MINNESOTA

Giant Traveling Map Lesson

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Minnesota ACADEMIC STANDARDS / SUITABLE DISCIPLINES:

Geography

1.3.1.1.1: Create sketch maps to illustrate spatial information about familiar places; describe spatial information found on maps. For example: cities, roads, boundaries, bodies of water, regions.

I2.3.4.9.1 Identify causes and consequences of human impact on the environment and ways that the environment influences people.

3.3.3.6.1 Identify landforms and patterns in population.

3.3.3.8.1 Identify physical and human features that act as boundaries or dividers; give examples of situations or reasons why people have made or used boundaries.

4.3.4.9.1 Explain how humans adapt to and/or modify the physical environment and how they are in turn affected by these adaptations and modifications.

4.3.4.10.2 Analyze the impact of geographic factors on the development of modern agricultural regions in Minnesota and the United States.

4.4.2.4.1 Identify and locate on a map or globe the origins of peoples in the local community and state; create a timeline of when different groups arrived; describe why and how they came.

6.3.3.6.1 Locate, identify and describe major physical features in Minnesota; explain how physical features and the location of resources affect settlement patterns and the growth of cities in different parts of Minnesota.

6.3.4.10.1 Describe how land was used during different time periods in Minnesota history; explain how and why land use has changed over time.

8.3.2.3.1 Use appropriate geographic tools to analyze and explain the distribution of physical and human characteristics of places.

9.3.2.3.1 Make inferences and draw conclusions about the physical and human characteristics of places based on a comparison of maps and other geographic representations and geospatial technologies.

9.3.3.5.4 Explain migration patterns in the modern era at a range of scales, local to global.

Civics

4.1.4.6.2 Identify the major roles and responsibilities of elected and appointed leaders in the community, state and nation; name some current leaders who function in these roles and how they are selected.

OBJECTIVES:
Participants will:

- Learn about major cities in Minnesota 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 Minnesota cities by population for 1890/1930/2010

PREPARATION:

- Discuss reasons why people choose to live in different places
- Review historical settlement patterns in Minnesota
- 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 Giant 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 Minnesota for the years 1890, 1930, and 2010. They will then look for trends based on the east/west axis and north/south axis, waterways adjacent to and within Minnesota, 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 Minnesota in 1890, 1930, 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 Minnesota in 1890. 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 St. Paul).
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 1930 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 1890 and 1930, 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 1930.
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.

NOTE:
Review the major eras in Minnesota History for contextual information for the time periods highlighted in this lesson.

GUIDING QUESTIONS:

Q. What factors influence where people settle(d)?
A. Water, transportation routes, physical geography and job availability. Treaties and laws about where settlers could live dictated population before about 1860, and those impacts can be seen into the 1900s.

Q. How many of the fifteen largest cities are located along a river or lake in 1890? 1930? 2010?

A.

1890	1930	2010
~12	~11	~13

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

A.

1890	1930	2010
South: 6 Middle: 6 Northeast: 3	North: 5 Middle: 3 South: 7	North: 1 Twin Cities: 12 Middle: 1 South: 1

Q. For what reasons did this pattern exist?

A. In the 1890s, the heaviest centers of population reflect the pattern of settlement and the types of jobs in the state. Settlers arrived up the Mississippi, starting to settle in the southeastern part of the state. Farms and railroads sprang up in this part of the state first. Mining, milling, and lumbering were also major industries that created population centers. By the 1930s, railroads had spread through the state. Mining and farming were still big industries. By 2010, mining and farming jobs were significantly reduced. Many people moved into the cities.

Q. How did Minnesota compare with the rest of the United States?

A. Consider how much the population of Minnesota increased compared to the increase in the United States. What percentage of people in the United States lived in Minnesota during the various time periods?

