

## **INCOME ON ARIZONA'S AMERICAN INDIAN RESERVATIONS**

**PURPOSE:** To explore differences in income between various American Indian Reservations and investigate possible causes for such differences.

**INTENDED AUDIENCE:** Undergraduate students and advanced secondary students; interested members of the general public.

### **LEARNING OBJECTIVES:**

1. Students will learn the difference between per capita income and median household income.
2. Students will develop a hypothesis to explain differences in income among adjacent American Indian reservations in Arizona.
3. Students will be able to use the Arizona Electronic Atlas to make maps
4. Students will be able to use the Zoom In tool to manipulate maps.
5. Students will be able to use the Show Data tool.

### **OUTLINE AND SYNOPSIS:**

This module should be completed in sequence, as Part II builds on the knowledge gained in Part I.

**PART I:** Students will explore per capita income measures for adjacent Indian reservations in Arizona, and brainstorm reasons for differences, if any.

**PART II:** Students will explore household median income among adjacent Indian reservations in Arizona. This measure will be compared to per capita income for the same reservations. Students will brainstorm why differences in the two measures exist, along with hypothesizing causes for income discrepancies among adjacent reservations.

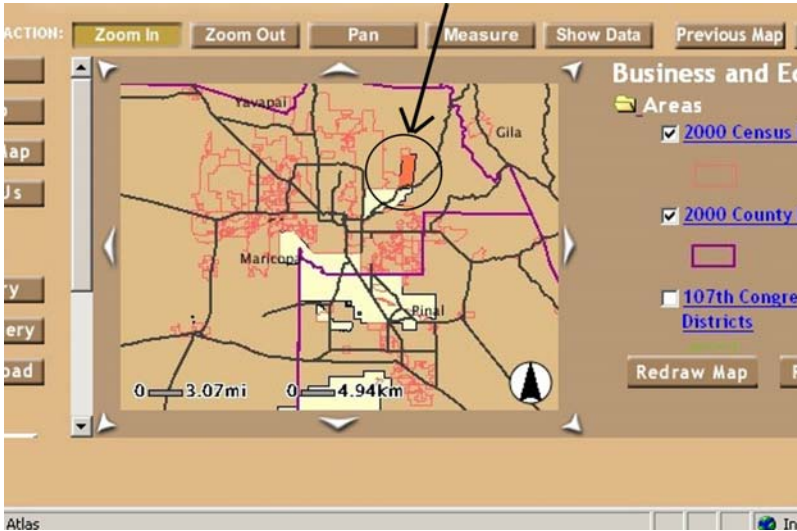
### **PART I:**

1. Open the Arizona Electronic Atlas at <http://atlas.library.arizona.edu>
2. Select "Make a Map" at the top left of the screen.
3. Select the "Business and Economics" map theme.
4. Allow the map to load, then click "Refresh" (this will enlarge the map)
5. Click "Overview Off" to remove the inset map (it will get in the way as you progress)
6. Click on the folder "People by American Indian Area."
7. Click on the box in front of "1999 Per Capita Income by (\$) American Indian Area"
8. Click "Redraw Map"
9. Notice how the map has changed. Use the legend to interpret it. It will appear, at first that all American Indian Reservations fall into the lowest per capita income range, less than \$9,898. However, zooming in will reveal some smaller, hard to see reservations with higher incomes.

10. To zoom in, make sure the "Zoom In" tool is selected at the top of the map screen (it will be a different color than the rest of the buttons along that row).

11. Find Maricopa County. Click and draw a rectangle around it using the mouse. Let go and this will cause the map to zoom in to this area.

12. You should notice an orange shaded area in the northeast region of the county (circled in the picture below):



13. Click on the "Show Data" button on the top right of the screen. Then click on the orange shaded area described above.

14. A small pop-up screen should appear which will show data about the area you selected. On this screen, you can find the name of the reservation and the per capita income. Record the information in the table below.

<b>RESERVATION NAME</b>	<b>1999 PER CAPITA INCOME</b>
FT MCDOWELL	
SALT RIVER	
MARICOPA (AK CHIN)	
GILA RIVER	

15. Close out the show data screen and return to the map. Notice that there are several other reservations nearby, and that they all fall into a lower income bracket.

