

Pre-Lab Reflection:

1. How is the Appalachian Region defined? How many US States are included?

The Appalachian Region is defined by states that contain a mountain in the Appalachian Mountains Range. It includes 13 states.

2. Provide some context on how rural Appalachia compares to the rest of rural America, specifically, in: population demographics, education, employment, income and poverty, broadband access

Population Demographics

Appalachia's population is 26,554,853 residents and the median age of the region is 41.3 years old.

Education

90% of Appalachian adults ages 25-64 have earned a high school diploma, while 28.8% hold a bachelor's degree

Employment

95.9% of Appalachia's labor force is employed. This is slightly above the U.S. rate.

Income and Poverty

Appalachia's median household income is \$64,588 which is 82% of the U.S. figure.

Broadband Access

92% of Appalachian households have access to a computer, smartphone or other device, while only 86.2% of Appalachian households have a broadband subscription.

3. Briefly describe each of the five listed goals in the ARC's Strategic Plan for investing in the Appalachian Region (<https://www.arc.gov/strategicplan/>).

Building Appalachian businesses - expands economic development and investments/entrepreneurship and business development.

Building Appalachian as workforce ecosystem - strengthen education, healthcare, housing, childcare, and other community systems that help people get and maintain jobs

Building Appalachia's infrastructure - ensure better utilities and infrastructure by making them more reliable and affordable

Building regional culture and tourism - preserving and investing in Appalachian heritage and tourism

Building community leaders and capacity - Invest in local leaders, organizations, and communities to provide technical assistance and support to access resources, engage partners, identify strategies and tactics, and conduct effective planning and project execution.

7. Mean: the mean is the average, calculated when you add all of the values up then divide by the number of values

Standard Deviation: How much variation there is, how spread out the data is from the mean

11. Go back to your Python program and remove the thousands option when reading the CSV. What is the result of running your program, and why is that option needed? Include the answer in your Google Doc.

When you remove the thousands option (the parameter when reading in csv) the program has errors because instead of reading the values in the columns as numeric values, it sees it as a string. So, finding the mean and median and other operations wouldn't work without the thousands parameter, because it can not be calculated with a string as the value.

15. In your Google Doc, reflect on what you observe in your data tables. What do you notice about top vs. bottom poverty rates? Average unemployment? PCI? Are there counties that seem to be in conflict even within the same state?

Looking at the tables, there is a very large difference between top and bottom poverty rates in different counties. Texas and Utah counties have the lowest rate, and South Dakota has the highest. For average unemployment, California, Alaska and Mississippi counties have the highest unemployment, and Texas and Kansas counties have the lowest. For per Capita income, Wyoming, Colorado and New York have the highest, and Kentucky has the lowest. Texas has the most conflict between the counties in that Loving County has a very low unemployment rate and poverty rate and Starr County has a very high unemployment rate and poverty rate.