Alliance Created State Giant Traveling Map Lesson

Title: Arizona's Indian Tribes and Communities

Grades: 3, 6, 7, 8

Time Needed: 30 - 45 minutes

Objectives: Students will:

- Locate Arizona's Indian reservations on a map
- Calculate the population per/500 for Indian tribes/communities
- Display graphically, using stacking items, the populations for the reservations on the map.
- Create a human timeline showing the dates reservations established in Arizona
- Calculate and display population density for the reservations.
- Discuss the spatial distribution of populations on reservations (number of people and population density).

Materials:

- Information Cards of American Indian Tribes and Communities in Arizona (22 cards)
- Stacking Items – 525
- Plastic ropes of various lengths
- 6 calculators (to be shared)
- 3x5 cards

Preparation:

- Gather the cards and stacking and have ready to distribute.
- If doing, the population density activity, gather the rope and notecards.

Directions:

Activity 1:

1. Share with students the following information:
   Twenty-two sovereign American Indian communities currently inhabit Arizona, representing a wealth of cultural diversity. Total reservation land covers over one fourth of the state. Some tribes are descended from Arizona's very first inhabitants. Others appeared just a few centuries before Spanish explorers trekked into the area. Today an estimated 5 to 6% of Arizona's total population is of American Indian ancestry. In fact, the state has the second largest American Indian population in the entire U.S.
   Information from the Heard Museum and the Inter Tribal Council of Arizona.
2. Hold back the card for the Navajo Nation – to be done by the entire class in step #12
3. Assign and distribute cards for the other 21 tribal communities (depending on the number of students involved, groups of two may needed).

4. Allow students to read the information on the card.
5. Explain that we are going to use a **ratio** to represent the population for the tribe/community. Each stacking item will represent 500 people.
6. Check for understanding by asking students what population would be represented by 2 stacking items? (Correct answer: 1000 people). Ask how many stacking items it would take to represent a population of 1,500 (correct answer: 3). Ask how many it would take for a population of 520 (correct answer: 1 – round to nearest 500).
7. Instruct students to gather as many stacking items as needed to represent the population for the tribe/community. Stack them together on top of each other to form a tower.
8. Direct students to move to the location of their tribe/community using the Arizona's Indian Reservations map located on the their card and place their stacking item tower and card in the approximate location for the tribe/community. Sit down on the map when done.
9. Have students check with a nearby student to verify the correct location and correct number of stacking items.

Tribe/Community	**Population**	**Stacking Item Population/per 500**
Ak-Chin	517	1 (round to 500)
Cocopah	816	2 (round to 1000)
Colorado Indian Tribes	3500	7
Ft. McDowell Yavapai Nation	960	4 (round to 1000)
Ft. Mohave Indian Tribe	1120	4 (round to 1000)
Gila River Indian Community	14000	28
Havasupai	639	1 (round to 500)
Hopi	10000	20
Hualapai	1532	3 (round to 1500)
Kaibab-Paiute Tribe	196	0 (rounded down)
Navajo Nation	170,000	340
Pascua Yaqui Tribe	3316	7 (round to 3500)
Quechan Tribe	2475	4 (round to 2000)
San Carlos Apache Tribe	9000	18
San Juan Southern Paiute Tribe	250	1 (round to 500)
Salt River Pima-Maricopa Indian Community	6000	12
Tohono O'Odham	24000	48
Tonto Apache Tribe	196	0 (rounded down)
White Mountain Apache Tribe	12000	24
Yavapai-Prescott Nation	158	0 (rounded down)
Pueblo of Zuni	98	0 (rounded down)

10. When all the tribes/communities have been located. Have students share out the name of the tribe/community and one or two of the facts from the card.
11. Ask students to look around the map and see if all the reservations have been represented or has been forgotten. They should notice that the Navajo Nation has not been done.

12. Share the information with students from the Navajo Nation card. Ask how many stacking items will be needed to represent the population (correct answer: 340). At this point, you can decide if you want to stack the 340 items. There are only 500 items included in the map trunk so you would have to gather up all of the stacking items to graph the Navajo population.
13. Carry on a discussion with the students about how this would compare to the other reservations in the state. Ask students if they think the larger population is due to the land area of the reservation. Ask students to observe on the map and discuss the natural landscape of this area? Discuss what resources might be available to meet the needs of those living on the reservation. If students have access to internet devices, have them search for images of their reservation and describe what they see. Another option is to use postcards from the various locations to give students visual images.
14. Discuss observations with students about other reservations. What do they notice? Is there a relationship between the size of the reservation and the population? What physical features are near the reservation? What cities are near the reservation?

Activity 2: For Elementary and Middle School

1. Have students review the Arizona Tribe/Community card and locate the date the reservation was established.
2. Direct students to form a "timeline" showing the dates the reservation/tribal lands were established beginning with the earliest.
3. Direct students to begin the timeline in the southeast corner of the map and extend toward the northwest corner.
4. Discuss which was the earliest? Which was the latest? Which time period had the most reservations formed?

