

Making Sense of the Census*

*Originally composed using ChatGPT

Essential Question: *How do measures of center and variation of census data provide insights into demographic, economic, and social trends within the United States?*

Topic Selection: Choose one of the following topics to address our essential question using census data. Use the guiding questions to assist your selection.

1. **Living Wage:** How does income vary between the states? What impact does this have on the affordability of living between states?
 - Census data to reference: Median household income by state
2. **Home Ownership:** How easy is it to afford a home? How does income impact affordability in other states? Who owns more homes and how does your age and race impact that?
 - Census data to reference: Home ownership rates by age and race
3. **Educational Attainment:** What is the relationship between age, sex and education in America?
 - Census data to reference: Educational attainment by age and sex
4. **Population Diversity:** How diverse is the United States? How diverse is each region?
 - Census data to reference: Population by race and ethnicity
5. **Employment:** What job industries are experiencing a boom? Which ones are experiencing a decline? What factors influence the fluctuation?
 - Census data to reference: Employment by industry

The Task: Your goal is to investigate the relationship between measures of center and variation in a given data set (from the ones mentioned above) to see how they are affected by outliers.

Mathematics to Include:

- Model: Creation of box plot or histograms for the data you selected
- Solve: Include calculations of mean, median, mode, range, interquartile range (IQR) and standard deviation
- Analyze: What measure of center is most appropriate for the data set? How does the presence (or absence) of outliers affect the measures of central tendency?