USA demographics

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? *[The east (specifically, northeast) is the most heavily populated 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? *[It switches from state-level data to data aggregated at the county level to neighborhood or census tract 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? *[Examples include a higher population along the coasts and in river valleys, a lower population density in mountains and deserts, and so on.]*

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. *[Metropolitan areas have higher median household incomes, and rural counties have lower median household incomes.]*

more ▶

📋 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? *[There has been an in-migration of retirees.]*

❓ What factor led to Maine having the oldest median age? *[There has been an out-migration of the young.]*

– 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? *[Idaho is similar; Arizona, Nevada, Colorado, and Wyoming are opposite.]*

❓ Which other data layer supports these conclusions? *[The US Pop Aged 0-18 Yrs layer supports them.]*

❓ 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*