

*Tucson Unified School District  
Native American Studies Department*

# **MATHing WITH SOCIAL JUSTICE**

**SUGGESTED LEVEL: 5-8**

**By:** Alzira Duncan  
**Year:** 2007-2008

## Introduction

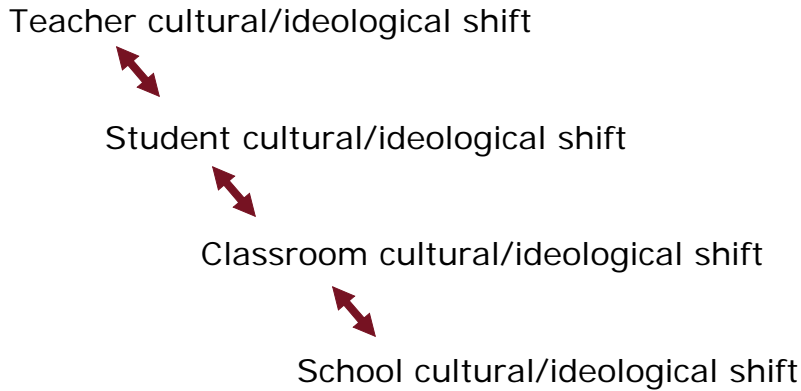
*Rethinking Mathematics – Teaching Social Justice by the Numbers* edited by Eric Gunstein and Bob Peterson was the book I used to inspire me in creating these lessons. The authors suggest the use of mathematics to help solve culturally relevant issues and ultimately, global issues. The information I used to generate some of the lessons was taken from different websites and I adapted the information to create culturally relevant activities which also meet grade level standards. The objective of the authors and mine, since I am using the book as a source of ideas and inspiration, was to use an approach that helps deepen students' understanding of society and to prepare them to be critical, active participants in a democracy. Gunstein and Peterson believe that some of the potential benefits of such a social justice approach to mathematics are:

- Recognition of the power of mathematics as an essential **analytical** tool to understand and potentially change not only their community but also the world.
- Deepening students' understanding of important social issues.
- Connecting math with their culture and community.
- Understanding their own power as active citizens in building a democratic society.

Since mathematics is essential to the understanding of political and social justice issues, the idea would be for us, teachers, to integrate into the lessons local issues and in doing so, bring meaning to the cultural and community component of the lives of our students. The underlying mathematical ideas – **(dis)proportionality, probability, randomness, sample size, and the law of large numbers** all become part of the context which students must understand to really see, and in turn demonstrate that something is amiss. Moreover, to understand some issues, students need to combine math with other subjects. When students have a deeper understanding for our local and also global issues, it helps them realize their power and what they can do about it. It is important to encourage students to defend their rights and recognize injustices around them by

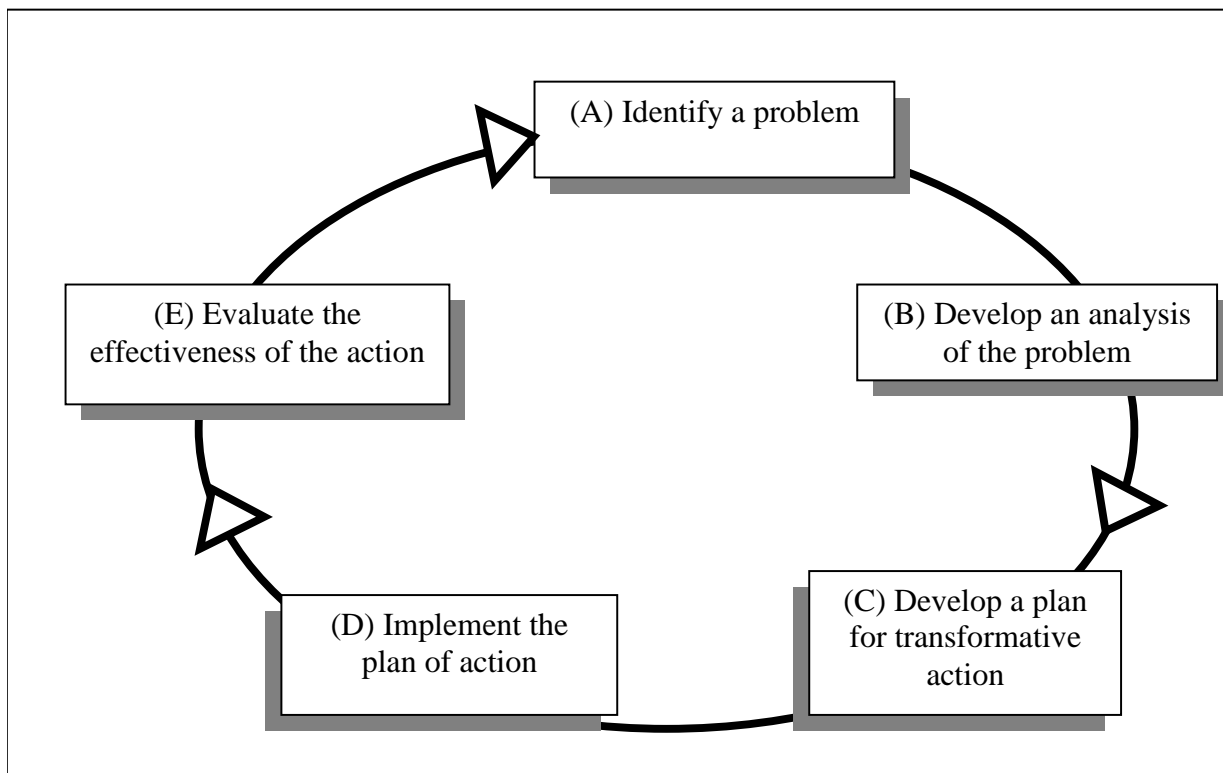
consciously counting, analyzing and acting on issues that are important not only to themselves but for humanity.

***Theory of change: Cultural/ideological shifts as tipping points in urban schools***



Source: Dr. Jeffrey Duncan-Andrade

***5 Stages of Critical Praxis with Youth***



Source: Dr. Jeffrey Duncan-Andrade

## IMPLEMENTATION GUIDELINES

The lessons were created for grades 5 – 8. It is possible to adapt the lessons for lower and higher grades by not doing some of the activities for that specific lesson and/or modifying it to fit your students' knowledge level.

## TEACHER PRE-INSTRUCTIONAL INFORMATION

It is important to understand that the lessons were created with several things in mind:

- 1- Teacher and students should be partners in the process of solving problems that arise organically from their daily experiences and from the activities provided through out this compilation of lessons. An excellent book that illustrates in several different ways this approach is *Black Ants and Buddhists* by Mary Cowhey.
- 2- GATE strategies were incorporated through out the lessons. The lessons require critical thinking and as a result, reading, writing, speaking, scientific observation, public speaking and inquiry are included in most of the lessons.
- 3- The basic concept underlying all lessons is that the belief in what Paulo Freire calls the "banking concept" of education, in which the students are viewed as ignorant, empty receptacles, to be filled with deposits of knowledge, provided by the teacher is an idea totally contrary to the social justice education. The reason for that is as Paulo Freire in *Pedagogy of the Oppressed* explains that the traditional "banking concept" approach stifles creativity and critical thinking and serves to enforce oppression.
- 4- Critical pedagogy is imbibed in most lessons as it requires focusing on knowledge, reflection, and praxis (action) as the basis of social change.
- 5- The lessons are independent from each other and are not in any sequential order.
- 6- Resources relevant to the lesson such as books, web sites, guest speakers (parents, community leaders, etc.), games, simulations, and anything else that the teacher can think of, would only enhance the lesson if added. Please share with the Native-American Studies Department (NASD) what else can and/or should have been done to make the lesson/s more culturally relevant, better and easier to execute. Any other lessons, ideas, suggestions that might be used to complement these lessons are welcome too.

**Native-American Studies Department**  
**LESSON PLAN 2007-2008**

**Unit Title:** Mathing with Social Justice

**Grade Level:** 5- 8      **By:** Alzira Duncan      **Number of Lessons:** 4

**Coverage for these series of lessons**

- a) Converting fractions into percentage
- b) Graphing – bar and pie graphs
- c) Mean, median and mode
- d) Area, perimeter
- e) Estimating
- f) Research

**Preplanning:** make copies of worksheets, read lessons before hand, having computers available, group students (4-5).

**Objectives:**

The lesson objectives will be displayed on the board during the lessons. Each lesson has its own objective.

**Criteria for Success:**

1-Activities:

- Responding to the questions posed verbally
- Answering and supporting the questions that requires inductive and deductive reasoning
- Solving problems with accuracy by using their mathematical skills.

2-Class discussions:

- Willingly share ideas
- Supports statement made when appropriate
- Respectfully challenges ideas of others

3-Group work

- Share ideas
- Support group problem solving activity when appropriate
- Respectfully challenges ideas and/or solutions of others

**Obs.:** Teacher will introduce the criteria for success for the specific lesson at the beginning of each class.

**Assessment:**

- Teacher will circulate among students and take observational notes.
- Teacher will collect the activity sheets and evaluate them for understanding and accuracy.
- Teacher will use the students' notebooks as a reference for re-teaching non-clear points.
- Teacher will evaluate ending products for accuracy.

At the beginning of each lesson, teacher will share with students the objectives for that particular lesson. The objectives should be displayed on the board at the beginning of each lesson. Students will write down the objectives in their notebooks.

## Lesson 1 Graphing and Averaging

### Objectives:

By the end of the lessons students will be able to:

- Convert fractions into percentages.
- Use a set of data to display it in a pie and bar graph.
- Find the mean, median and mode of a set of data.
- Reflect on the power of graphing information.

6.2.1.3	Interpret simple displays of data including double bar graphs, tally charts, frequency tables, circle graphs, and line graphs.	Access information from graphs using the title, axes labels, intervals, key, percent, tally marks, and/or table headings Given a value or data point, being able to identify the corresponding information from the graph (in the year 1996, how many flat screen TV's were purchased)
6.2.1.4	Answer questions based on simple displays of data including double bar graphs, tally charts, frequency tables, circle graphs, and line graphs.	Access information from graphs using the title, axes labels, intervals, key, percent, tally marks, and/or table headings Given a value or data point, identify the corresponding information from the graph (in the year 1996, how many flat screen TV's were purchased) Take information from the graph and make an inference or interpretation (future data, data point not specifically listed, combination or comparison of more than one piece of data)
6.2.1.5	Find the mean, median (odd number of data points), mode, range, and extreme values of a given numerical data set.	Vocabulary – mean, median, mode, range, extreme values. Add, subtract, and divide numbers (including decimals) as required for the calculations and know when to use which operations. Order and organize a set of data. Identify the lowest, highest, middle and repeated values in a data set.

### Materials:

Butcher paper  
Markers of different colors  
Graphing paper  
Crayons  
Pencil  
Glue, scissors (optional)  
Calculator (optional)  
Computer

### Pre-planning:

Divide the class in groups of 4-5  
Butcher paper with focus question  
Copy of the list of the "NOTABLE AMERICANS" - 1- per group or student  
Graphing paper, pencil and crayons (1 per student)

**Thinking Strategies:** brainstorming, follow steps of problem solving, considers new and different approaches to ideas, issues, or problems, draw logical conclusion based on facts, analyzes and evaluates and synthesizes information, and communicates ideas effectively.

**How the Lesson is Differentiated for Gifted Students:** Students will use critical thinking strategies to solve problems, work in open-ended activities, use inductive and deductive reasoning, will learn different reasoning processes by observing, listening, and interacting with other students, will formulate conclusions based on inferences.

## SHELTERED INSTRUCTION OBSERVATION PROTOCOL FEATURES

Select the SIOP Features that are utilized to shelter instruction for ELLs.

(Adapted from Echevarria, Vogt, & Short, *Making Content Comprehensible for English Learners*. Pg. 212.)

<ul style="list-style-type: none"><li>• <b>Preparation</b> Adaptation of Content <b>Links to Background</b> <b>Links to Past Learning</b> <b>Strategies Incorporated</b></li><li>• <b>Integration of Processes</b> Reading <b>Writing</b> <b>Speaking</b> Listening</li></ul>	<ul style="list-style-type: none"><li>• <b>Scaffolding</b> <b>Modeling</b> <b>Guided Practice</b> <b>Independent Practice</b> Comprehensible Input</li><li>• <b>Application</b> Hands-on <b>Meaningful</b> <b>Linked to Objectives</b> <b>Promotes Engagement</b></li></ul>	<ul style="list-style-type: none"><li>• <b>Grouping Options</b> Whole <b>Small</b> <b>Partners</b> <b>Independent</b></li><li>• <b>Assessment</b> <b>Individual</b> Group <b>Written</b> Oral</li></ul>
---	---	---

## Activities/Procedures

**FOCUSING QUESTION:** “In what ways might a list of names be used in a math activity?”

### **Activity 1**-Activating Prior Knowledge

**Brainstorming and Categorizing:** Have students write down everything that comes to their mind and each time they have an idea, they have to give a category label, and repeat the process. For example: If list was the key word and the student says grocery list than a possible category could be shopping.

Brainstorming: Write the focusing question “in what ways might a list of names be used in a math activity?” on the board or butcher paper. Teacher will give students around 5 minutes to come up with ideas. At the end of five minutes, teacher will invite a member of each group to come up and write down their ideas. Students should pay attention on what their classmates are writing on the board because no ideas should be on the paper twice. In this case, if they have the same idea but different category, teacher should accept it. Everything is acceptable as long as the student can explain the connection when challenged.

### **Activity 2** – Testing students’ ideas

Teacher will now ask each group to write an activity for the whole class to do using one or more of their group’s ideas. Teacher will walk around the room answering questions that might rise from the exercise. If a group can not come up with anything and teacher does not see anything promising happening, teacher will then ask the group of students to select an idea from the brainstorming session.

### **Activity 2** – Bar Graphing

- 1- Pass the list of “Notable American Indians” to each group or/and individual student.
- 2- Allow students a few minutes to check the list for people they know and for the other ones that they don’t know and for them to notice what made those people notable. Allow enough time for students to explore the list and be critical about it.
- 3- Have a discussion with students about the people on the list. Talk about the number of people they know, how many they don’t know, and have students speculate why they don’t or do know them. Students should be allowed to add to the list if they feel the list is not accurate. However, it is up to the teacher to allow students to add people to the Notable American Indian list at this time. Please, keep in mind that if a group add names the students will ended up with different answers to the future activities, which is great.
- 4- Students now will be instructed to organize the information. If they didn’t come up with it during the brainstorm session, suggest grouping people into

categories. Have students come up with a few possible categories as a total class activity and then have them back to their groups and work on it.

5-Place names under categories – examples of categories: writer, actor, leader (chief), activist/peacemaker, filmmaker, artist, doctor (medicine man, holy woman). Students should be encouraged to come up with their own categories.

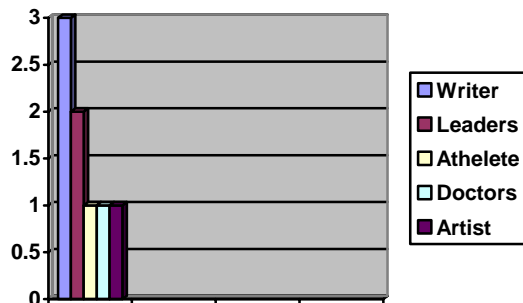
**Obs.:** Allow students to cut and paste the list if necessary. There is no right or wrong way to do this activity.