	1890	1930	2010
Minnesota	1,310,283	2,563,953	5,290,000
United States	62,979,766	123,202,624	308,745,538

Q. How many cities in the new top fifteen in 1930 were also in the top fifteen in 1890? What percentage is that?

A. 10, 66%

Q. How many cities in the new top fifteen in 2010 were also in the top fifteen in 1890? In 1930?

A. 1890: 8 of 15, 53%; 1930: 5 of 15, 33%

Q. Where are most of the large cities in Minnesota located in 2010? Why?
A. The largest cities in Minnesota are Minneapolis and St. Paul. There are three large cities outside the Twin Cities metropolitan area: Duluth, Rochester, and St. Cloud. The other largest cities in the state are suburbs of Minneapolis and St. Paul.

Q. Are major cities and suburbs significantly more concentrated than they were in 1930?
A. Depending on which suburbs are counted as being part of major cities, the concentration of population in major cities is similar to what it was in 1930.

Q. Generally speaking, how would you describe the majority of population movement and growth in the Minnesota over the past one hundred years?
Minnesota's population has moved increasingly to urban and suburban areas. Population in the rural areas has decreased.

Q. Why? What factors have encouraged people to move and live in cities?
A. Job loss in rural areas has encouraged migration to the cities and surrounding areas. Significant reductions in jobs in mining in the Iron Range and farming in the southwest part of the state have had an impact on populations there.

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 Minneapolis today than in 1890? How much larger is Minneapolis than the 15th largest city? How concentrated is the population in Minneapolis over time? How did the population of your city change?

Imagine what the state might look like in 2050. Current trends are pointing to a megalopolis type of urban area extending from St. Cloud through the Twin Cities southeast towards Rochester. If that trend continues, what does that mean for outstate populations and their political representation? Many are leaving the southwestern part of the state because of agricultural prices and problems.

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:

Minnesota Council for the Social Studies
http://www.mcss.org/resources/documents/2011%20social%20studies%20standards.pdf

Minnesota Alliance for Geographic Education
https://magemn.com/

Minnesota Historical Society
http://education.mnhs.org/

City	1890	√		City	1930	√		City	2010	√
State	**1,310,283**			**State**	**2,563,953**			**State**	**5,290,000**	
Minneapolis	164,738		1	Minneapolis	464,850		1	Minneapolis	382,578	
St. Paul	133,156		2	St. Paul	271,606		2	St. Paul	285,068	
Duluth	33,115		3	Duluth	101,363		3	Rochester	106,769	
Winona	18,208		4	St. Cloud	21,000		4	Duluth	86,265	
St. Cloud	7,686		5	Winona	20,850		5	Bloomington	82,893	
Faribault	6,520		6	Rochester	20,621		6	Brooklyn Park	75,781	
Red Wing	6,294		7	Hibbing	15,666		7	Plymouth	70,576	
Brainerd	5,703		8	Mankato	14,038		8	St. Cloud	65,842	
Rochester	5,321		9	Faribault	12,767		9	Eagan	64,206	
Austin	3,901		10	Austin	12,276		10	Woodbury	61,961	
Albert Lea	3,305		11	Virginia	11,968		11	Maple Grove	61,567	
Brooklyn Park	1,254		12	Brainerd	10,221		12	Coon Rapids	61,476	
Maple Grove	1,197		13	Albert Lea	10,169		13	Eden Prairie	60,797	
Plymouth	1,072		14	South St. Paul	10,009		14	Burnsville	60,306	
Bloomington	959		15	Red Wing	9,629		15	Blaine	57,186	

	City	2020*	√
	State	**5,706,494**	
1	Minneapolis	429,954	
2	St. Paul	311,527	
3	Rochester	121,395	
4	Bloomington	89,987	
5	Duluth	86,697	
6	Brooklyn Park	86,478	
7	Plymouth	81,026	
8	Woodbury	75,102	
9	Maple Grove	70,253	
10	Blaine	70,222	
11	Lakeville	69,490	
12	St. Cloud	68,881	
13	Eagan	68,855	
14	Burnsville	64,317	
15	Eden Prairie	64,198	

*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