

HAWAII

Giant Traveling Map Lesson

TITLE / AUTHOR: Hawaiians on the Move / Michelle Harangody

Hawaii ACADEMIC STANDARDS / SUITABLE DISCIPLINES:

Geography

- SS.1.1.13.3: Use maps and map features to describe places
- SS.2.3.13.4: Describe major geographic features of places using maps, photos, and other geographic representations
- SS.3.3.15.2: Investigate factors that influence why people migrate and where they settle
- SS.3.3.16.3: Compare the ways people, goods, and ideas move from place to place
- SS.4.2.13.1: Identify major geographic characteristics of the Hawaiian archipelago, including its relative location to other major land masses
- SS.4.2.16.2: Explain how geographic characteristics of the islands influenced locations of early settlements
- SS.MHH.2.15.1: Compare the causes and effects of migration to and from Hawai'i

Civics

- SS.3.2.6.5: Explain the purpose of various government functions
- SS.PID.2.6.1: Explain how the American Constitution embodies the principles of the rule of law, popular sovereignty, separation of powers, checks and balances, and limited government
- SS.PID.2.8.2: Analyze the role of the three branches of government in the lawmaking process

OBJECTIVES:

Participants will:

- Learn about major cities in Hawaii 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 Hawaii cities by population for 1900/1950/2010

PREPARATION:

- Discuss reasons why people choose to live in different places
- Review historical settlement patterns in Hawaii
- Review Hawaii era info
- 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 Hawaii for the years 1900, 1950, and 2010. They will then look for trends based on the east/west axis and north/south axis, waterways adjacent to and within Hawaii, 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 Hawaii in 1900, 1950, 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 Hawaii in 1900. 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 Honolulu).
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 1950 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 1900 and 1950, 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 1950.
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 Hawaii History for contextual information for the time periods highlighted in this lesson.

GUIDING QUESTIONS:

Q. What factors influence where people settle(d)?

A. Historically, settlement patterns in Hawaii have been driven by locations of natural bays and valleys where traditional fishponds could be built for protein sourcing and kalo-based agriculture. These areas would become centers of commerce, explaining why areas like Lahaina and Honolulu were vibrant cities during the whaling era and hubs for development that have led them to be modern population hubs. With the historic development of sugar and increased dependence on 'foreign' imports for food supplies and decreased dependence on local agriculture, these ports became focal points for population. This was reinforced by high military activity in the area as the U.S.'s main naval base in the Pacific in the early 1900s. Colonial history in Hawaii has been HUGE in reducing self-sufficiency on agricultural systems, increasing dependencies and population centers around ports, and the lack of industry/opportunities except in concentrated areas.

Q. How many of the fifteen largest cities are located along a river or lake in 1900? 1950? 2010?

A. In Hawaii our water resources have increasingly been based on ground water resources and rain water systems rather than the streams, would think about this more in terms of proximities to safe harbors.

1900	1950	2010
~??	~??	~??

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

A. Not sure what “various regions” means here

1900	1950	2010

Q. For what reasons did this pattern exist?

A. Transportation opportunities, employment opportunities

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

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

	1900	1950	2010
Hawaii	154,001	499,794	1,360,301
United States	76,212,168	150,697,361	308,745,538

Q. How many cities in the new top fifteen in 1950 were also in the top fifteen in 1900? What percentage is that?

A. ?, ??%7

Q. How many cities in the new top fifteen in 2010 were also in the top fifteen in 1900? In 1950?

A. 1900: ? of 15; 1950: ? of 15

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

A. Honolulu

Q. Are major cities and suburbs significantly more concentrated than they were in 1950?

No. Major cities are in the same places, centered around ports while suburbs continue to grow out in sprawling patterns of previously agriculture or forested areas.

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

A. There has been high levels of urbanization in concentrated areas like Honolulu as well as increasing numbers of affordable housing going up in rural areas zoned for agriculture. -- Sprawling development

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

A. Job opportunities-- not a lot of industry in the outer islands.

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 Honolulu today than in 1900? How much larger is Honolulu than the 15th largest city? How concentrated is the population in Honolulu 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:

Hawai'i State Department of Education
<http://www.hawaiipublicschools.org/TeachingAndLearning/StudentLearning/Pages/stan-dards.aspx>

Hawaiian Historical Society
<https://www.hawaiianhistory.org/>

	City	1900	√		City	1950	√		City	2010	√
	State	154,001			State	499,794			State	1,360,301	
1	Honolulu	39,306		1	Honolulu	248,034		1	Honolulu	390,738	
2	Hilo	19,785		2	‘Ewa (Beach?)	46,691		2	Pearl City	47,698	
3	‘Ewa (Beach?)	9,639		3	Hilo	27,198		3	Hilo	43,263	
4	Wailuku	7,958		4	Ko‘olaupoko	20,779		4	Waipahu	38,216	
5	Makawao	7,236		5	Wailuku	19,835		5	Kāne‘ohe	34,597	
6	Hāmākua	6,919		6	Makawao	12,800		6	Kahului	26,337	
7	Waimea	5,714		7	Wahiawā	8,369		7	Mililani Town	27,629	
8	Hāna	5,276		8	Waimea	7,949		8	‘Ewa Gentry	22,690	
9	Puna	5,128		9	Waiialua?	7,906		9	Kīhei	20,881	
10	Lahaina	4,951		10	Koloa	7,286		10	Kapolei	21,086	
11	Kōloa	4,564		11	Wai‘anae	7,024		11	Makakilo	18,248	
12	Līhu‘e	4,494		12	Puna	6,747		12	Mililani Mauka	21,039	
13	North Kohala	4,366		13	Kawaihau (or Kawaihae?)	6,291		13	Schofield Barracks	16,370	
14	Ka‘ū	3,854		14	Hāmākua	6,056		14	Wahiawā	17,821	
15	North Kona (Kona ‘Akau?)	3,819		15	Lahaina	5,973		15	Kailua	11,975	

	City	2020*	√
	State	1,455,271	
1	Urban Honolulu	350,964	
2	East Honolulu	50,922	
3	Pearl City	45,295	
4	Hilo	44,186	
5	Waipahu	43,485	
6	Kailua	40,514	
7	Kaneohe	37,430	
8	Kahului	28,219	
9	Mililani Town	28,121	
10	Ewa Gentry	25,707	
11	Kihei	21,423	
12	Kapolei	21,411	
13	Mililani Mauka	21,075	
14	Makakilo	19,877	
15	Kailua	19,713	

*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>