### Sample

Writer	Leaders	Athlete	Doctors	Artist
Sherman Alexis	Cochise	Billy Mills	Black Elk	Sacheen Littiefeather
Paula Gunn Allen	Winona LaDuke			
Winona LaDuke				
Total: 3	2	1	1	1

Another organizational way of displaying information would be to graph the table. Brainstorm with students ideas on how to graph the information. Allow students to graph it. It would be nice for students to experience graphing in different ways. There are some possible questions that the students could answer to reflect on it.

### Bar Graph - Sample



- 1- Which category is the **smallest**?
- 2- Which category is the **biggest**?
- 3- Why is that?

### Activity 3 - Pie Graph

Find the **percentage** of each category.

#### Sample

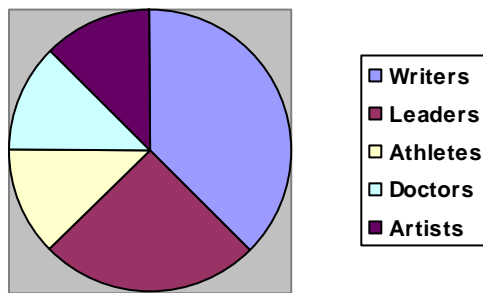
a-Add the number of people in the category. This will be the numerator.

b-Divide by the total number of people, 8(number of people on the list). This is your denominator. Now you should have a fraction: for example for the writer category –  $3/8$

c- Multiply the result by 100% to get your percentage.

Example: (Number of people in the Writers category)  $3 \div 8 \times 100\% = 37.5\%$

1- Ask students now what kind of graph they could do using the information in percentage.



Writers:  $3/8 \times 100\% = 37.5\%$

Leaders:  $2/8 \times 100\% = 25\%$

Athletes:  $1/8 \times 100\% = 12.5\%$

Doctors:  $1/8 \times 100\% = 12.5\%$

Artists:  $1/8 \times 100\% = 12.5\%$

2- What information would you need to **line graph** it?

3- Which graph is the **best** visual to illustrate the information?

4- How many people from each gender are represented in the information? Is it a **fair** representation or there is **more** representation of one gender **than** another? Why do you think that is the case?

**Reflection:** Have students write on their notebooks what they learned (objective) and their thoughts about the list of notable American Indians.

### Activity 4 – Mean, Median and Mode

6- Find the **mean**, **median**, and **mode** of the set of data that you have.

Sample



# Extensions

## Language Arts

- Have students at this time share the names they added to their list and add these new historical figures to the class' list. The new names should be in alphabetical order.
- Have students select the people that they would like to learn more about it and report their findings to the class. While they are doing the research, have students take note of the person's age so they can use it during the math activity (mean, median, and mode).
- Who are the notable American Indians in your community? What do they do that make them notable? Write a short bio about the person of your choice and include what experiences he/she has had that make/made him/her notable. Be sure to include the role that acculturation and assimilation played in her/his life.
- Compare and contrast two of your favorite people on the list. Write at least 4 paragraphs about it (introduction, likeness, differences and one for conclusion)
- What does it take to be notable/famous? Write a short story about yourself being famous/notable. Please describe what you do and what made you famous. Don't forget to talk about how you help your community with what you do.
- What role do acculturation and/or assimilation play a role in the lives of the notable people? Talk about the impact of assimilation/acclturation in your life and community.

## Social Studies

- Have students locate on the map the respective nations of some/all of the notable people.
- Which state has the highest amount of these notable American Indians?
- How many people from different nations that you know of are there in your community? Name the nations. Plot it on the map.
- How does a reservation help or handicap your community? Make a list of the positives and negatives about reservations in general and talk more specifically about the reservation you are familiar with.

**OBS.:** Allow students to cut and paste the list from the lesson if there is a need for that. The goal is to graph, so please adapt the lesson to the student's needs. Make the list accessible to students in the computer so the students can access it and learn more about the people on their choice. All they have to do is to use **the control key and clicking on the person to read more about it**. Students should also be able to add people to the list if they feel the list is uncompleted.

## Notable American Indians Native Americans bios, from Alexie to Wovoka

1. [Sherman Alexie](#), writer
2. [Paula Gunn Allen](#), Pueblo-Sioux poet, novelist, critic
3. [Dennis Banks](#), Anishinabe (Ojibwa) activist
4. [Adam Beach](#), Ojibwa actor
5. [Elias Boudinot](#), Cherokee leader in the American Revolution
6. [Joseph Brant](#), Mohawk chief
7. [Ben Nighthorse Campbell](#), Northern Cheyenne chief and U.S. senator from Colorado
8. [Billy Bowlegs](#), (Holata Micco), Seminole leader
9. [Black Elk](#), Oglala Lakota holy man
10. [Black Hawk](#), Sauk Leader
11. [Black Kettle](#), Cheyenne chief
12. [Canonicus](#), Narragansett chief
13. [Captain Jack](#), Modoc subchief
14. [Cochise](#), Apache chief
15. [Cornplanter](#), Seneca chief
16. [Crazy Horse](#), Oglala Sioux chief
17. [Charles Curtis](#), Kaw senator and vice president of the United States (1929-33)
18. [Delaware Prophet](#), Native American religious leader
19. [Vine Deloria, Jr.](#), Leading Standing Rock Sioux scholar, writer and activist
20. [Michael Dorris](#), Modoc (ancestry) writer
21. [Louise Erdrich](#), Ojibway (ancestry) writer
22. [Chris Eyre](#), Cheyenne and Arapaho filmmaker
23. [Gall](#), Sioux chief
24. [Geronimo](#), Apache political leader
25. [Graham Greene](#), Oneida actor
26. [Handsome Lake](#), Seneca religious leader
27. [Hendrick](#), Mohawk chief
28. [Hiawatha](#), Onondaga chief
29. [Ishi](#), Last Yahi tribesperson
30. [Joseph](#), Nez Percé chief
31. [Betty Mae Jumper](#), Seminole Indian tribal leader and publisher
32. [Keokuk](#), Sac and Fox chief
33. [Winona LaDuke](#), Ojibwa activist and writer
34. [Edmonia Lewis](#), Ojibwa sculptor
35. [Sacheen Littlefeather](#), Yaqui (ancestry) actress
36. [Little Turtle](#), Miami chief
37. [James Logan](#), Mingo chief
38. [Lone Wolf](#), Kiowa chief
39. [Mangas Coloradas](#), Apache chief
40. [Wilma Mankiller](#), Cherokee chief
41. [María Martínez](#), Tewa Pueblo potter

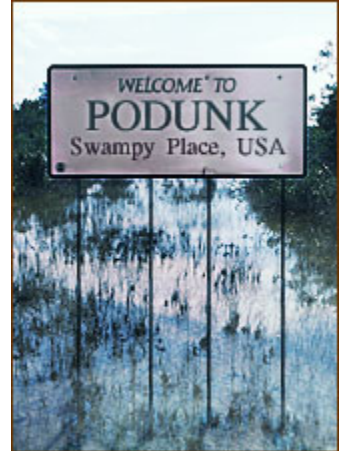
- |   |   |
|---|---|
| 42. <a href="#">Massasoit</a> ,             | Wampanoag chief                                   |
| 43. <a href="#">Russell Means</a> ,         | Lakota activist and actor                         |
| 44. <a href="#">Alexander McGillivray</a> , | Creek chief                                       |
| 45. <a href="#">William McIntosh</a> ,      | Creek chief                                       |
| 46. <a href="#">Miantonomo</a> ,            | Narragansett chief                                |
| 47. <a href="#">Billy Mills</a> ,           | Sioux athlete                                     |
| 48. <a href="#">N. Scott Momaday</a> ,      | Kiowa and Cherokee poet, author, scholar, and     |
| painter                                     |   |
| 49. <a href="#">Samson Occom</a> ,          | Mohegan clergyman                                 |
| 50. <a href="#">Opechancanough</a> ,        | Pamunkey Indian chief                             |
| 51. <a href="#">Osceola</a> ,               | Seminole leader                                   |
| 52. <a href="#">Quanah Parker</a> ,         | Comanche chief                                    |
| 53. <a href="#">Leonard Peltier</a> ,       | Ojibwa and Lakota activist                        |
| 54. <a href="#">Pocahontas</a> ,            | Powhatan peacemaker                               |
| 55. <a href="#">Pontiac</a> ,               | Ottawa chief                                      |
| 56. <a href="#">Popé</a> ,                  | Pueblo medicine man                               |
| 57. <a href="#">Powhatan</a> ,              | Powhatan chief                                    |
| 58. <a href="#">Red Cloud</a> ,             | Oglala Sioux chief                                |
| 59. <a href="#">Red Jacket</a> ,            | Seneca chief                                      |
| 60. <a href="#">Ben Reifel</a> ,            | Sioux activist and U.S. representative from South |
| Dakota                                      |   |
| 61. <a href="#">Louis Riel</a> ,            | Métis leader                                      |
| 62. <a href="#">Robbie Robertson</a> ,      | Mohawk songwriter and guitarist                   |
| 63. <a href="#">Will Rogers</a> ,           | Cherokee actor and humorist                       |
| 64. <a href="#">John Ross</a> ,             | Cherokee chief                                    |
| 65. <a href="#">Sacajawea</a> ,             | Shoshone interpreter                              |
| 66. <a href="#">Buffy Sainte-Marie</a> ,    | Cree activist, songwriter, singer, and artist     |
| 67. <a href="#">Samoset</a> ,               | Algonquin leader                                  |
| 68. <a href="#">Seattle</a> ,               | Suquamish Indian leader                           |
| 69. <a href="#">Sequoyah</a> ,              | inventor of the Cherokee syllabary                |
| 70. <a href="#">Shawnee Prophet</a> ,       | Shawnee religious leader                          |
| 71. <a href="#">Leslie Marmon Silko</a> ,   | Laguna Pueblo poet and novelist                   |
| 72. <a href="#">Jay Silverheels</a> ,       | Mohawk actor                                      |
| 73. <a href="#">Sitting Bull</a> ,          | Sioux chief                                       |
| 74. <a href="#">Smohalla</a> ,              | Wanapun chief and religious leader                |
| 75. <a href="#">Squanto</a> ,               | Pawtuxet interpreter                              |
| 76. <a href="#">Wes Studi</a> ,             | Cherokee actor                                    |
| 77. <a href="#">Maria Tallchief</a> ,       | Osage ballerina                                   |
| 78. <a href="#">Tecumseh</a> ,              | Shawnee chief                                     |
| 79. <a href="#">Catherine Tekakwitha</a> ,  | Mohawk holy woman                                 |
| 80. <a href="#">Jim Thorpe</a> ,            | Sac and Fox Olympian                              |
| 81. <a href="#">John Trudell</a> ,          | Sioux musician, poet, activist                    |
| 82. <a href="#">Uncas</a> ,                 | Mohegan chief                                     |
| 83. <a href="#">Victorio</a> ,              | Apache chief                                      |
| 84. <a href="#">Nancy Ward</a> (Nanye-hi),  | Cherokee leader and "Beloved Woman"               |
| 85. <a href="#">William Weatherford</a> ,   | Creek chief                                       |
| 86. <a href="#">Wovoka</a> ,                | Paiute religious leader                           |

Below find another list that might be used to reinforce the idea of different ways of relating information.

## American Indian Place Names

by Borgna Brunner

Many American places have been named after Indian words. In fact, about half of the states got their names from Indian words. The name of **Kentucky** comes from an Iroquoian word (Kentahten), which means "land of tomorrow." **Connecticut's** name comes from the Mohican word (Quinnehtukqut), which means "beside the long tidal river." And the word "**Podunk**," meant to describe a insignificant town out in the middle of nowhere, comes from a Natick Indian word meaning "swampy place."



**Alabama:** may come from Choctaw meaning "thicket-clearers" or "vegetation-gatherers."

**Alaska:** corruption of Aleut word meaning "great land" or "that which the sea breaks against."

**Arizona:** from the Indian "Arizonac," meaning "little spring" or "young spring."

**Arkansas:** from the Quapaw Indians.

**Chicago (Illinois):** Algonquian for "garlic field."

**Chesapeake (bay):** Algonquian name of a village.

**Connecticut:** from an Indian word (Quinnehtukqut) meaning "beside the long tidal river."

**Illinois:** Algonquin for "tribe of superior men."

**Indiana:** meaning "land of Indians."

**Iowa:** probably from an Indian word meaning "this is the place" or "the Beautiful Land."

**Kansas:** from a Sioux word meaning "people of the south wind."

**Kentucky:** from an Iroquoian word "Ken-tah-ten" meaning "land of tomorrow."

**Massachusetts:** from Massachusett tribe of Native Americans, meaning "at or about the great hill."

**Michigan**: from Indian word "Michigana" meaning "great or large lake." **Minnesota**: from a Dakota Indian word meaning "sky-tinted water."

**Mississippi (state and river)**: from an Indian word meaning "Father of Waters."

**Malibu (California)**: believed to come from the Chumash Indians.

**Manhattan (New York)**: Algonquian, believed to mean "isolated thing in water."

**Milwaukee (Wisconsin)**: Algonquian, believed to mean "a good spot or place."

**Missouri**: named after the Missouri Indian tribe. "Missouri" means "town of the large canoes."

**Narragansett (Rhode Island)**: named after the Indian tribe.

**Nebraska**: from an Oto Indian word meaning "flat water."

**Niagara (falls)**: named after an Iroquoian town, "Ongiaahra."

**North Dakota**: from the Sioux tribe, meaning "allies."

**Ohio**: from an Iroquoian word meaning "great river."

**Oklahoma**: from two Choctaw Indian words meaning "red people."

**Pensacola (Florida)**: Choctaw for "hair" and "people."

**Roanoke (Virginia)**: Algonquian for "shell money" (Indian tribes often used shells that were made into beads called wampum, as money).

**Saratoga (New York)**: believed to be Mohawk for "springs (of water) from the hillside."

**South Dakota**: from the Sioux tribe, meaning "allies."

**Sunapee (lake in New Hampshire)**: Pennacook for "rocky pond."

**Tahoe (lake in California/Nevada)**: Washo for "big water."

**Tennessee**: of Cherokee origin; the exact meaning is unknown.

**Texas**: from an Indian word meaning "friends."

**Utah**: from the Ute tribe, meaning "people of the mountains."

**Wisconsin**: French corruption of an Indian word whose meaning is disputed.

**Wyoming**: from the Delaware Indian word, meaning "mountains and valleys alternating"; the same as the Wyoming Valley in Pennsylvania.

**Source:** O Brave New Words! Native American Loanwords in Current English, by Charles L. Cutler.

## Lesson 2

### Areas, Perimeters, and Reservations

#### Objectives:

By the end of the lessons students will be able to:

- Find area and perimeter
- Use a set of data to display it in a pie or bar graph
- Find the mean, median, and mode of a set of data.
- Reflect on the power of graphing information.

6.1.2.15	Simplify numerical expressions using the order of operations with grade-appropriate operations on number sets.	Vocabulary - expression How to perform basic operation (add, subtract, multiply, divide) The order in which they need to add, subtract, multiply and divide
6.1.3.1	Solve grade-level appropriate problems using estimation.	Find important information in problem context or drawing Determine which operation or method to use to solve a problem Determine if the answer is reasonable and makes sense Use problem solving strategies (visual representations, working backwards, guess and check, using a simpler problem)

#### Materials

- Rice and or beans
- Ruler
- Pencil
- Paper
- Copies of maps of the reservations (per group or student)
- Copy of formulas for area and perimeter
- Markers of different colors
- Graphing paper
- Crayons
- Glue, scissors (optional)
- Calculator (optional)

#### Pre-planning:

- Read lesson prior to teaching it
- Gather the necessary material(s) for each activity before hand
- Group students (4-5)
- Make copies – maps, formulas,

**Thinking Strategies:** brainstorming, follow steps of problem solving, considers new and different approaches to ideas, issues, or problems, compare and contrast, draw logical conclusion based on facts, analyzes and evaluates and synthesizes information, and communicates ideas effectively.