16. Use the process described in steps 14-15 to obtain information on these reservations. Record it in the table above.

17. As you can see from the table, there are striking differences in per capita income between these reservations. This especially true for Fort McDowell, with a per capita income much higher than any of the other nearby reservations.

18. But what is per capita income? Check the definition in the **glossary**

19. Per capita income, then, is an average measure that includes the entire population. Non-employed persons such as stay at home mothers, children, and retired people are factored into this measure. How might a large number of non-employed people affect a per capita income statistic? Would a large number of non employed people raise or lower the per capita income?

20. Taking this and any other factors into account, brainstorm causes for discrepancies in per capita income across the reservations studied.

**PART II**

1. Now we will look at the median household income, a slightly different income measure, of the same reservations that we studied in Part I. Begin by going to the glossary at [http://atlas.library.arizona.edu/glossaryk\\_p.htm](http://atlas.library.arizona.edu/glossaryk_p.htm) to define "median income."

2. How is median household income different than per capita income? Make a prediction as to whether the patterns you discovered with per capita income will hold true for median household income. In other words, do you think Ft McDowell, which the highest per capita income will also have the highest median household income? Do you think a high per capita income necessarily means a high median household income? Why or why not?

3. Return to your map and click Refresh to reset it.

4. On the legend, find the "People by American Indian Area" and click on it.

5. Scroll down, find " 1999 Median Household Income (\$) by American Indian Area. Click on the box in front of it. (Make sure only 2000 Census Places, 2000 County Boundaries, and 1999 Median Household Income (\$) by American Indian Area are clicked on before proceeding).

6. Click Redraw Map.

7. Use the legend to interpret the map. Notice that median income varies widely among American Indian reservations in Arizona.

8. Zoom in to Maricopa County, as you did in Part I. Look for the Indian Reservations you studied in Part I.

9. As in Part I, use the Show Data tool to obtain exact figures for each reservation. Record the data in the table below

<b>RESERVATION</b>	<b>MEDIAN HOUSEHOLD INCOME (1999)</b>
FT MCDOWELL	
SALT RIVER	
MARICOPA (AK CHIN)	
GILA RIVER	

10. Did your prediction from step 2 hold true? What about the predictions of other students (if applicable)? If this is a whole class activity, discuss your results.

11. Returning to the central question: why are there such vast income disparities between adjacent Indian reservations at all? What are some possible causes? What unanswered questions have been raised by this activity?

## FOR FURTHER INVESTIGATION

1. Research the economic base of each reservation, to better understand income differences. The following resources may be helpful:

Economic Profiles for each Reservation from AZ Dept of Commerce:

<http://www.azcommerce.com/Communities/indian%20profile.asp>

Find economic information about each tribe from the Inter Tribal Council of Arizona

<http://www.itcaonline.com/tribes.html>

2. Further investigate economic development issues on American Indian Reservations.

Murray, Steve and Luther Tweeten. Culture, Education and Economic Progress on Federal Indian Reservations. *Growth & Change* Apr81, Vol. 12 Issue 2, p10, 7p. An older article, but it provides a set of predictors for per capita income on Indian reservations. Available full text from **Academic Search Premier**.

Vinje, David L. Income and Labor Participation on Indian Reservations. *Growth & Change* Jul77, Vol. 8 Issue 3, p38, 4p. Another old but valuable article. Available full text from **Academic Search Premier**.

An Analysis of the Economic Impacts of Indian Gaming in the State of Arizona

[http://www.udallcenter.arizona.edu/nativenations/pubs/indian\\_gaming.pdf](http://www.udallcenter.arizona.edu/nativenations/pubs/indian_gaming.pdf)

Reloading the Dice: Improving the chance for economic development on American Indian Reservations

[http://www.jopna.net/JOPNA02\\_Dice.pdf](http://www.jopna.net/JOPNA02_Dice.pdf)

3. Complete Part II of "**Exploring Unemployment Rates by Gender**" module, to explore differences in unemployment across reservations.

4. There are two other reservations in Arizona with relatively high per capita income: Fort Mohave and Colorado River Indian Tribes (both in the far western part of the state). Use the Atlas to explore this.