



IOWA Giant Traveling Map Lesson

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K-12 IOWA CORE IN SOCIAL STUDIES

- **Content Anchor Standard: Analyze Human Population Movement & Patterns**
 - **SS.K.15:** Explain why and how people move from place to place.
 - **SS.1.18:** Use a map to detail the journey of particular people, goods, or ideas as they move from place to place.
 - **SS.2.18:** Describe how the choices people make impact local and distant environments.
 - **SS.3.21:** Use map evidence to explain how human settlements and movements relate to the locations and use of various regional landforms and natural resources.
 - **SS.4.18:** Describe how environmental and cultural characteristics influence population distribution in specific places or regions.
 - **SS.5.20:** Analyze how rules and laws encourage or restrict human population movements to and within the United States of America.
 - **SS.6.18:** Explain how changes in transportation, communication, and technology influence the movement of people, goods, and ideas in various countries.
 - **SS.7.21:** Evaluate the push and pull factors involved in human population movement and patterns.
- **Content Anchor Standard: Iowa History**
 - **SS.K.19:** Compare and contrast local environmental characteristics to that of other parts of the state of Iowa.
 - **SS.1.23:** Describe the diverse cultural makeup of Iowa's past and present in the local community, including indigenous and agricultural communities.
 - **SS.2.24:** Describe the intended and unintended consequences of using Iowa's natural resources.

OBJECTIVES:

Participants will:

- Learn about major cities in Iowa 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, 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
- List of Iowa cities by population for 1870/1930/2010 (some cities are not on the map and will need to be found by using latitude and longitude lines at the sides of the map – attached)

PREPARATION:

- Discussion about the reasons why people choose to live in different places
- Review of historical settlement patterns in Iowa
- Development of predictions by participants about where they think people might live

RULES:

- Shoes are not allowed on the map. Please have participants remove shoes before walking 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 Iowa for the years 1870, 1930, and 2010. They will then look for trends based on the east/west axis and north/south axis, speculating about the factors that contributed to populations shifting across the state.

Part One: 1870

1. Provide participants with an overview about exploring the top fifteen populated places in Iowa in 1870, 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 Iowa in 1870. Ask them to predict where people might be living.
3. Take 15 of the flat, 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 them to place the marker on the dot identifying the town (star in the case of Des Moines). Reading them allows everyone in the group to think about where the city is and why it might be among the top 15 during that time period.
5. Remind the participants that they can provide assistance about the location of a city based on cardinal directions or the grid. They should avoid shouting “over there”, “this way”, etc.
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. Using colored yarn or plastic chains, divide Iowa into quadrants along Interstate 80 and Interstate 35.

Q: How many of the largest cities were in the eastern part of the state?

A: 12 cities (not including Des Moines, which is in the center)

Q: How many were in the southern part?

A: 10 cities (including Council Bluffs, Des Moines, Iowa City, and Davenport)

Q: Why did this pattern exist in 1870?

A: Iowa became a state in 1846, when its capital was Iowa City. The capital later moved to more centrally-located Des Moines in 1857, which is also when the boundaries were delineated on US maps. Iowa's earliest white settlers chose the timber-rich, and sometimes coal-rich, banks of southeastern rivers. The Mississippi, outlining Iowa's easternmost border, was an important transportation network for the shipment of agricultural goods to New Orleans. In the early 1850s, many eastern Iowa river cities began organizing local railroad companies. By 1867, tracks extended all the way to Council Bluffs in western Iowa, which was designated as the east terminus for Union Pacific. In 1870, oat processing and meat packing plants were getting their start in Cedar Rapids and Ottumwa.

Part Two: 1930

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 individuals participants to place their cones on the 15 cities. For cities in the top 15 in 1870 and 1930, have participants pick up the flat, round marker and place it on top of the cone.
9. After the larger cones are all on the map, repeat Item 6 above.

Q: What has changed about the distribution of cities?

A: 11 cities in the eastern part of the state (1 fewer than in 1870)
7 cities in the southern part of the state (3 fewer than in 1870)

Q: What might be driving this change?

A: Population in Iowa doubled between 1870 and 1930, from about 1.2 million to 2.5 million. Between 1870 and 1900, Iowa branded itself the state of immigrants – even producing promotional materials in English, German, Dutch, Swedish, and Danish. The rail boom led to an increased demand for coal, which peaked in production at about 1920. Many southeastern European migrants, primarily those from Italy and Croatia, took work in the coal mines. With the industrialization of agriculture, decline in the number of small family farms drove many to seek life in small towns and cities.

Q: How many cities that were in the top 15 in 1870 are also in the top 15 in 1930?

A: 12 cities remained in the top 15. New additions to the list included Mason City, Fort Dodge, and Marshalltown. The railroad boom after 1870 had a significant impact on the growth of these cities.