**How the Lesson is Differentiated for Gifted Students:** Students will use critical thinking strategies to solve problems, use inductive and deductive reasoning, and will learn different reasoning processes by observing, listening, and interacting with other students.

## SHELTERED INSTRUCTION OBSERVATION PROTOCOL FEATURES

Select the SIOP Features that are utilized to shelter instruction for ELLs.

(Adapted from Echevarria, Vogt, & Short, *Making Content Comprehensible for English Learners*. Pg. 212.)

<ul style="list-style-type: none"> <li>• <b>Preparation</b> <ul style="list-style-type: none"> <li>Adaptation of Content</li> <li>Links to Background</li> <li>Links to Past Learning</li> <li>Strategies Incorporated</li> </ul> </li> <li>• <b>Integration of Processes</b> <ul style="list-style-type: none"> <li>Reading</li> <li>Writing</li> <li>Speaking</li> <li>Listening</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• <b>Scaffolding</b> <ul style="list-style-type: none"> <li>Modeling</li> <li>Guided Practice</li> <li>Independent Practice</li> <li>Comprehensible Input</li> </ul> </li> <li>• <b>Application</b> <ul style="list-style-type: none"> <li>Hands-on</li> <li>Meaningful</li> <li>Linked to Objectives</li> <li>Promotes Engagement</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• <b>Grouping Options</b> <ul style="list-style-type: none"> <li>Whole</li> <li>Small</li> <li>Partners</li> <li>Independent</li> </ul> </li> <li>• <b>Assessment</b> <ul style="list-style-type: none"> <li>Individual</li> <li>Group</li> <li>Written</li> <li>Oral</li> </ul> </li> </ul>
---	--	---

### Activities/Procedure

**Focusing Question:** How might we figure out areas and perimeter of shapes with no known formula for them?

**Activity 1-** Brainstorming session – Teacher will post the **focusing question** on the board and invite students to think about it. Explain to them that as they are aware, there are formulas to figure out the areas of a square, rectangle, triangle, circle, etc. However; certain shapes, like people are different from the norm and no formula has been developed to figure out the area of such shapes. Accept all answers.


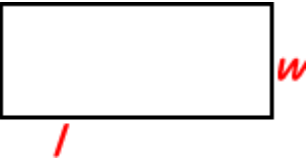

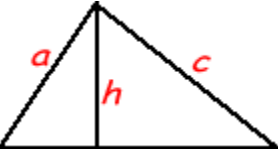
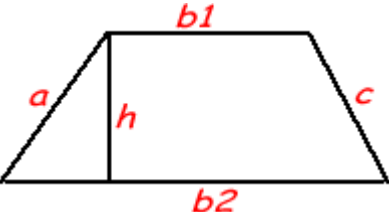
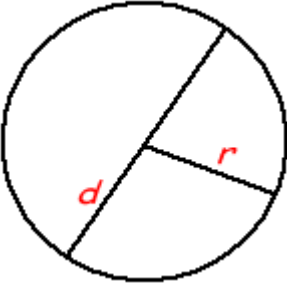
## Activity 2 – Estimating areas and perimeter of reservations

- 1- Separate class into groups of 4-5 students.
- 2- Students will receive from teacher the map of the reservations located in Arizona and New Mexico and the formulas to figure out areas and perimeters of different shapes.
- 3- Teacher will inform students that their task is to find a way to calculate the areas and perimeters of the reservations on their maps.
- 4- Teacher will share with students that the only materials available to accomplish the task are: graph paper, beans and/or rice, calculator, pencil, paper, scissors, glue, and formulas.
- 5- Teacher will allow a few minutes for a class discussion. Do not share the answer for the problem at this time. This time is thinking time only.
- 6- Teacher will ask students to demonstrate how to figure out the areas and perimeters of different shapes by going over the practice worksheet as a whole class activity. Give students the area of a square, such as 64 and ask students to demonstrate the results by doing hands on illustration too. Provide alternate material for such task.
- 7- After that, ask students to figure out (estimate) the areas and perimeters of the reservations in New Mexico and Arizona. Allow students to explore it before helping them. Give clues to help them problem solve it. For example, "How could you make irregular shapes into regular shapes so it is possible the use of formulas that you have?"

**Possible solutions:** Have students put rice or beans on top of the maps of the reservations. Ask students to make sure that there is no empty space. Remove the beans or rice from the area. Shape the beans or rice now into a square, or rectangle or any other shape that they desire. Measure the sides of the shapes. Use the appropriate formula to figure out the areas and perimeters. Another way, but harder would be to cut out the areas and glue them on a graph paper. Measure it and apply formula.

Have students share their results and ideas. Students should present to the class how they did it and what made them successful or not so successful. Ask students to write a reflection on this activity. Students should include feelings, reactions and the problem solving into the reflection.

## Formula Chart for Area and Perimeter

Shapes	Formula
	<p><b>Square:</b>            Area = Length x Length  <math>A = l^2</math></p> <p>Perimeter = 4 x Lengths  <math>P = 4l</math></p>
	<p><b>Rectangle:</b>            Area = Length X Width  <math>A = lw</math></p> <p>Perimeter = 2 X Lengths + 2 X Widths  <math>P = 2l + 2w</math></p>
	<p><b>Parallelogram</b>            Area = Base X Height  <math>a = bh</math></p>
	<p><b>Triangle</b>            Area = 1/2 of the base X the height  <math>a = 1/2 bh</math>            Perimeter = <math>a + b + c</math>            (add the length of the three sides)</p>
	<p><b>Trapezoid</b>  <math>A = \left(\frac{b1 + b2}{2}\right)h</math>            Perimeter = area + <math>b1 + b2 + c</math>  <math>P = a + b1 + b2 + c</math></p>
	<p><b>Circle</b> <a href="#">Try the Online tool.</a>            The distance around the circle is a circumference. The distance across the circle is the diameter (d). The radius (r) is the distance from the center to a point on the circle. (Pi = 3.14) More about <a href="#">circles.</a></p> <p><math>d = 2r</math>  <math>c = \pi d = 2 \pi r</math>  <math>A = \pi r^2</math>            (<math>\pi = 3.14</math>)</p>

## Area and Perimeter Activity

Name: \_\_\_\_\_

Date: \_\_\_\_\_

1- Find the length of each side of a square with an area of 64. Show your work.

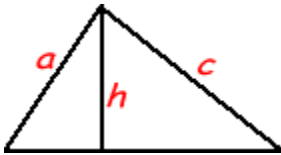
2- What would the perimeter of the square be if the area was 64? Show your work.

3- Jose was asked to figure out the area of a table which the length was 7 ft and the width was 4 ft. What shape is the table and how is Jose going to figure out the formula? Help Jose find the perimeter too. Show your work.

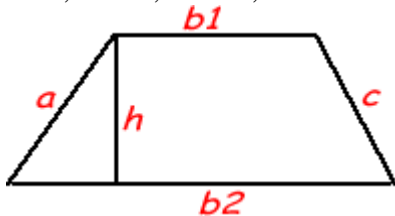
4- What is the area of a fried bread if the radius is 5 inches long? Show your work.

5- What is the height of a parallelogram if the area is 64 and the base is 4? Show your work.

6-  $a = 6$   $c = 9$  and  $h$  is 5. Find area and perimeter.



7-  $a = 4$ ,  $b_1 = 6$ ,  $b_2 = 9$ ,  $h = 3$ . Find the area. Show your work.



## Area

The area of a figure measures the size of the region enclosed by the figure. This is usually expressed in terms of some square unit. A few examples of the units used are square meters, square centimeters, square inches, or square kilometers.



---

### Area of a Square

If  $l$  is the side-length of a square, the area of the square is  $l^2$  or  $l \times l$ .

**Example:**

What is the area of a square having side-length 3.4?

The area is the square of the side-length, which is  $3.4 \times 3.4 = 11.56$ .

---

### Area of a Rectangle

The area of a rectangle is the product of its width and length.

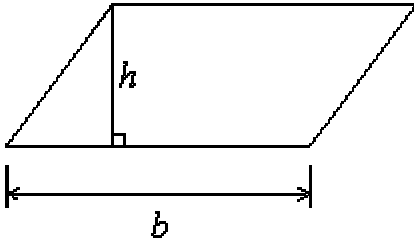
**Example:**

What is the area of a rectangle having a length of 6 and a width of 2.2?

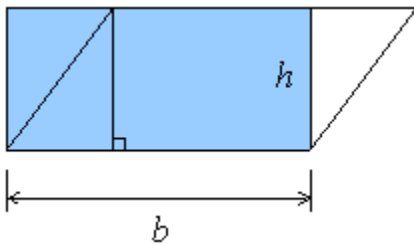
The area is the product of these two side-lengths, which is  $6 \times 2.2 = 13.2$ .

## Area of a Parallelogram

The area of a parallelogram is  $b \times h$ , where  $b$  is the length of the base of the parallelogram, and  $h$  is the corresponding height. To picture this, consider the parallelogram below:



We can picture "cutting off" a triangle from one side and "pasting" it onto the other side to form a rectangle with side-lengths  $b$  and  $h$ . This rectangle has area  $b \times h$ .

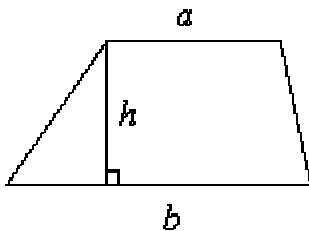


Example:

What is the area of a parallelogram having a base of 20 and a corresponding height of 7?  
The area is the product of a base and its corresponding height, which is  $20 \times 7 = 140$ .

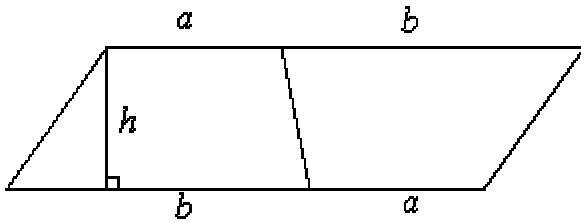
---

## Area of a Trapezoid



If  $a$  and  $b$  are the lengths of the two parallel bases of a trapezoid, and  $h$  is its height, the area of the trapezoid is  
 $1/2 \times h \times (a + b)$ .

To picture this, consider two identical trapezoids, and "turn" one around and "paste" it to the other along one side as pictured below:



The figure formed is a parallelogram having an area of  $h \times (a + b)$ , which is twice the area of one of the trapezoids.

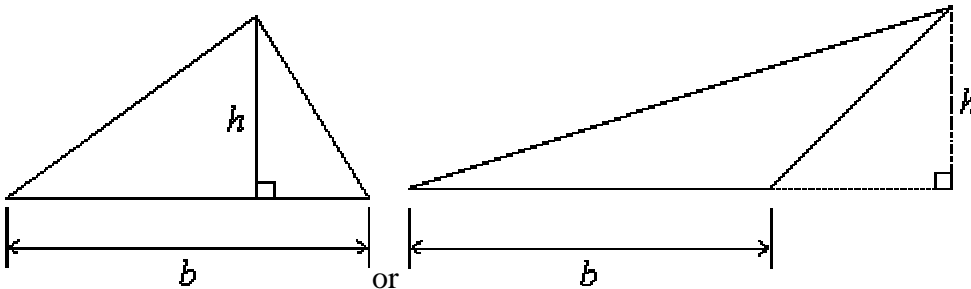
Example:

What is the area of a trapezoid having bases 12 and 8 and a height of 5?

Using the formula for the area of a trapezoid, we see that the area is

$$\frac{1}{2} \times 5 \times (12 + 8) = \frac{1}{2} \times 5 \times 20 = \frac{1}{2} \times 100 = 50.$$

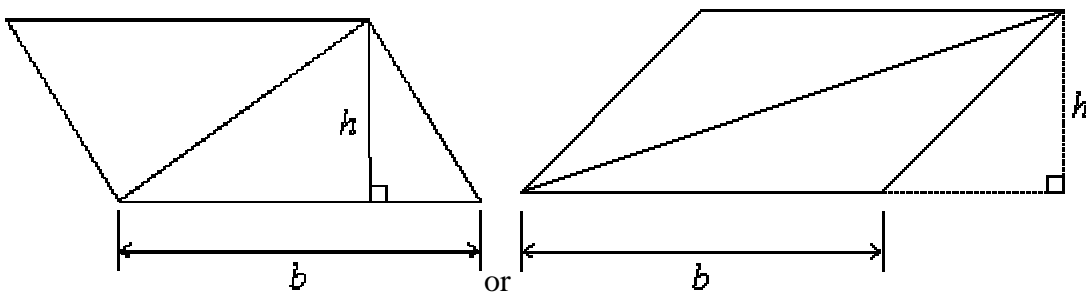
### Area of a Triangle



Consider a triangle with base length  $b$  and height  $h$ .

The area of the triangle is  $\frac{1}{2} \times b \times h$ .

To picture this, we could take a second triangle identical to the first, then rotate it and "paste" it to the first triangle as pictured below:

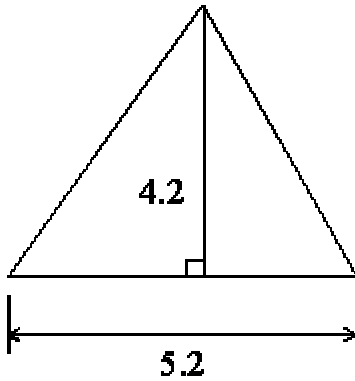


The figure formed is a parallelogram with base length  $b$  and height  $h$ , and has area  $b \times h$ .

This area is twice that of the triangle, so the triangle has area  $\frac{1}{2} \times b \times h$ .

Example:

What is the area of the triangle below having a base of length 5.2 and a height of 4.2?  
The area of a triangle is half the product of its base and height, which is  
 $\frac{1}{2} \times 5.2 \times 4.2 = 2.6 \times 4.2 = 10.92$ .



---

### Area of a Circle

The area of a circle is  $\text{Pi} \times r^2$  or  $\text{Pi} \times r \times r$ , where  $r$  is the length of its radius. Pi is a number that is approximately 3.14159.

Example:

What is the area of a circle having a radius of 4.2 cm, to the nearest tenth of a square cm? Using an approximation of 3.14159 for Pi, and the fact that the area of a circle is  $\text{Pi} \times r^2$ , the area of this circle is  $\text{Pi} \times 4.2^2 \cong 3.14159 \times 4.2^2 = 55.41 \dots$  square cm, which is 55.4 square cm when rounded to the nearest tenth.

---

### Perimeter

The perimeter of a polygon is the sum of the lengths of all its sides.

Example:

What is the perimeter of a rectangle having side-lengths of 3.4 cm and 8.2 cm? Since a rectangle has 4 sides, and the opposite sides of a rectangle have the same length, a rectangle has 2 sides of length 3.4 cm, and 2 sides of length 8.2 cm. The sum of the lengths of all the sides of the rectangle is  $3.4 + 3.4 + 8.2 + 8.2 = 23.2$  cm.

Example:

What is the perimeter of a square having side-length 74 cm? Since a square has 4 sides of equal length, the perimeter of the square is  $74 + 74 + 74 + 74 = 4 \times 74 = 296$ .

