



# USA demographics

## Student Activity Sheet

Audience – High school human geography

Time required – 15 minutes

### Activity

Students will explore U.S. census data to see the spatial differences in the United States' population.

### APHG Benchmarks

Unit 2, A1: Geographical analysis of population (density, distribute and scale)

Unit 2, A3: Geographical analysis of population (composition: age, sex, income, education and ethnicity)

Unit 2, A4: Geographical analysis of population (patterns of fertility, mortality and health)

### Learning Outcomes

- Students will be able to identify U.S. population data and certain spatial patterns.

Map URL: <http://esriurl.com/humanGeoInquiry4>

### Ask

Why do people cluster in certain regions, and why are some places more lightly populated?

- ? Which portion of the United States is the most heavily population region?
- Zoom in to the most heavily populated region.
- ? What happens to the data when you zoom in?
- Slowly zoom in on New York City or another urban area of your choice.
- ? What happens to the data?

### Acquire

What is the population around you?

- Click the Content button to add new layers for population.
- Click Basemap, and then choose Imagery. Make the population layers 50 percent transparent.
- ? What are the population patterns in your region?
- ? How does the physical geography of the area affect these patterns?

### Explore

How does income vary across the United States?

- Turn on the USA Median Household Income layer at the county level.
- ? What spatial patterns can you identify in areas with higher median household income and areas with lower median household income? Compare this map layer to others, especially in terms of population density.

## Analyze

### How does age differ around the United States?

- Turn on the USA Median Age layer. On the East Coast, states with the oldest residents are at opposite ends.
- Click on any state or county for more information.
- ? What factor led to Florida having an elderly population?
- ? What factor led to Maine having the oldest median age?
  - Utah has the lowest median age in the United States.
- ? Which neighboring states follow this youthful pattern, and which neighboring states stand in stark contrast?
- ? Which other data layer supports these conclusions?
- ? Go to Oklahoma City. What age patterns do you see? Where are the younger people living?

## Act

### What can you say about median household value patterns?

- Examine the USA Median Home Value layer for your state, county, census tract, or block group (or another area of interest).
- ? Does this match up with your local knowledge of the socioeconomics in the area?
- ? What surprises you about this data? Why?
- Explore one additional data layer.
- ? Does this data layer show a pattern that is spatially related in some way to another data layer? If so, what is the relationship, and why does it exist?

## FINDING SPECIFIC PLACE DATA

- Zoom in or out until the map displays the data at the correct scale.
- Click a region to view a pop-up about the data.

## TRANSPARENCY

- To view two layers simultaneously, make one “see-through.”
- In the Contents pane, click the three dots beneath the layer name.
- Select Transparency, and adjust it to 50 percent.

## Next Steps

**DID YOU KNOW?** ArcGIS Online is a mapping platform freely available to U.S. public, private, and home schools as a part of the White House ConnectED Initiative. A school subscription provides additional security, privacy, and content features. Learn more about ArcGIS Online and how to get a school subscription at <http://connected.esri.com>.

### THEN TRY THIS...

- Create an online story map using demographic data to highlight certain demographic trends in the United States or a particular region.
- Load state-specific demographic data to your organizational account home page.

## TEXT REFERENCES

This GIS map has been cross-referenced to material in sections of chapters from these texts.

- *Human Geography: A Short Introduction* by Oxford University Press – Chapter 3
- *The Cultural Landscape* by Pearson – Chapters 5, 6

- *Human Geography: People Place and Culture* by Wiley Press – Chapters 5, 6