Activity 3: For Middle School

1. Place calculators and pieces of the plastic rope around the edges of the giant map.
2. Using the Arizona's Indian Reservations map on their assigned Arizona Tribe/Community card, ask students to **generally** layout the boundary for their reservation on the giant map. Tell them this is just a general estimate so select a piece of rope that is large enough to form the general boundary of their assigned reservation. (Note: some of the reservations are very small, so student only needs a small amount of rope). Assure them this is just a rough estimate of the boundary so they may need have some of the rope extending from the border.
3. Tell students they will be determining the population density of the reservation. This is the **ratio** of people in a given area. *Population density is the number of people living per unit of an area (e.g. per square mile).*
4. Tell students that there is a formula for figuring out population density: **number of people ÷ the area they occupy = population density.** We will be using square miles as the unit.
5. Demonstrate this by having students calculate the population density for the state of Arizona. Arizona's population (est. by the US Census Bureau) is 6,931,000 and the area is 113,998 square miles. Explain to students they take the number of people and divide by the area. (8.77 people per square miles – round to 9).
6. Discuss with students what this means. Explain that a square mile represents the area covered - one mile by one mile by one mile by one mile.

7. Discuss what a square mile represents using examples from around their own area. For an example explain that it would take about 18 football fields to cover a square mile. Or one mile of road by one mile of road (in Phoenix this might be from one major intersection to another since the city is laid out in a grid). Thinking about the population density of Arizona being 9 people per square mile, are there actually only about 9 people in a square mile in the area they live? Discuss factors which affect how the population within the square mile is distributed? (Businesses, parks, mountains, roads, apartment vs. houses, uninhabitable areas, etc.).
8. Tell students the population of the metropolitan Phoenix area is a little over 4 million people living in an area of about 9000 square miles. If you take the population and divide it by the area (sq. miles) you get about 444 people per square mile. Discuss what factors might contribute to the difference between the state population density and the Phoenix area population density.
9. Once you are sure students understand the idea of the ratio of people to area. Give each team of students a 3x5 notecard and ask them to calculate the population density for the tribe they are representing. Distribute and share the calculators. Record the population density in large print on the notecard. Then place their notecard in the roped area outlined on the map for the reservation.
10. Check to be sure the answers are:

Tribe/Community	**Square Miles**	**Population/per sq. miles**
Ak-Chin	34	15
Cocopah	10	82
Colorado Indian Tribes	368	10
Ft. McDowell Yavapai Nation	39	25
Ft. Mohave Indian Tribe	46	24
Gila River Indian Community	581	24
Havasupai	1	639
Hopi	2406	4
Hualapai	2343	1
Kaibab-Paiute Tribe	189	1
Navajo Nation	27000	6
Pascua Yaqui Tribe	2	1658
Quechan Tribe	70	35
San Carlos Apache Tribe	2859	3
San Juan Southern Paiute Tribe	NA	
Salt River Pima-Maricopa Indian Community	82	73
Tohono O'Odham	4375	5
Tonto Apache Tribe	.5	392
White Mountain Apache Tribe	2500	5
Yavapai-Apace Nation	1	743
Yavapai-Prescott Tribe	2	79
Pueblo of Zuni	724 (most all in New Mexico)	3

11. Discuss what the population density reveals about conditions on the reservation. Identify which reservation has the highest population density. Which has the lowest? Which one has the largest area of land? What is the population density for the reservation with the most land? What is the landscape of the area the reservation is located? Does the landscape affect the population density? How does the population density compare to the population density for the entire state? For the Phoenix area? What other areas/cities are they curious about population density?

Standards:

National Geography Standard Geography
Standard 1: How to use maps and other geographic representations, geospatial technologies, and spatial thinking to understand and communicate information

Arizona Social Science Standards
Global interconnections and spatial patterns are a necessary part of geographical reasoning.
3.G4.1 Describe how Arizona has changed over time. Key concepts include but are not limited to Paleo-Indians, explorers, settlers, farmers, immigrants, migrants, the 22 Arizona Indian Nations, plants, land use, and animals.
The use of geographic representations and tools helps individuals understand their world.
6.G1.1 Use and construct maps, graphs, and other representations to explain relationships between locations of places and regions. Key concepts include major landforms and water bodies, countries, cities, ecosystems, climate, languages, religion, economic systems, governmental systems, population patterns, disease, trade routes, and settlement patterns
7.G1.1Use and construct maps and other geographic representations to explain the spatial patterns of cultural and environmental characteristics. Key tools and representations such as maps, globes, aerial and other photos, remotely sensed images, tables, graphs, and geospatial technology
8.G1.1 Use geographic tools and representations to analyze historical and modern political and economic issues and events. Key tools and representations such as maps, globes, aerial and other photos, remotely sensed images, tables, graphs, and geospatial technology

Mathematics
6.RP.A Understand ratio concepts and use ratio reasoning to solve problems. d. Use ratio reasoning to convert measurement units; manipulate and transform units appropriately when multiplying or dividing quantities.
7.RP.A.2. Recognize and represent proportional relationships between quantities.