Example:

What is the perimeter of a regular hexagon having side-length 2.5 m? A hexagon is a figure having 6 sides, and since this is a regular hexagon, each side has the same length, so the perimeter of the hexagon is  $2.5 + 2.5 + 2.5 + 2.5 + 2.5 + 2.5 = 6 \times 2.5 = 15\text{m}$ .

**Example:**

What is the perimeter of a trapezoid having side-lengths 10 cm, 7 cm, 6 cm, and 7 cm? The perimeter is the sum  $10 + 7 + 6 + 7 = 30\text{cm}$ .

---

## Circumference of a Circle

The distance around a circle. It is equal to Pi ( $\pi$ ) times the diameter of the circle. Pi or  $\pi$  is a number that is approximately 3.14159.

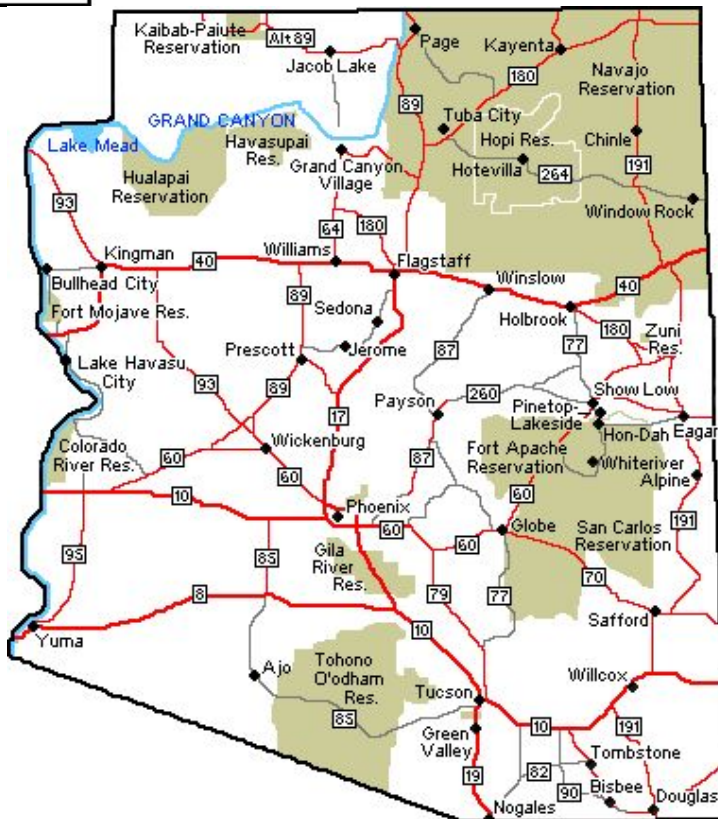
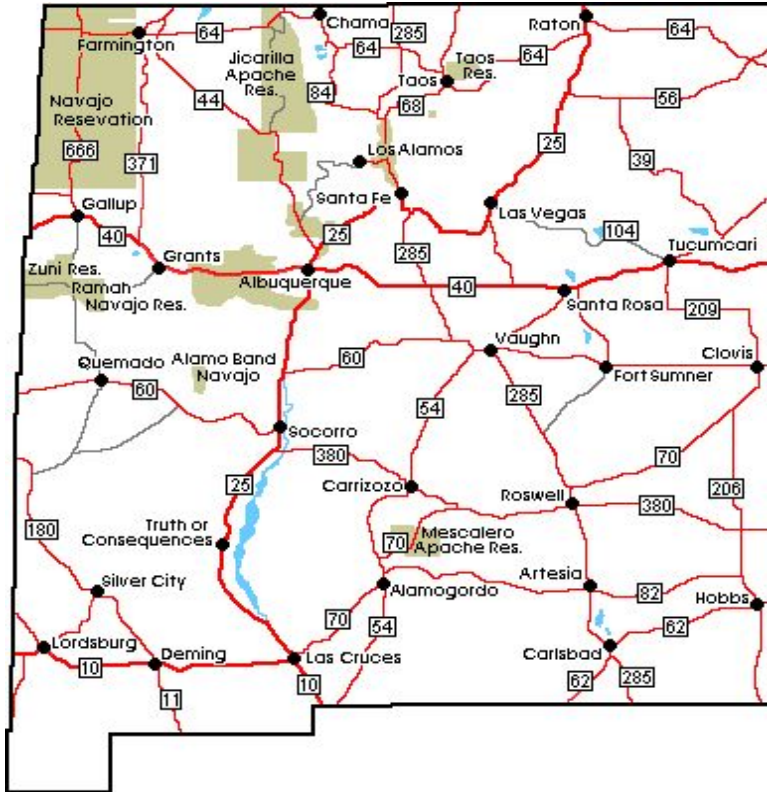
**Example:**

What is the circumference of a circle having a diameter of 7.9 cm, to the nearest tenth of a cm? Using an approximation of 3.14159 for  $\pi$ , and the fact that the circumference of a circle is  $\pi$  times the diameter of the circle, the circumference of the circle is  $\pi \times 7.9 \cong 3.14159 \times 7.9 = 24.81\dots\text{cm}$ , which equals 24.8 cm when rounded to the nearest tenth of a cm.

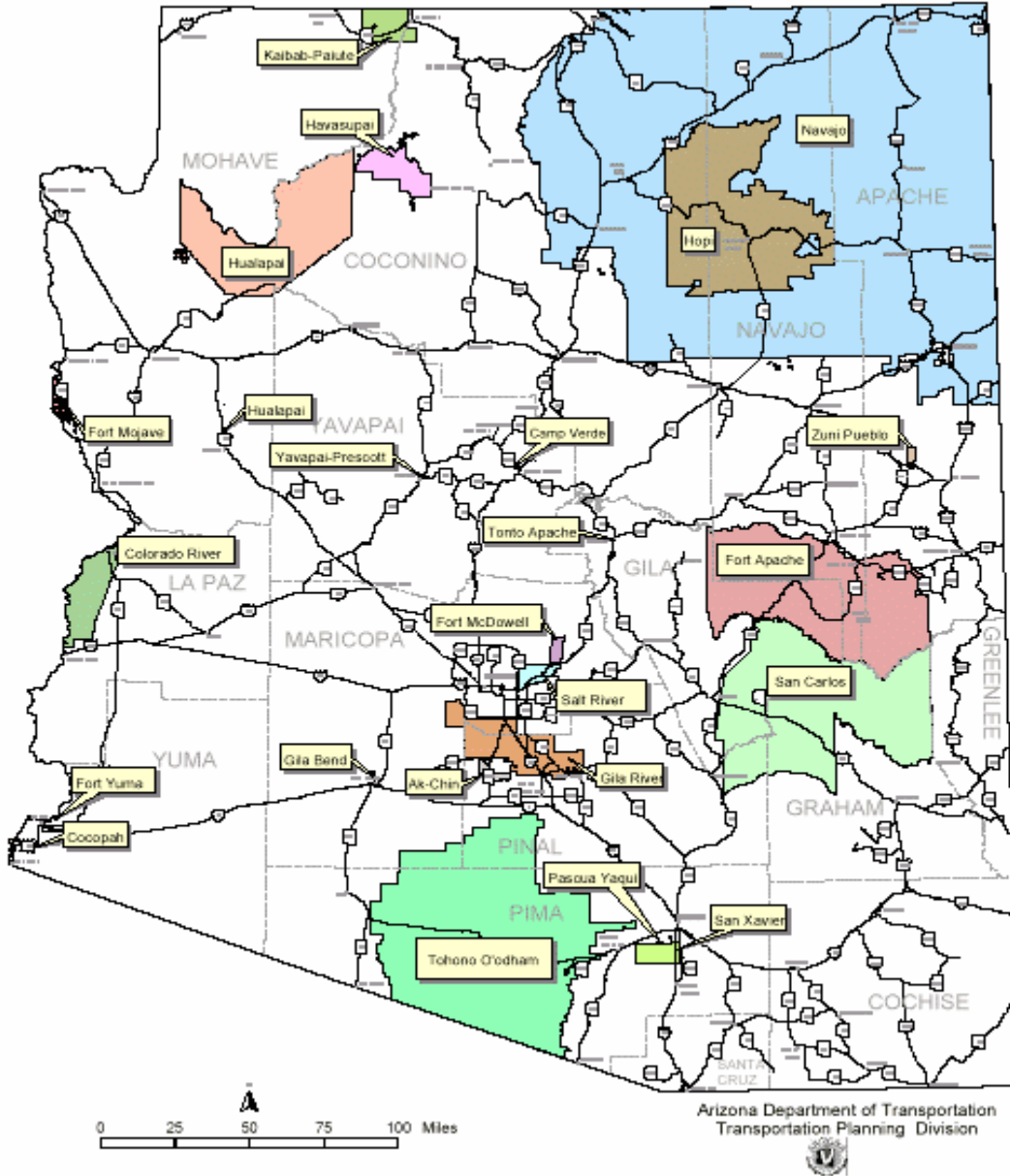
# Reservations of Arizona and New Mexico

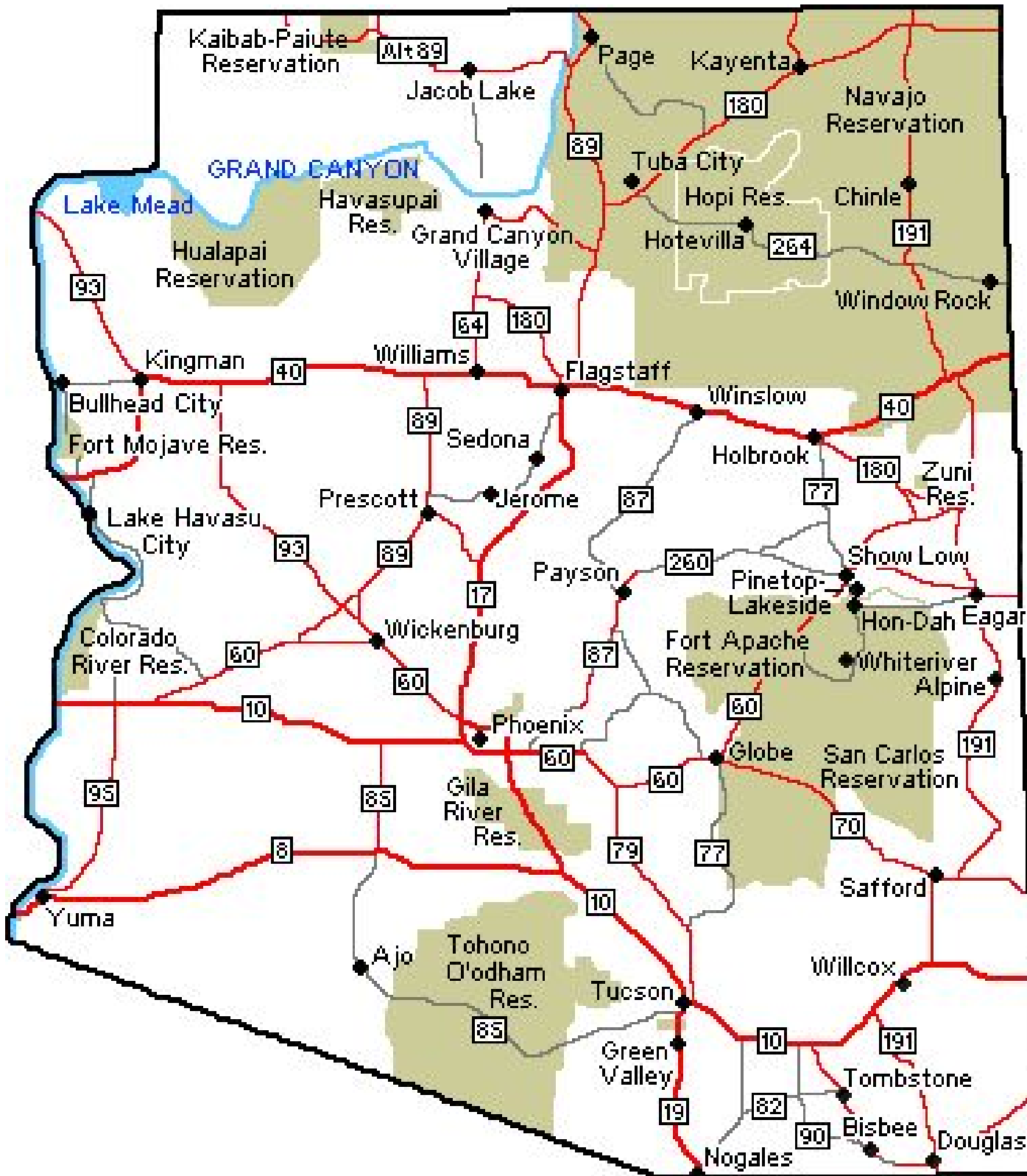
Courtesy of: [Boise Matthews](#)  
About.com Guide to Southwest US for Visitors

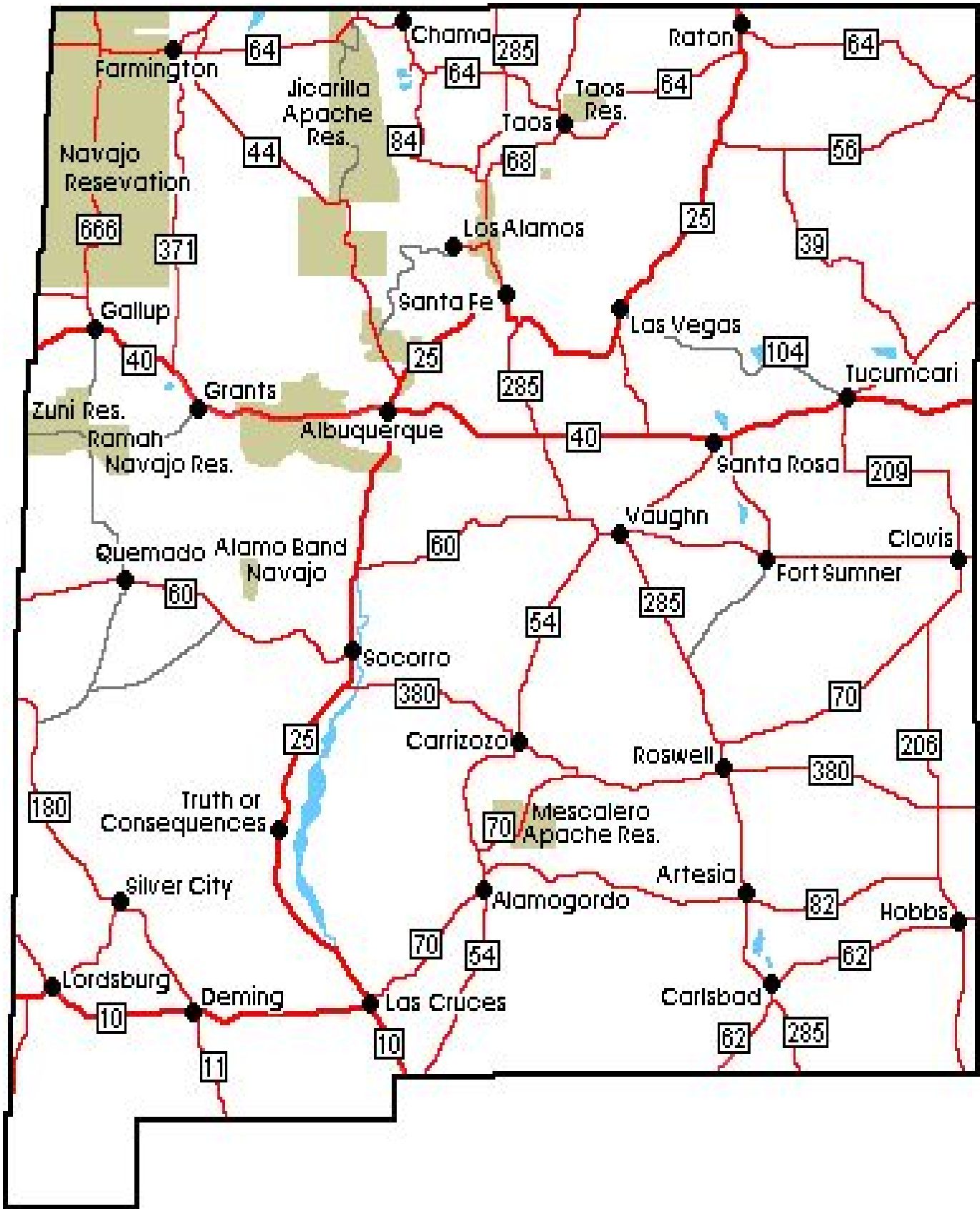
[Welcome](#) [Forum](#) [Newsletter](#)



# American Indian Reservations







### Activity 3

Compare and contrast the three maps of the Arizona and New Mexico reservations. Compare the areas using the scale provided at the bottom of the Arizona Indian Reservations map to measure them.