Part Three: 2010

10. Repeat process with 2010 census data and smaller or flexible 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 in the top 15 only in 1930.
11. In [----], Iowa's center of population is in Marshalltown, Iowa.

Year	% Urban	% Rural
1870	13.1%	86.9%
1930	39.6%	60.4%
2010	64.0%	36.0%

NOTES:

Tell participants that at the beginning of Iowa history agriculture and **mining were the main industries in the state**. Ask what other factors might have influenced where people settled.

Ask participants:

Q. Were there patterns of settlement by Native Americans that influenced where European settlers created cities?

A.

Q. What was the demographic make-up of the population?

A. According to the 1930 Census, the percentage of males was 51--%; in 1910 it was --% (no information is available for 1870). The racial and ethnic make-up was reported as --% white in 1870 and 1910, and --% white in 1930. Only --% reported being born in the state in 1890; in 1930 that rose to almost --%. In 1870, the density of the population was - persons per square mile.

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

A. In 1870, the population of all of Iowa was ---,---. That was a --% increase over the population in 1860. During the same decade, the population of the United States increased by --%.

Q. Where are most of the large cities in Iowa located in 2010? Why?

A. People want to be near Des Moines, but not live in the city.

Conclusion

Tell participants that the total population of the fifteen largest cities in 1870 was approximately --- and that the total of the top fifteen cities in 2010 is nearly ---.

Now ask participants:

Q. Generally speaking, how would you describe the majority of population movement and growth in the Iowa over the past one hundred years?

A. Away from agricultural areas and toward the cities.

Q. Why? What factors have encouraged people to move and live in cities?

A. Resources such as minerals and timber have been depleted. The proportion of people involved in agricultural production has decreased significantly. There are generally better and more varied educational opportunities and employment prospects 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 Des Moines today than in 1870? How much larger is Des Moines than the 15th largest city? How concentrated is the population in Des Moines over time? How did the population of your city change?

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. Another thank-you to Rebecca Theobald for modifying the Nat Geo lesson to fit Colorado's giant traveling map and for her guidance in adapting the lesson to the state of Iowa.

Helpful information about using giant state maps: https://www.uccs.edu/coga/colorado_giant_map

Photos for Reference



Colorado



North Carolina

City	1870	√	City	1930	√	City	2010	√
State			State			State	3,046,355	
Davenport	20,038		Des Moines	142,559		Des Moines	203,433	
Dubuque	18,434		Sioux City	79,183		Cedar Rapids	126,326	
Burlington	14,930		Davenport	60,751		Davenport	99,685	
Keokuk	12,766		Cedar Rapids	56,097		Sioux City	82,684	
Des Moines	12,035		Waterloo	46,191		Waterloo	68,406	
Council Bluffs	10,020		Council Bluffs	42,048		Iowa City	67,862	
Muscatine	6,718		Dubuque	41,679		Council Bluffs	62,230	
Clinton	6,129		Ottumwa	28,075		Ames	58,965	
Cedar Rapids	5,940		Burlington	26,755		Dubuque	57,637	
Iowa City	5,914		Clinton	25,726		West Des Moines	56,609	
Ottumwa	5,214		Mason City	23,304		Ankeny	45,582	
Waterloo	4,337		Fort Dodge	21,895		Urbandale	39,463	
Mount Pleasant	4,245		Marshalltown	17,373		Cedar Falls	39,260	
Fort Madison	4,011		Muscatine	16,778		Marion	34,768	
Sioux City	3,401		Iowa City	15,340		Bettendorf	33,217	
Marshalltown	3,218		Keokuk	15,106		Mason City	28,079	
Oskaloosa	3,204		Fort Madison	13,779		Marshalltown	27,552	
Fort Dodge	3,095		Boone	11,886		Clinton	26,885	
Cedar Falls	3,070		Newton	11,560		Burlington	25,663	
Independence	2,945		Ames	10,261				
Vinton	2,460		Oskaloosa	10,123				
McGregor	2,074		Charles City	8,039				
Charles City	2,166							
Decorah	2,110							
Fairfield	2,226							

	City	2020*	✓
	State	3,190,369	
1	Des Moines	214,133	
2	Cedar Rapids	137,710	
3	Davenport	101,724	
4	Sioux City	85,797	
5	Iowa City	74,828	
6	West Des Moines	68,723	
7	Ankeny	67,887	
8	Waterloo	67,314	
9	Ames	66,427	
10	Council Bluffs	62,799	
11	Dubuque	59,667	
12	Urbandale	45,580	
13	Marion	41,535	
14	Cedar Falls	40,713	
15	Bettendorf	39,102	

*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>