:
Participants will:
- Learn about major cities in New Hampshire 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 New Hampshire cities by population for 1830/1910/2010

PREPARATION:
- Discuss reasons why people choose to live in different places
- Review historical settlement patterns in New Hampshire
- Review New Hampshire era information
- 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 Giant Map.
- Participants should wear socks on the Giant Map.
- No writing utensils on the Giant Map.
- No sliding on the Giant Map.

DIRECTIONS:
Using the list of cities and colored cones, participants will locate the fifteen most populous cities in New Hampshire for the years 1830, 1910, and 2010. They will then look for trends based on the east/west axis and north/south axis, waterways adjacent to and within New Hampshire, 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 New Hampshire in 1830, 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 New Hampshire in 1830. 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 successfully?)
3. Take 15 of the round markers. 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 Concord).
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 1830 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 the 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.

GUIDING QUESTIONS:

Q. What factors influence where people settle(d)?
A. Water, transportation routes, physical geography, natural resources

Q. How many of the fifteen largest cities are located along a river or lake in 1830? 1910? 2010?
A.

1830	1910	2010
~14	~15	~13

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

Region	1830	1910	2010
North Country	0	1	0
White Mountains	0	0	0
Upper Valley	2	2	0
Lakes Region	4	2	1
Monadnock	1	1	1
Merrimack Valley	4	4	10
Seacoast	4	5	3

Q. For what reasons did this pattern exist?
A. Fishing, textiles and lumber through its early history gave way to a more service-centered economy with widely dispersed employment.

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

	1830	1910	2010
New Hampshire	269,328	430,572	1,316,470
United States	12,866,020	92,228,496	308,745,538

Q. How many cities in the new top fifteen in 1910 were also in the top fifteen in 1830? What percentage is that?
A. 8, 53.3%

Q. How many cities in the new top fifteen in 2010 were also in the top fifteen in 1830? In 1910?
A. **1830**: 5 of 15; **1910**: 9 of 15

Q. Where are most of the large cities in New Hampshire located in 2010? Why?
A. Proximity to Boston is the reason for why Manchester/Nashua has the largest cluster of the top 15 cities in 2010.

Q. Are major cities and suburbs significantly more concentrated than they were in 1910?
A. Yes. In 2010, ten of the largest cities were clustered between Manchester and Nashua.

Q. Generally speaking, how would you describe the majority of population movement and growth in the New Hampshire over the past one hundred years?
A. Between 1910 and 2010, population in New Hampshire became more concentrated in the Merrimack Valley.

Q. Why? What factors have encouraged people to move and live in cities?
A. Water power was the original key to the development of the textile industry in New Hampshire. As the industry declined, it was replaced by defense and financial sectors. Proximity to Boston's tech corridor has also led to a vibrant tech sector. Boston's economy is often described as "eds and meds" or education and medicine. The city of Nashua, right on the Massachusetts border, is pushing for the creation of passenger commuter trains to connect into the MBTA rail system. This would allow people to take a train from Nashua into downtown Boston, instead of commuting by car. The idea of expanded rail service potentially would extend farther north into Manchester and even Concord, but that seems optimistic. Consider past, present, and future modes of transportation and how that affects people's options for employment.

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 Nashua today than in 1830? How much larger is Manchester than the 15th largest city? How concentrated is the population in Manchester 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:
Population statistics: https://www.nh.gov/osi/data-center/historical-census.htm

Social Studies standards: https://www.education.nh.gov/instruction/curriculum/social_studies/documents/frameworks.pdf

Regional divisions: https://www.nesmc.org/regions/regionNH.html

	City	1830	√		City	1910	√		City	2010	√
	State	**269,328**			**State**	**430,572**			**State**	**1,316,470**	
1	Portsmouth	8,026		1	Manchester	70,063		1	Manchester	109,565	
2	Dover	5,449		2	Nashua	26,005		2	Nashua	86,494	
3	Gilmanton	3,816		3	Concord	21,497		3	Concord	42,695	
4	Concord	3,720		4	Dover	13,247		4	Derry	33,109	
5	Somersworth	3,090		5	Berlin	11,780		5	Dover	29,987	
6	Sanbornton	2,866		6	Portsmouth	11,269		6	Rochester	29,752	
7	Exeter	2,753		7	Laconia	10,183		7	Salem	28,776	
8	Sandwich	2,744		8	Keene	10,068		8	Merrimack	25,494	
9	Meredith	2,683		9	Rochester	8,868		9	Hudson	24,467	
10	Claremont	2,526		10	Claremont	7,529		10	Londonderry	24,129	
11	Hopkinton	2,474		11	Somersworth	6,704		11	Keene	23,409	
12	Weare	2,432		12	Franklin	6,132		12	Portsmouth	21,233	
13	Nashua	2,414		13	Lebanon	5,718		13	Bedford	21,203	
14	Keene	2,374		14	Derry	5,123		14	Goffstown	17,651	
15	Hanover	2,361		15	Exeter	4,897		15	Laconia	15,951	