<http://ag.arizona.edu/edrp/tribes.html>

### Activity 4

1- Looking the **Arizona's Native American Tribes** information, answer the following questions. Please, don't forget to show your work.

- Which tribe has the lowest population?
- Which tribe has the most?
- Which tribe has the most land area?
- Which tribe has the least?
- Which tribe has the most tribal members?
- Which tribe has the lowest?
- List the tribes with gaming.
- What is the average number of people living in the reservations?
- What is the mean?
- What is the mode?
- In average, does population exceeds the number of enrolled tribal members?
- What is the average number of tribal enrolled members?
- Choose any of this information for you to graph it.

## Arizona's Native American Tribes

Arizona is home to 21 federally recognized tribes. Together, the tribes contribute to the rich cultural diversity of Arizona. The state is home to over 250,000 Native Americans (2000 Census). Reservations and tribal communities comprise over a quarter of Arizona's lands.

### Ak-Chin Indian Community

**Location:** 58 miles south of Phoenix on Highway 347

**Population (2000 Census):** 742

**Enrolled Tribal Members:** 645

**Land Area:** 34.1 square miles

**Gaming:** Yes (Harrah's Ak-Chin Casino, located in Maricopa)

### Yavapai-Apache Nation

**Location:** 95 Miles north of Phoenix

**Population (2000 Census):** 743

**Enrolled Tribal Members:** 1,550

**Land Area:** 1.02 square miles

**Gaming:** Yes (Cliff Castle Casino, located in Camp Verde)

### Navajo Nation

## Extensions

### Social Studies

#### Activity 1

Have students put the reservations in order by size. Refer to the map to answer the following questions:

- 1- Which one is the largest?
- 2- Which one is the smallest?
- 3- Which one just by looking at the area would have the most people living in it? Verify your answer. How did you make your guess?
- 4- Which one has the least?
- 5- Why do they think that some areas are more populated than others?
- 6- Why do some of the tribes have more tribal members than its population?

#### Activity 2

Now looking at the table of **NATIVE AMERICAN TRIBES POPULATION RANKINGS** answer the following questions:

- 1- Rank the 30 Native American Tribes in order from the highest to the lowest of population. There are 30 tribes listed. Please beware that the numbers are from the census of 1990.
- 2- What is the percentage of each tribe in comparison to the total number?
- 3- How many more tribes can you add to the list?

### Language Arts

- 1- Write an essay about the "need" or "not need" of casinos in reservations.
  - 2- Diné people do not have casino in their reservation. Explain why they would choose not to have such a lucrative business.
- Write an essay comparing and contrasting two reservations, one with and one without casino.

**NATIVE AMERICAN TRIBES  
POPULATION RANKINGS**  
of the 30 largest tribes in the U.S.  
1990 census report  
(U.S. Department of Commerce)  
**Native American Population:**  
**1,878,285 = 100.0 %**

<b>Rank</b>	<b>Tribe</b>	<b>Population</b>	<b>Percent</b>
	Sioux	<b>103,255</b>	
	Navajo	<b>219,198</b>	
	Cree	<b>8,290</b>	
	Crow	<b>8,588</b>	
	Apache	<b>50,051</b>	
	Delaware	<b>9,321</b>	
	Pueblo	<b>52,939</b>	
	Cherokee	<b>308,132</b>	
	Iroquois	<b>49,038</b>	
	Blackfoot	<b>32,234</b>	
	Creek	<b>43,550</b>	
	Chickasaw	<b>20,631</b>	
	Canadian & Latin Americ.	<b>22,379</b>	
	Tohono O' Odham	<b>16,041</b>	
	Pima	<b>14,431</b>	
	Potawatomi	<b>16,763</b>	
	Seminole	<b>13,797</b>	
	Alaskan Athabaskans	<b>13,738</b>	
	Lumbee	<b>48,444</b>	
	Tlingit	<b>13,925</b>	
	Puget Sound Salish	<b>10,246</b>	
	Kiowa	<b>9,421</b>	
	Paiute	<b>11,142</b>	
	Comanche	<b>11,322</b>	
	Shoshone	<b>9,215</b>	
	Osage	<b>9,527</b>	
	Yaqui	<b>9,931</b>	
	Cheyenne	<b>11,456</b>	
	Choctaw	<b>82,299</b>	
	Chippewa	<b>103,826</b>	

If you need information about the other 86 tribes with a population over 1,000 people, or if you need a breakdown of the numbers by regions, divisions and states, then please call Population Division of the Bureau of the Census, Washington, DC 20233, tel. (301) 457-2402. They will send you the complete report for the asking.

**Answer Key**

<b>NATIVE AMERICAN TRIBES POPULATION RANKINGS</b> of the 30 largest tribes in the U.S. according to the 1990 census report (U.S. Department of Commerce)			
<b>Native American Population: 1,878,285 = 100.0 %</b>			
<b>Rank</b>	<b>Tribe</b>	<b>Population</b>	<b>Percent</b>
1	Cherokee	308,132	16.4
2	Navajo	219,198	11.7
3	Chippewa	103,826	5.5
4	Sioux	103,255	5.5
5	Choctaw	82,299	4.4
6	Pueblo	52,939	2.8
7	Apache	50,051	2.7
8	Iroquois	49,038	2.6
9	Lumbee	48,444	2.6
10	Creek	43,550	2.6
11	Blackfoot	32,234	1.7
12	Canadian & Latin Americ.	22,379	1.2
13	Chickasaw	20,631	1.1
14	Potawatomi	16,763	0.9
15	Tohono O' Odham	16,041	0.9
16	Pima	14,431	0.8
17	Tlingit	13,925	0.7
18	Seminole	13,797	0.7
19	Alaskan Athabaskans	13,738	0.7
20	Cheyenne	11,456	0.6
21	Comanche	11,322	0.6
22	Paiute	11,142	0.6
23	Puget Sound Salish	10,246	0.5
24	Yaqui	9,931	0.5

25	Osage	<b>9,527</b>	<b>0.5</b>
26	Kiowa	<b>9,421</b>	<b>0.5</b>
27	Delaware	<b>9,321</b>	<b>0.5</b>
28	Shoshone	<b>9,215</b>	<b>0.5</b>
29	Crow	<b>8,588</b>	<b>0.5</b>
30	Cree	<b>8,290</b>	<b>0.4</b>

## Lesson 3

### Checking and Balancing

#### Objectives:

By the end of the lessons students will be able to:

- Compare and contrast the US census numbers on American Indians with other sources.

6.2.1.1	Formulate questions to collect data in contextual situations.	Identify area of interest to be explored and needed/wanted information Determine your audience Craft clearly worded question in order to efficiently collect data (choices, rankings, ranges, etc)
6.2.1.3	Interpret simple displays of data including double bar graphs, tally charts, frequency tables, circle graphs, and line graphs.	Access information from graphs using the title, axes labels, intervals, key, percent, tally marks, and/or table headings Given a value or data point, being able to identify the corresponding information from the graph (in the year 1996, how many flat screen TV's were purchased)
6.2.1.4	Answer questions based on simple displays of data including double bar graphs, tally charts, frequency tables, circle graphs, and line graphs.	Access information from graphs using the title, axes labels, intervals, key, percent, tally marks, and/or table headings Given a value or data point, identify the corresponding information from the graph (in the year 1996, how many flat screen TV's were purchased) Take information from the graph and make an inference or interpretation (future data, data point not specifically listed, combination or comparison of more than one piece of data)
6.3.1.2	Extend a grade-level appropriate iterative pattern.	Identify patterns Analyze patterns to determine the relationship between the parts of the pattern (iterative – repeating patterns, i.e. apply the same operation – adding 3) Apply the rule to find the next number in the sequence
6.3.1.3	Solve grade-level appropriate iterative pattern problems.	Identify patterns Analyze patterns to determine the relationship between the parts of the pattern (iterative – repeating patterns, i.e. apply the same operation – adding 3) Apply the rule to find the next number in the sequence or a missing number
6.3.2.1	Describe the rule used in a simple grade-level appropriate function (e.g., T-chart, input/output model).	Vocabulary - input, output, rule Analyze patterns in the table Determine which operation(s) when performed on the input number will yield the output number

6.3.3.2	Use variables in contextual situations.	Find important information in problem context or drawing Determine which of the pieces of information in the problem are being represented by variables Determine the relationship between the variables and which operation can be used. Use expression and equation notation and variables correctly Use number to check the accuracy of the equation or expression
---------	---	---

## Materials

- Pencil
- Paper
- Copies of activities – if it is not a whole class lesson (per group or student)

## Pre-planning:

- Read lesson prior to teaching it
- Gather the necessary material(s) for each activity before hand
- Group students (4-5)
- Make copies – maps, formulas

**Thinking Strategies:** brainstorming, considers new and different approaches to ideas, issues, or problems, compare and contrast, draw logical conclusion based on facts, analyzes and evaluates and synthesizes information, and communicates ideas effectively

**How the Lesson is Differentiated for Gifted Students:** Students will use critical thinking strategies to solve problems, use inductive and deductive reasoning, and will learn different reasoning processes by observing, listening, and interacting with other students.

## SHELTERED INSTRUCTION OBSERVATION PROTOCOL FEATURES

Select the SIOP Features that are utilized to shelter instruction for ELLs.

(Adapted from Echevarria, Vogt, & Short, *Making Content Comprehensible for English Learners*. Pg. 212.)

• Preparation	• Scaffolding	• Grouping Options
<ul style="list-style-type: none"> <li>• Adaptation of Content</li> <li>• Links to Background</li> <li>• Links to Past Learning</li> <li>• Strategies Incorporated</li> </ul>	<ul style="list-style-type: none"> <li>• Modeling</li> <li>• Guided Practice</li> <li>• Independent Practice</li> <li>• Comprehensible Input</li> </ul>	<ul style="list-style-type: none"> <li>• Whole</li> <li>• Small</li> <li>• Partners</li> <li>• Independent</li> </ul>
<ul style="list-style-type: none"> <li>• Integration of Processes</li> <li>• Reading</li> <li>• Writing</li> <li>• Speaking</li> <li>• Listening</li> </ul>	<ul style="list-style-type: none"> <li>• Application</li> <li>• Hands-on</li> <li>• Meaningful</li> <li>• Linked to Objectives</li> <li>• Promotes Engagement</li> </ul>	<ul style="list-style-type: none"> <li>• Assessment</li> <li>• Individual</li> <li>• Group</li> <li>• Written</li> <li>• Oral</li> </ul>

## Activities/Procedures

**Focusing Question:** What kind of information that the government discloses might actually be incorrect?

### Activity 1- Brainstorming session

Teacher will pose the **focusing question** and will allow time for students to discuss their ideas. If students can not come up with anything, talk about if withholding information such as tapping the phone lines of people without their knowledge, minimizing or maximizing the risk of something so that the government can do something that it believes, such as getting into the war and how in times of war it is OK to alter such information for safety purposes.

Another example of information and numbers, which many claim to have been altered in the past, is the government unwillingness to talk about the number of American Indians' lives lost in war, smallpox from the blankets given to them, other contagious diseases brought in by the colonizers, relocations, etc.. Why might this be?

### Activity 2

---

**Using the information provided by the U.S. Census Bureau, answer the questions for some of the sections of the census. Remember to show your work.**

#### **Population**

#### **4.4 million**

As of July 1, 2004, the estimated population of American Indians and Alaska natives, including those of more than one race. They made up 1.5% of the total population.

#### **Figure out**

a- The total US population.

b- The ratio of American Indians and Alaska natives compared to the rest of the population?

### Activity 3

Read the article below and answer the following questions.

In paragraph **1** says that the Native population ranged from 1.8 to over 12 million.

- 1- What would be the average number for the Native population?
- 2- Assuming that the US census data is correct and the Native population today is 4.4 million, what is the difference between the average population back then and the population of today?
- 3- How much is four centuries?
- 4- 237,000 is an estimation of what the Native population was reduced to. How many lives were lost then? Compare to the 12 million and 1.8 million.
- 5- What is the difference between 4 centuries and 4 decades?
- 6- The Native population in what is now Mexico decreased by how much in 4 decades?

## PAST GENOCIDES COMMITTED AGAINST NATIVE AMERICANS

1- The population of North America prior to the first sustained European contact in 1492 AD is a matter of active debate. Various estimates of the pre-contact Native population of the continental U.S. and Canada range from 1.8 to over 12 million. <sup>4</sup> Over the next four centuries, their numbers were reduced to about 237,000 as Natives were almost wiped out. Author Carmen Bernand estimates that the Native population of what is now Mexico was reduced from 30 million to only 3 million over four decades. <sup>13</sup> Peter Montague estimates that Europeans once ruled over 100 million Natives throughout the Americas.

2-European extermination of Natives started with Christopher Columbus' arrival in San Salvador in 1492. Native population dropped dramatically over the next few decades. Some were directly murdered by Europeans. Others died indirectly as a result of contact with introduced diseases for which they had no resistance -- mainly smallpox, influenza, and measles.

3-Later European Christian invaders systematically murdered additional Aboriginal people, from the Canadian Arctic to South America. They used warfare, death marches, forced relocation to barren lands, destruction of their main food supply -- the Buffalo -- and poisoning. Some Europeans actually shot at Indians for target practice. <sup>14</sup>

4-Oppression continued into the 20th century, through actions by governments and religious organizations which systematically destroyed Native culture and religious heritage. One present-day byproduct of this oppression is suicide. Today, Canadian Natives have the highest suicide rate of any identifiable population group in the world. Native North Americans are not far behind.

5-The genocide against American Natives was one of the most massive, and longest lasting genocidal campaigns in human history. It started, like all genocides, with the oppressor treating the victims as sub-humans. It continued until almost all Natives were wiped of the face of the earth, along with much of their language, culture and religion.

We believe that:

- Only the [mass murder of European Jews by Christians](#) from 306 to 1945 CE was of longer duration.
- Only the [mass murder by the government of the USSR of about 41 million of its citizens](#) (1917 to 1987), and [by the government of China of about 35 million of its citizens](#) (1949 to 1987) may have involved greater loss of life.

The following essay contains only a small sampling of the horrendous atrocities inflicted on Natives by Europeans.

<http://www.religioustolerance.org/genocide5.htm>

## Activity 4

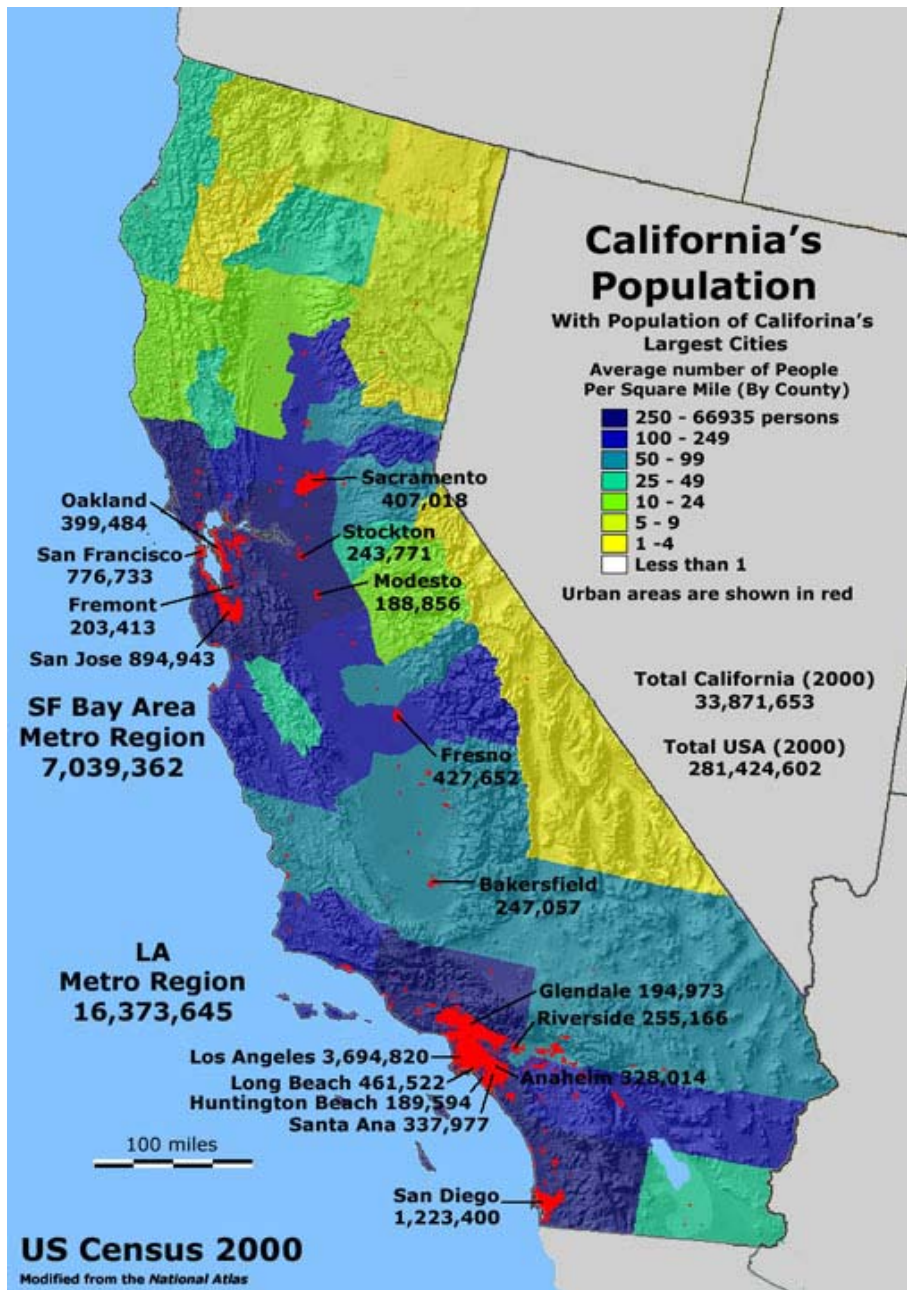
1- Which numbers are important in the passage **“PAST GENOCIDES COMMITTED AGAINST NATIVE AMERICANS”**. Why?

2-

**687,400**

is the number of the American Indian and Alaska native population in California as of July 1, 2004, the highest total of any state in the nation. California was followed by Oklahoma (398,200) and Arizona (322,200). About 6,400 American Indians and Alaska natives were added to Arizona’s population between July 1, 2003, and July 1, 2004. That is the largest numeric increase of any state in the nation. Florida and Texas added 5,300 and 4,500, respectively.

- 1- Compare the number of American Indian and Alaska native population in California with the population of California. Refer to the map provided below to get the information necessary to answer this question. Is it a lot? What is your opinion about it?
- 2- How much more is the Native population in California than Oklahoma?
- 3- How much more is the Native population in Arizona compared to California and Oklahoma? Explain your answer.
- 4- How many more Native people were added to Arizona than Florida and Texas according to the US census?
- 5- Compare the number of American Indian and Alaska native population in California to the total population of American Indian and Alaska native. Is there a lot of American Indian and Alaska native in California? Is it proportional to the rest of the country?



Modified from the *National Map* with Census 2000 data.

## Activity 5

### Languages

**381,000**

The number of people 5 years and older who speak a native North American language at home. The most common language is Navajo, spoken by 178,014.

- 1-How many people are speakers of other native North American language?
- 2-Why do you think that there are so few people speaking native North American
- 3-What is the role of acculturation and assimilation with regards to language?
- 4-Why do you think the acquisition of other languages are not encouraged in this country?

### American Indian Tribes

- 1-There are 4.4 million Native Americans according to the US census of 2004. Below you will find a list of the tribes, and by looking at the vast list, do you find the number of people that speak a native language at home proportional or disproportional? Explain your answer.
- 2- Figure out the percentage of the Navajos who speak Navajo at home. Is the percentage high or low? Explain why.
- 3- How many of these tribes have been extinct? Graph your findings.
- 4- What letter of the alphabet seems to be the most used in the Native American languages? Graph the findings.

## List of American Indian tribes

### [[edit](#)] A

- [Acaxee](#)
- [Acolapissa](#)
- [Acuera](#)
- [Aguacatec](#)
- [Ais](#)
- [Akatek](#)
- [Alakwisa](#)
- [Aleut](#)
- [Algonquin](#)
- [Alliklik](#)
- [Amuzgo](#)
- [Anasazi](#)
- [Ani-Stohini/Unami](#)
- [Apache](#)
- [Apalachee](#)
- [Apalachicola](#)
- [Arawak](#)
- [Ataronchronon](#)
- [Aztec](#)

### [[edit](#)] B

- [Baciroa](#)
- [Bagaces](#)
- [Bainoa](#)
- [Bambana](#)
- [Bamoá](#)
- [Bawihka](#)
- [Baymunana](#)
- [Bayogoula](#)
- [Bear River Indians \(California\)](#)
- [Bear River Indians \(North Carolina\)](#)
- [Biloxi](#)
- [Blackfoot](#)
- [Bora](#)
- [Boruca](#)
- [Bribri](#)
- [Burica](#)
- [Burucaca](#)

### [[edit](#)] C

- [Cabecar](#)
- [Cacaopera](#)
- [Cahibo](#)
- [Cahuilla](#)
- [Caizcimu](#)
- [Cakchiquel](#)
- [Calapooya](#)
- [Calusa](#)
- [Cape Fear Indians](#)
- [Carib](#)
- [Carrier Indians](#)  
Subdivisions: [Babine](#),  
[Hwotsotenne](#).
- [Carrizo](#)
- [Catawba](#)
- [Cathlamet](#)
- [Cathlapotle](#)
- [Cayuse](#)
- [Cazcan](#)
- [Chakchiuma](#)
- [Changuena](#)
- [Charrúa](#)
- [Chasta Costa](#)
- [Chatino](#)
- [Chato](#)
- [Chatot](#)
- [Chawasha](#)
- [Chicomuceltec](#)
- [Chilcotin](#)
- [Chilluckittequaw](#)
- [Chilula](#)
- [Chimakum](#)
- [Chimariko](#)
- [Chinantec](#)
- [Chinarra](#)
- [Chinipa](#)
- [Chinook](#)
- [Chip people](#)
- [Chipewyan](#)
- [Chippewa](#)
- [Chitimacha](#)
- [Chizo](#)
- [Chmeau](#)
- [Chocho](#)
- [Choctaw](#)
- [Chol](#)
- [Cholutec](#)
- [Chontal](#)
- [Chorotega](#)
- [Ch'orti'](#)
- [Chowanoc](#)
- [Chuchures](#)
- [Chuje](#)
- [Chumash](#)
- [Coast Miwok](#)
- [Cochimi](#)
- [Cocomacaque](#)
- [Cocopa](#)
- [Cocora](#)
- [Cocto](#)
- [Coeur d'Alêne](#)
- [Colotlan](#)
- [Colville](#)
- [Comanche](#)
- [Comanito](#)
- [Comecrudo](#)
- [Comox](#)
- [Concho](#)
- [Congaree](#)
- [Conicari](#)
- [Conoy](#)
- [Copalis](#)
- [Coquille](#)
- [Cora](#)
- [Coree](#)
- [Corobisi](#)
- [Costanoan](#)
- [Cowichan](#)
- [Cowlitz](#)
- [Cree](#)
- [Creek](#)

- [Chehalis](#)
- [Chelamela](#)
- [Chelan](#)
- [Chemehuevi](#)
- [Chepenafa](#)
- [Cheraw](#)
- [Cherokee](#)
- [Chetco](#)
- [Cheyenne](#)
- [Chiaha](#)
- [Chiapanec](#)
- [Chickasaw](#)
- [Ciboney](#)
- [Ciguayo](#)
- [Clackamas](#)
- [Clallam](#)
- [Clatskanie](#)
- [Clatsop](#)
- [Clowwewalla](#)
- [Coahuiltec](#)
- [Coapite](#)
- [Coaque](#)
- [Crow Nation](#)
- [Cruzob](#)
- [Cuahcomeca](#)
- [Cuicatec](#)
- [Cuitlatec](#)
- [Cuna](#)
- [Cupeño](#)
- [Cusabo](#)
- [Cuyuteco](#)

### [[edit](#)] D

- [Dakota](#)
- [Desaguadero Indians](#)
- [Didú](#)
- [Dihai-kutchin](#)
- [Dorasque](#)
- [Dule](#)
- [Duy](#)

### [[edit](#)] E

- [Edú](#)
- [Embera \(Northern\)](#)
- [Eno](#)
- [Erviame](#)
- [Eskimo](#)
- [Estrella](#)
- [Euchre Creek](#)

### [[edit](#)] F

- [Fernandeño](#)
- [Flandreau santee sioux](#)
- [Flathead](#)
- [Flecheiros](#)
- [Fox](#)

### [[edit](#)] G

- [Gabrieleño](#) (aka [Tongva](#))
- [Galice](#)
- [Gitksan](#)
- [Gosiute](#)
- [Gotane](#)
- [Grigra](#)
- [Guacata](#)
- [Guacciarima](#)
- [Guachichil](#)
- [Guale](#)
- [Guanexico](#)
- [Guaraní](#)
- [Guasapar](#)
- [Guasave](#)
- [Guatinicamame](#)
- [Guatuso](#)
- [Guaymi](#)
- [Guetar](#)

### [[edit](#)] H

- [Haida](#)
- [Halchidhoma](#)
- [Halyikwamai](#)
- [Han](#)
- [Hare](#)
- [Hasinai](#)
- [Hatteras](#)
- [Havasupai](#)
- [Hidatsa](#)
- [Hitchiti](#)
- [Hoh](#)
- [Honniasant](#)
- [Hoopa](#)
- [Hopi](#)
- [Houma](#)
- [Hualapai](#)
- [Huastec](#)
- [Huave](#)
- [Huchnom](#)
- [Huichol](#)
- [Huite](#)
- [Humptulips](#)
- [Hwotsotenne](#)
- [Hñähñu](#) (Otomi)
- [Huron](#)

### [[edit](#)] I

- [Ibitoupa](#)
- [Icafui](#)
- [Icaiche](#)
- [Illinois Indians](#)
- [Inca](#)
- [Ingalik](#)
- [Iowa Indians](#)
- [Iroquois](#)
- [Itzá](#)
- [Ixcatec](#)
- [Ixil](#)
- [Izalco](#)

### [[edit](#)] J

- [Jacaltec](#)
- [Janambre](#)
- [Jano](#)
- [Jeaga](#)
- [Jemez](#)
- [Jicaque](#)
- [Jicarilla](#)
- [Jocome](#)
- [Jova](#)
- [Juaneño](#)
- [Jumano](#)

### [[edit](#)] K

- [Kadohadacho](#)
- [Kamia](#)
- [Kansa](#)
- [Karankawa](#)
- [Karok](#)
- [Kaskinampo](#)
- [Kato](#)
- [Kaveltchadom](#)
- [Kawaiisu](#)
- [Kekchi](#)
- [Keres](#)
- [Keyauwee](#)
- [Kichai](#)
- [Kickapoo](#)
- [Kiliwi](#)
- [Kiowa Apache](#)
- [Kiowa](#)
- [Kitanemuk](#)
- [Kiwahka](#)
- [Klamath](#)
- [Klickitat](#)
- [Kohani](#)
- [Kohuana](#)
- [Konomihu](#)
- [Kopano](#)
- [Koroa](#)
- [Korubo](#)
- [Koyukon](#)
- [Ku Indians](#)
- [Kuitsh](#)
- [Kukalaya](#)
- [Kus](#)
- [Kutchá-kutchin](#)
- [Kutchin](#)
- [Kutenai](#)
- [Kwaiailk](#)
- [Kwakwaka'wakw](#)
- [Kwalhioqua](#)

### [[edit](#)] L

- [Lacandon](#)
- [Lagunero](#)
- [Lake Miwok](#)
- [Lakota](#)
- [Laku](#)
- [Lassik](#)
- [Latgawa](#)
- [Laymon](#)
- [Lenape](#)
- [Lenca](#)
- [Lillooet](#)
- [Lipan](#)
- [Lohim](#)
- [Lucayo](#)
- [Luckiamute](#)
- [Luiseño](#)
- [Lumbee](#)
- [Lummi](#)
- [Lupaqa](#)

### [[edit](#)] M

- [Muskogee Creek\)](#)
- [Machapunga](#)
- [Macoyahui](#)
- [Maguana](#)
- [Mahican](#)
- [Maidu](#)
- [Makah](#)
- [Maleku](#)
- [Maliseet](#)
- [Mam \(Honduras\)](#)
- [Matlatzinca](#)
- [Matses](#)
- [Mattole](#)
- [Maya](#)
- [Mayaimi](#)
- [Mayeye](#)
- [Mayo](#)
- [Mayoruna](#)
- [Mazahua](#)
- [Mazatec](#)
- [Mobile](#)
- [Mocorito](#)
- [Mocoço](#)
- [Modoc](#)
- [Mohave](#)
- [Mohawk](#)
- [Mohegan](#)
- [Molala](#)
- [Monacan](#)
- [Moneton](#)

- [Mame \(Guatemala\)](#)
- [Manahoac](#)
- [Manche \(tribe\)](#)
- [Mandan](#)
- [Manso](#)
- [Maribichicoa](#)
- [Maricopa](#)
- [Marien](#)
- [Marubo](#)
- [Massachuset](#)
- [Matagalpa](#)
- [Mataponi](#)
- [Matecumbe](#)
- [Matis](#)
- [Meherrin](#)
- [Melchora](#)
- [Methow](#)
- [Metoac](#)
- [Meztitlanec](#)
- [Miami](#)
- [Mical \(tribe\)](#)
- [Micmac](#)
- [Mikasuki](#)
- [Mingo](#)
- [Miskito](#)
- [Missouri](#)
- [Miwok](#)
- [Mixe](#)
- [Mixtec](#)
- [Monimbo](#)
- [Montagnais](#)
- [Montauk](#)
- [Mopán](#)
- [Moratok](#)
- [Mosopelea \(Ofó\)](#)
- [Motozintlec](#)
- [Move](#)
- [Muckleshoot](#)
- [Muite](#)
- [Multnomah](#)
- [Munsee](#)
- [Muoi](#)
- [Murire](#)
- [Musutepes](#)

### [[edit](#)] N

- [Nabesna \(Tanacross\)](#)
- [Nahane](#)
- [Nahuatlato](#)
- [Nahyssan](#)
- [Nakotcho-kutchin](#)
- [Naltunnetunne](#)
- [Nanaimo](#)
- [Nansemond](#)
- [Nanticoke](#)
- [Narragansett](#)
- [Naskapi](#)
- [Nata](#)
- [Natchez](#)
- [Natchitoches](#)
- [Natsit-kutchin](#)
- [Nauset](#)
- [Navajo Nation](#)
- [Nebome](#)
- [Neusiok](#)
- [Neutral Nation](#)
- [Nez Percé](#)
- [Niantic](#)
- [Nicarao](#)
- [Nicoleño](#)
- [Nicoya Indians](#)
- [Nio](#)
- [Nipmuc](#)
- [Niska](#)
- [Nisqually](#)
- [Nomlaki](#)
- [Nongatl](#)
- [Nooksack](#)
- [Nootka](#)
- [Noquet](#)
- [Nottaway](#)

### [[edit](#)] O

- [Ocale](#)
- [Occaneechi](#)
- [Oconee](#)
- [Ocoroni](#)
- [Ojibwa](#)
- [Okanagan](#)
- [Okelousa](#)
- [Okmulgee](#)
- [Okwanuchu](#)
- [Olive](#)
- [Omaha](#)
- [Onatheaqua](#)
- [Oneida](#)
- [Opelousa](#)
- [Orotiña](#)
- [Osage](#)
- [Oto or Otoe](#)
- [Otomí \(see \[Hñähñu\]\(#\)\)](#)
- [Outagami](#)
- [Ozette Indians](#)
- [Ópata](#)

### [[edit](#)] P

- [Paiute \(Northern\)](#)
- [Paiute](#)
- [Palouse](#)
- [Pame](#)
- [Pamlico Indians](#)
- [Pamunkey](#)
- [Panamaka](#)
- [Panamint](#)
- [Payaya](#)
- [Pecos](#)
- [Pedee](#)
- [Pend d'Oreille](#)
- [Pennacook](#)
- [Penobscot](#)
- [Penomeño](#)
- [Pensacola](#)
- [Pochutla](#)
- [Pocomtuc](#)
- [Pocosi](#)
- [Pohoy](#)
- [Pokomam](#)
- [Pokonchi](#)
- [Pomo](#)
- [Ponca](#)

- [Pantasma](#)
- [Papago](#)
- [Paparo](#)
- [Pascagoula](#)
- [Passamaquoddy](#)
- [Patiri](#)
- [Patwin](#)
- [Pawnee](#)
- [Pawokti](#)
- [Paya](#)

- [Pentlatch](#)
- [Pequot](#)
- [Pericu](#)
- [Piankashaw](#)
- [Piato](#)
- [Pima Bajo](#)
- [Pima](#)
- [Pipil](#)
- [Piro](#)
- [Pisone](#)

- [Popoloca](#)
- [Popoluca](#)
- [Potano](#)
- [Potawatomi](#)
- [Potlapigua](#)
- [Powhatan](#)
- [Prinzo](#)
- [Pshwanwapam](#)
- [Puinave/Puinare](#)
- [Puyallup](#)

### [[edit](#)] Q

- [Quahatika](#)
- [Quapaw](#)
- [Quata](#)
- [Quepo](#)
- [Quiatso](#)
- [Quiché](#)
- [Quileute](#)
- [Quinault](#)
- [Quinipissa](#)
- [Quinnipiac](#) (Quiripi)

### [[edit](#)] R

- [Rama](#)
- [Rappahanock](#)

### [[edit](#)] S

- [Sahehwamish](#)
- [Salinan](#)
- [Saluda](#)
- [Samish](#)
- [Sanpoil](#)
- [Santee](#)
- [Santiam](#)
- [Saponi](#)
- [Sarsi](#)
- [Satsop](#)
- [Saturiwa](#)
- [Saura](#)
- [Sayultec](#)
- [Sekani](#)
- [Semiahmoo](#)
- [Seminole](#)
- [Senijextee](#)
- [Seri](#)
- [Serrano](#)
- [Sewee](#)
- [Shakori](#)
- [Shasta](#)
- [Shawnee](#)
- [Shipibo](#)
- [Shoshone](#)
- [Shoshoni \(Northern\)](#)
- [Shoshoni \(Western\)](#)
- [Shuswap](#)
- [Sierra Miwok](#)
- [Sigua](#)
- [Siletz \(tribe\)](#)
- [Sinkaietk](#)
- [Sinkakaius](#)
- [Sinkiuse](#)
- [Sinkyone](#)
- [Sioux](#)
- [Sishiatl](#)
- [Sissipahaw](#)
- [Siuslaw](#)
- [Skagit](#)
- [Skilloot](#)
- [Skin](#)
- [Snohomish](#)
- [Snoqualmie](#)
- [Sobaipuri](#)
- [Songish](#)
- [Spokan](#)
- [Squawmish](#)
- [Squaxin](#)
- [Stalo](#)
- [Stuwiamuk](#)
- [Subinha](#)
- [Subtiaba](#)
- [Suerre](#)
- [Sugeree](#)
- [Suisunes](#)
- [Suma](#)
- [Sumo-Sirpe](#)
- [Sumo](#)
- [Suquamish](#)
- [Surreque](#)
- [Susquehanna](#)
- [Sutai](#)
- [Swallah](#)
- [Swinommish](#)

### [[edit](#)] T

- [Tacatacuru](#)
- [Teluski](#)
- [Tolimeca](#)

- [Taensa](#)
- [Tagish](#)
- [Tahltan](#)
- [Tahue](#)
- [Taidnapam](#)
- [Takelma](#)
- [Takkuth-kutchin](#)
- [Talamanca](#)
- [Tamathli](#)
- [Tamaulipeca](#)
- [Tamazulteca](#)
- [Tanaina](#)
- [Tanana](#)
- [Tangipahoa](#)
- [Tano](#)
- [Tapachultec](#)
- [Taposa](#)
- [Tarahumara](#)
- [Tarasco](#)
- [Tatlit-kutchin](#)
- [Tawahka](#)
- [Tawakoni](#)
- [Tawasa](#)
- [Tawehash](#)
- [Tawira](#)
- [Teco-Tecoxquin](#)
- [Tecual](#)
- [Tehuaco](#)
- [Temori](#)
- [Tenino](#)
- [Tennuth-Kutchin](#)
- [Tepahue](#)
- [Tepanec](#)
- [Tepecano](#)
- [Tepehua](#)
- [Tepehuane](#)
- [Tepuzteca](#)
- [Tequesta](#)
- [Tequistlatec](#)
- [Térraba](#)
- [Teshbi](#)
- [Teul](#)
- [Tewa](#)
- [Thompson Indians \(Ntlakyapamuk\)](#)
- [Ticuna](#)
- [Tillamook Indians](#)
- [Timucua](#)
- [Tiou](#)
- [Tiwa](#)
- [Tlapanec](#)
- [Tlaxcaltec](#)
- [Tlingit](#)
- [Toboso](#)
- [Tocobaga](#)
- [Tojar](#)
- [Tojolabal](#)
- [Tolowa](#)
- [Tongva](#)
- [Tonkawa](#)
- [Toquegua](#)
- [Totonac](#)
- [Totorame](#)
- [Tranjik-kutchin](#)
- [Trique](#)
- [Tsetsaut](#)
- [Tsimshian](#)
- [Tubar](#)
- [Tübatulabal](#)
- [Tucurrique](#)
- [Tungla](#)
- [Tunica](#)
- [Tupi](#)
- [Turucaca](#)
- [Tuscarora](#)
- [Tuskegee](#)
- [Tutchone](#)
- [Tutelo](#)
- [Tutera](#)
- [Tututni](#)
- [Twana](#)
- [Tyigh](#)
- [Tzeltal](#)
- [Tzotzil](#)
- [Tzutuhil](#)

[\[edit\]](#) U

- [Uchiti](#)
- [Ulua](#)
- [Umatilla](#)
- [Umpqua](#)
- [Unami](#)
- [Ure](#)
- [Uren](#)
- [Urraca](#)
- [Uspanteca](#)
- [Ute](#)

[\[edit\]](#) V

- [Vacoregue](#)
- [Valley Miwok](#)
- [Vanyume](#)
- [Varohío](#)
- [Viceita](#)
- [Vigitega](#)
- [Voto](#)
- [Vunta-kutchin](#)

[\[edit\]](#) W

- [Waccamaw](#)
- [Waco](#)
- [Wai-lakki](#)
- [Waicuri](#)
- [Walla Walla](#)
- [Wampanoag](#)
- [Washa](#)
- [Washo](#)
- [Wateree](#)
- [Watlala](#)
- [Waxhaw](#)
- [Wea](#)
- [Wichita](#)
- [Wind River Shoshoni](#)
- [Winnebago](#)
- [Wintu](#)
- [Winyaw](#)
- [Wishram](#)

- [Wanapam](#)
- [Wappani](#)
- [Wappo](#)
- [Wasco](#)
- [Weapemeoc](#)
- [Wenatchee](#)
- [Wenrotron](#)
- [Westo](#)
- [Whilkut](#)
- [Wishtenatin](#)
- [Wiyot](#)
- [Woccon](#)
- [Wynoochee](#)

[[edit](#)] X

- [Xilotlantzinca](#)
- [Xinca](#)
- [Xingu](#)
- [Xixime](#)

[[edit](#)] Y

- [Yadkin](#)
- [Yagua](#)
- [Yahi](#)
- [Yahuskin](#)
- [Yakima](#)
- [Yamasee](#)
- [Yamel](#)
- [Yana](#)
- [Yanomami](#)
- [Yaqui](#)
- [Yaquina](#)
- [Yasika](#)
- [Yatasi](#)
- [Yavapai](#)
- [Yazoo](#)
- [Yecora](#)
- [Yellowknife Indians](#)
- [Yujuane](#)
- [Yokuts](#)
- [Yoncalla](#)
- [Yosco](#)
- [Yscani](#)
- [Yuchi](#)
- [Yufera](#)
- [Yui](#)
- [Yuki \(Coast\)](#)
- [Yuki](#)
- [Yuma](#)
- [Yurok](#)
- [Yustaga](#)

[[edit](#)] Z

- [Zacateco](#)
- [Zapotec](#)
- [Zoe](#)
- [Zoque](#)
- [Zuaque](#)
- [Zuñi](#)

## Activity 6

### Income and Poverty

**\$33,132** is the median income of households where the householder reported they were American Indian and Alaska native and no other race. The median income is based on a three-year average (2002–2004).

### Current poverty rate and guidelines

The official poverty rate in the U.S. has increased for four consecutive years, from a 26-year low of 11.3% in [2000](#) to 12.7% in [2004](#). This means that 37.0 million people were below the official poverty thresholds in 2004. This is 5.4 million more than in 2000. The poverty rate for children under 18 years old increased from 16.2% to 17.8% over that period. The current poverty rate is measured according to the 2006 [HHS](#) Poverty Guidelines<sup>[9]</sup> which are illustrated in the table below.

Persons in Family Unit	48 Contiguous States and D.C.	Alaska	Hawaii
1	\$9,800	\$12,250	\$11,270
2	\$13,200	\$16,500	\$15,180
3	\$16,600	\$20,000	\$19,090
4	\$20,000	\$25,000	\$23,000
5	\$23,400	\$29,250	\$26,910
For each additional person, add	\$3,400	\$4,250	\$3,910

1- Compare and contrast the median income for the Native American population and the rest of the country. Explain your answer.

### **Veterans**

**185,000**

The number of American Indian and Alaska native veterans of the U.S. armed forces.

- 1- What is the percentage of male and female American Indians who go are veterans and are in Iraq right now?
- 2- How many more American Indian and Alaska natives to the veterans list after the Iraq war?

## Language Arts

- 1- Write a paragraph offering an explanation for the low number of American Indian speaking their native language. (Why not speak? Where and/or when does it get lost? Who is more inclined to speak it?)
- 2- **3-2-1** - Use this technique to ensure understanding of the text. At the end of the reading, pass out index cards and on write down three important terms or ideas to remember, two ideas or facts they would like to know more about, and one concept, process or skill they think they have mastered. This activity can help make a transition to the next task and lets you check in quickly on their progress.
- 2- Use the "PAST GENOCIDES COMMITTED AGAINST NATIVE AMERICANS" article for this activity. Have students write an essay talking about the causes and effects of what the article calls "genocides".
- 3- Use the reading to do the
- 3- Write an essay explaining the genocides from the point of view of the American Indian and/or the colonizers.
- 4- Some American Indians were killed by warfare, others by transmission of infectious disease such as smallpox, and others committed suicide because they did not want to be slaves. Explain why the deaths of millions of American Indians who died in such different ways should be counted as part of the genocide.

## Social Studies

- 1- Write an essay about the consequences or the impact of a tribal language being extinct, wiped out.
- 2- Compare other genocides committed against humanity to the American Indian genocide.
- 3- Write a cause and effect essay about the non-disclosure of information at any level, personal, local, national, international.

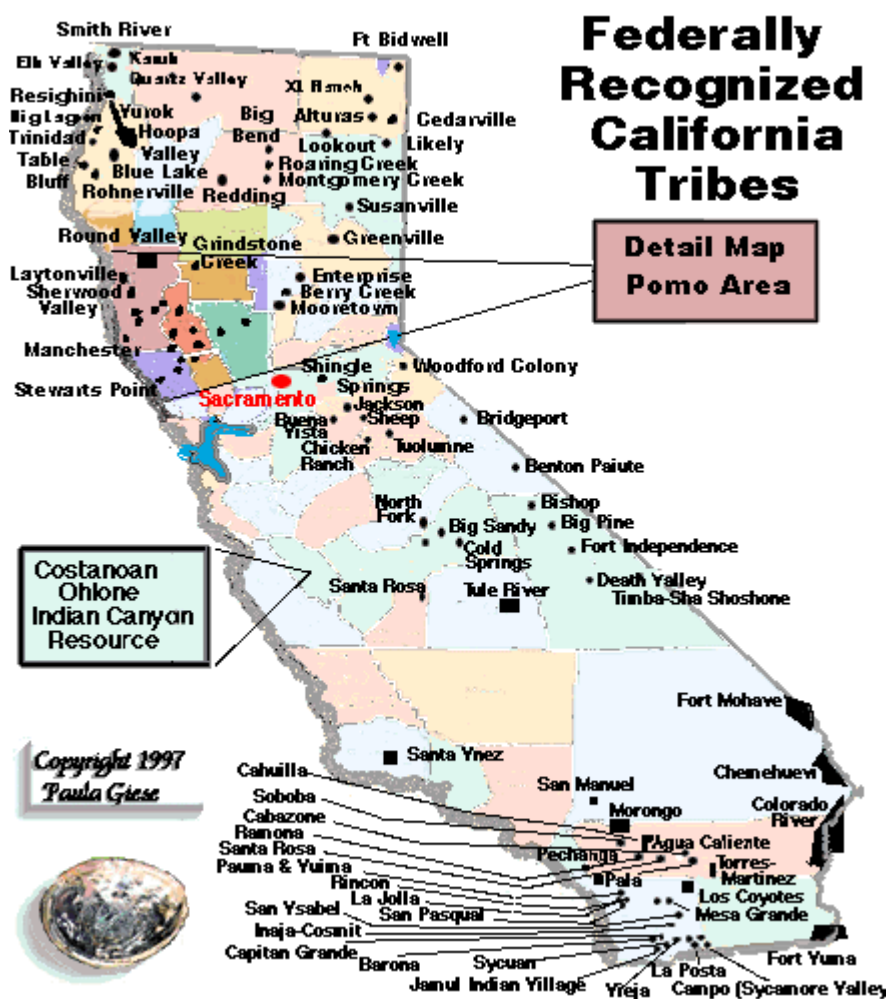
### **153,500**

The number of American Indians and Alaska natives in Los Angeles County, Calif., as of July 1, 2004. Los Angeles led all the nation's counties in the number of people of this racial category. Maricopa County, Ariz., added about 3,000

people of this group between July 1, 2003, and July 1, 2004. Maricopa led all the nation's counties in this category.

Answer the following questions using the map as a reference. (**Inference**)

- 1-By looking at the map, do the Native population who reside in the Los Angeles are, live in a reservation? Explain your answer.
- 2-By looking at the reservations, does the number of the Native population seem proportional or disproportional?
- 3-Where is most concentration of American Indians?



**Health Insurance**

29% is the percentage of people who reported they were American Indian and Alaska native and no other race who lacked health insurance coverage, based on a three-year average.

**1-** Do a survey at the school to find out if the US census information if the health care matches the reality of your school. After the survey, compare and contrast the information gathered by the survey and the information given by the US government. Write a report and support your conclusion with data. Students will decide which way is the best to collect the data. Students should work in groups of 3-4 people.

## Lesson 4

### How do you define yourself?

#### Objectives:

- By the end of the lessons students will be able to:
- Understand how to gather data for survey
  - Understand how to display the data gathered
  - Understand how to report the data
  - How to use the data to take action

6.2.1.1	Formulate questions to collect data in contextual situations.	Identify area of interest to be explored and needed/wanted information Determine your audience Craft clearly worded question in order to efficiently collect data (choices, rankings, ranges, etc)
6.2.1.3	Interpret simple displays of data including double bar graphs, tally charts, frequency tables, circle graphs, and line graphs.	Access information from graphs using the title, axes labels, intervals, key, percent, tally marks, and/or table headings Given a value or data point, being able to identify the corresponding information from the graph (in the year 1996, how many flat screen TV's were purchased)
6.2.1.4	Answer questions based on simple displays of data including double bar graphs, tally charts, frequency tables, circle graphs, and line graphs.	Access information from graphs using the title, axes labels, intervals, key, percent, tally marks, and/or table headings Given a value or data point, identify the corresponding information from the graph (in the year 1996, how many flat screen TV's were purchased) Take information from the graph and make an inference or interpretation (future data, data point not specifically listed, combination or comparison of more than one piece of data)
6.3.3.2	Use variables in contextual situations.	Find important information in problem context or drawing Determine which of the pieces of information in the problem are being represented by variables Determine the relationship between the variables and which operation can be used. Use expression and equation notation and variables correctly Use number to check the accuracy of the equation or expression

#### Materials

- Pencil
- Paper
- Copies – NONA Award, Preference for racial or ethnic Terminology (per group or student)
- Markers of different colors
- Graphing paper
- Crayons
- Glue, scissors (optional)
- Calculator (optional)

### Pre-planning:

- Read lesson prior to teaching it
- Gather the necessary material(s) for each activity before hand
- Group students (4-5)
- Make copies – maps, formulas,

**Thinking Strategies:** brainstorming, follow steps of problem solving, considers new and different approaches to ideas, issues, or problems, take risks, accept challenges, compare and contrast, draw logical conclusion based on facts, analyzes and evaluates and synthesizes information, and communicates ideas effectively.

**How the Lesson is Differentiated for Gifted Students:** Students will use critical thinking strategies to solve problems, work in open-ended activities, use inductive and deductive reasoning, and will learn different reasoning processes by observing, listening, and interacting with other students.

## SHELTERED INSTRUCTION OBSERVATION PROTOCOL FEATURES

Select the SIOP Features that are utilized to shelter instruction for ELLs.

(Adapted from Echevarria, Vogt, & Short, *Making Content Comprehensible for English Learners*. Pg. 212.)

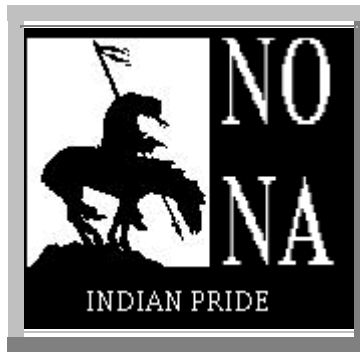
• Preparation	• Scaffolding	• Grouping Options
Adaptation of Content	Modeling	Whole
Links to Background	Guided Practice	Small
Links to Past Learning	Independent Practice	Partners
Strategies Incorporated	Comprehensible Input	Independent
• Integration of Processes	• Application	• Assessment
Reading	Hands-on	Individual
Writing	Meaningful	Group
Speaking	Linked to Objectives	Written
Listening	Promotes Engagement	Oral

### Activities/Procedures

**Focusing Question:** Why is it important to address people with the correct terminology? (For example – African-American vs. black, Hispanic vs. Latino, etc..n..... word vs. black)

**Activity 1-** Brainstorming session – Teacher will pose the focusing question and will allow time for students to discuss their ideas as a whole class or in group and then report to the rest of the class.

# NONA Award



## NONA - No Native American

This award is presented to the WebMasters of sites with the foresight and pride not to use the government's term for quiet genocide. Years ago certain members of the United States government and in particular the Bureau of Indian Affairs set upon a course of silent but sure genocide against the indigenous peoples of America.

What began with the British and General Amherst's "inoculation ... of this execrable race" by issuing blankets used by smallpox victims to Indians, eventually turned into a benevolent program of extinction. Even now, BIA has set upon a campaign of eventual destruction of the Tribes by manipulating the policies governing the issuance of Certificate Degree of Indian Blood cards. The Inter-Tribal Council of Oklahoma has demanded in a joint letter that BIA issue written guidelines in an attempt to bring this cancer to the forefront.

Even membership in the "Native American Church" is restricted by federal law to those of "one quarter degree or greater Indian blood." This is, by definition, a violation of the First Amendment to the Constitution.

We (the American Indians) are the only ethnic or racial group that begins their name with "American." While we love America, we know we must change America's heart. This is not just a matter of "pride" like the diatribes of the 60's and 70's, this is a matter of survival. Did the government give you your name? Did BIA choose your color? Were you created by God or bureaucracy? No one tells me who I am. I was created by God as I am. He saw fit to make me a mixture of White and Red, He must indeed have had a reason to do so. No man, no political body, will ever make me in their own image.

Those who receive this award have made a bold stand against tyranny. They stand, sometimes alone, for Freedom and Justice. They will never forget Wounded Knee.

*Jim Hickinbotham (Rabid Wolf), Oklahoma Choctaw, July 1999*

## AP Close Reading Activity

Students will be reading a piece of literature that will be the anchor of this lesson and unit.

Directions:

- 1) The reading has been numbered for easy reference by the teacher and student. Have the students follow your number sequence and allow for individual students to read the text aloud for the class. As the students are reading the text, have students implement the AP reading strategy **Close Reading**. Each student is to dialogue with the text; to agree, disagree, question, and validate the author's text. It is essential that as an academician, students need to communicate their thoughts with the author of the text, and not passively accept what the student is reading.
- 2) Throughout the reading, refer to one of the numbered paragraphs and have the reader of that paragraph choose one of the following:
  - a) create a question on the paragraph,
  - b) ask for clarification on a certain subject/topic/concept...
  - c) go to the board and illustrate a picture of their interpretation on the meaning of the paragraph
  - d) verbally link what was in the paragraph to a previous paragraph or to something that is personal to the student.
  - e) identify an unknown vocabulary word in the paragraph and seek out its meaning.
  - f) summarize the paragraph in their own words

The teacher should provide feedback as well as engage students in class discussion

## AP Close Reading Activity

### DEFINING THE SKILL

Unfortunately, too many students are unreflective when they read. For them, reading is a simple and straightforward process. The meaning of a text lies only within the author's words. Reflective readers, on the other hand, experience an interaction between themselves and what they read. Their reading is a dynamic process wherein they doubt, question, respond, and often reread and ponder before they move on.

Transforming students from unreflective to reflective readers is an ongoing task. The following strategies are possible methods for teachers to help their students become more reflective readers. This chapter divides these tactics into two types: *metacognitive strategies* and *discussion methods*.

### METACOGNITIVE STRATEGIES

#### THINKING NOTES

This is a simple procedure to help students become more involved in their reading and to give them a way of recording their thoughts about the text. The strategy consists of a notation system that records students' reactions to what they read. Since marking in a book is an issue at times, strips of paper or sticky notes can be labeled with the marking systems and placed on the page. (Note: It is sometimes advisable for students to add page numbers to their thinking notes.)

*The AP Vertical Teams Guide for English*

*These are some common thinking notes that students might use:*

- Yes**     agree
- X**       disagree
- +**       New
- !**       WOW
- ?**       I wonder
- ??**      Don't understand
- \***       Important

**Activity 2**

- 1- Teacher will read with students modeling the AP Close Reading model to ensure students understanding of the feelings and ideas expressed in the NONA Award article.
- 2- Teacher will have a class discussion to allow students to clarify any questions they might have.
- 3- Give students the "Preference for Racial or Ethnic Terminology" table and ask students to take a look at it and analyze the percentage given by the government of racial preferences.

Preference for Racial or Ethnic Terminology

Preferred term <sup>1</sup>	Percent
<b>Hispanic</b>	
Hispanic	57.88%
Of Spanish origin	12.34
Latino	11.74
Some other term	7.85
No preference	10.18
<b>White</b>	
White	61.66%
Caucasian	16.53
European American	2.35
Some other term	1.97
Anglo	.96
No preference	16.53

<b>Black</b>	
Black	44.15%
African American	28.07
Afro-American	12.12
Negro	3.28
Some other term	2.19
Colored	1.09
No preference	9.11
<b>American Indian</b>	
American Indian	49.76%
Native American	37.35
Some other term	3.66
Alaska Native	3.51
No preference	5.72

- 4- Ask students to take a guess of what "some other term" means as with regards to the American Indian. For the Hispanics, it could mean Brazilian because Brazilians have not been colonized by the Spaniards.
- 5- If the students do not come up with a line on the survey for "Indian" suggest that.
- 6- Students have to create a survey form in groups and then share with the rest of the class and make one for the entire class.
- 7- Students will now create a survey for the entire student body to respond. The survey must be inclusive and not contain a line for "some other term" like the government survey has.
- 8- Divide students to visit different classes and make sure that students request from their peers not to fill out the survey twice or else it could compromise the validity of the survey. Analyze the results of the students' survey and compare with the table from the government.
- 9- Students will report their finding by illustrating the data through graphs, pictures, and maybe even do presentations, power points, etc...to bring awareness about racial preferences.

OBS: 5 Stages of Critical Praxis with Youth could be used here for students to take action. Students should be encouraged to do so. It is a great opportunity for them to express themselves.

Preference for Racial or Ethnic Terminology

Preferred term <sup>1</sup>	Percent
<b>Hispanic</b>	
Hispanic	57.88%
Of Spanish origin	12.34
Latino	11.74
Some other term	7.85
No preference	10.18
<b>White</b>	
White	61.66%
Caucasian	16.53
European American	2.35
Some other term	1.97
Anglo	.96
No preference	16.53
<b>Black</b>	
Black	44.15%
African American	28.07
Afro-American	12.12
Negro	3.28
Some other term	2.19
Colored	1.09
No preference	9.11
<b>American Indian</b>	
American Indian	49.76%
Native American	37.35
Some other term	3.66
Alaska Native	3.51
No preference	5.72

### Activity 3

#### The Meaning of Names

What do our names mean? Naming a child is very important for most cultures and parents. Some people are named after a favorite person in their family, or to honor an important person in their family, a descriptive of what people do, favorite movie star, etc. When some Jewish people immigrated to Brazil in hopes that they were no longer persecuted, they took names that other Jewish people could identify them but it wouldn't raise any suspicion to any other person of their religion affiliation. They took the last names of trees and animals (Pereira – pera (pear), Bezerra (little lamb)).

Brainstorm the following question with the students. Talk about your name and your family name and allow time for students to talk about it.

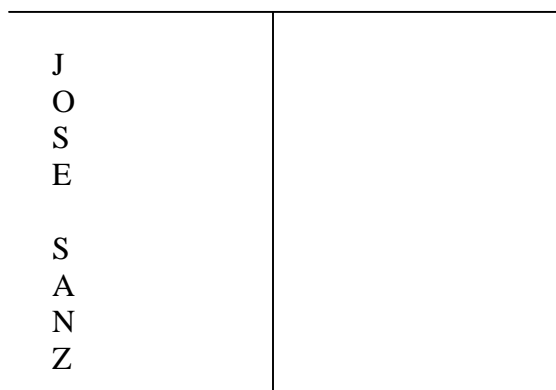
**1- What is the story about your name? How about your family's name?**

2- After a brief discussion about their names, ask if they know how they would draw their name. How do people draw their names if there is not a symbol attached to it? For example, if your name is Rose, you could draw a Rose. If it is Apple, then draw an apple. etc.. How about if your name is Rene or Norma? How would you draw it?

<http://www.missioncollege.org/depts/esl/StudProj/Names.html#Kwong>

#### Activity – Name Design

1-Ask students to write their names in a vertical line on "T" graph.



2- The next step is to assign numbers for each letter of their name on the other side of the "T" chart. That becomes the X or Y

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>
A	B	C	D	E	F	G	H	I
J	K	L	M	N	O	P	Q	R
S	T	U	V	W	X	Y	Z	

3-The third step is to get the number for the X or Y axis by reversing the numbers.

Letter	Y	X (y numbers in reverse)
R	9	3
A	1	5
C	3	8
H	8	3
E	5	1
L	3	9

4-Now graph the numbers. For example, 9 on the Y and 3 on the X. Make sure that you number which one is your first, 2<sup>nd</sup>, 3<sup>rd</sup>, etc.. It is very important to know the chronological order of the graphing for the next step.

5-Connect your lines. Go from 1 to 2, then 2 to 3, and so on. Make sure that you connect the last number with the first one to close the shape.

6- Color it as you wish. It looks really cool when you use lots of colors.

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>
A	B	C	D	E	F	G	H	I
J	K	L	M	N	O	P	Q	R
S	T	U	V	W	X	Y	Z	

Letter	Y	X (y numbers in reverse)
R	9	3
A	1	5
C	3	8
H	8	3
E	5	1
L	3	9

Letter	Y	X (y numbers in reverse)
S	1	8
A	1	5
N	5	8
C	3	3
H	8	5
E	5	1
Z	8	1

