

Graphing Native American Populations

Fast Facts

Curriculum Area: Mathematics
Grade Level: Grade 4
Suggested Duration: 60 minutes

Stage 1 Desired Results

Established Goals

Montana Content Standards for Mathematics

Measurement and Data (3.MD.3) Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories, within cultural contexts including those of Montana American Indians. Solve one- and two-step "how many more" and "how many less" problems using information presented in scaled bar graphs. For example, draw a bar graph in which each square in the bar graph might represent five pets.

Measurement and Data (4.MD.2) Use the four operations to solve word problems within cultural contexts, including those of Montana American Indians, involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals and problems that require expressing measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale.

Number and Operations in Base Ten (4.NBT.4) Fluently add and subtract multi-digit whole numbers using the standard algorithm.

Indian Education for All Essential Understandings Regarding Montana Indians

Essential Understanding 1 There is great diversity among the twelve sovereign tribes of Montana in their languages, cultures, histories, and governments. Each tribe has a distinct and unique cultural heritage that contributes to modern Montana.

Essential Understanding 4 Though there have been tribal peoples living successfully on the North American lands for millennia, reservations are lands that have been reserved by or for tribes for their exclusive use as permanent homelands. Some were created through treaties, while others were created through statutes and executive orders. The principle that land should be acquired from tribes only through their consent with treaties involved three assumptions:

- I. Both parties to treaties were sovereign powers.



- II. Indian tribes had some form of transferable title to the land.
- III. Acquisition of Indian lands was solely a government matter not to be left to individual colonists or states.

Essential Understanding 5 There were many federal policies put into place throughout American history that have affected Indian people and continue to shape who they are today. Many of these policies conflicted with one another. Much of Indian history can be related through several major federal policy periods:

- Colonization/Colonial Period 1492 - 1800s
- Treaty-Making and Removal Period 1778 - 1871
- Reservation Period - Allotment and Assimilation 1887 - 1934
- Tribal Reorganization Period 1934 - 1953
- Termination and Relocation Period 1953 - 1968
- Self-Determination Period 1975 – Present

Student Background Knowledge

- How to make a double bar graph using appropriate labels, key, scale, and title. (3.MD.3)
- The locations of the Montana reservations.

Understandings

- The number of enrolled members of each tribe living on the reservation compared to those living off the reservation.

Essential Questions

- How many total enrolled members live on the reservations?
- How many total enrolled members live off the reservations?
- Do more enrolled members live on the reservations or off the reservations? How many more?
- What is the total Native American population in the state of Montana given the information you have?

Students will be able to...

- design a graph using appropriate labels, key, scale, and title.
- compare populations of the reservations for those living on, off, or combined.

Students will know...

- the populations of the Blackfeet, Crow, Flathead, Fort Belknap, and Northern Cheyenne Reservations.
- how to correctly input data into a graph using appropriate labels, key, scale, and title.

Stage 2 Assessment Evidence

Performance Tasks

1. Finished product will be a complete double bar graph representing five reservations and their enrolled member population that live on the reservation and the number of enrolled members living off the reservations.
2. On the back of the graph, students will answer the Essential Questions from above. Refer to Reservation Populations (attached at the end of this lesson) for answers.

Stage 3 Learning Plan

Learning Activities

Download the Montana Office of Public Instruction Indian Education Division publication *Montana Indians Their History and Location*. Share with the students on a projector or make copies for groups to share as you read through parts it. Stop periodically and check for understanding by asking questions about the population, history, land amount, or other interesting facts of a tribe.

Upon completing the reading, discuss populations on and off the reservation and talk about why they would leave the reservation. This information is in *Montana Indians Their History and Location* under the section titled "Montana Urban Indians."(p.86-88)

Handout the graph paper and a copy of reservation populations (below) to each student. Explain to the students they are going to design a double bar graph comparing those living on and those living off the reservations. Let them know they are going to need to use two coloring tools, one for each group.

Have students discuss in pairs or as a whole group how they can represent large population values in terms of a smaller unit to fit on the double bar graph. Have students discuss what scale would be appropriate.

Model what a double bar graph looks like using a simple example. For example, the number of boys and girls in two fourth grade classes.

The finished product will be a double bar graph representing the seven reservations and their enrolled member population that live on the reservation and the number of enrolled members living off the reservations. Students should include a scale.

On the back of the graph, have students answer the Essential Questions from above. Refer to Reservation Populations for answers.

Materials/Resources Needed

[Montana Indians Their History and Location](#), Helena, MT: Montana Office of Public Instruction, 2016.

Copies of reservation populations (below) for each student.

Graph paper

Coloring tools

Rulers

Pencils

Montana Content Standards and IEFA Essential Understandings Regarding Montana Indians

[Montana Content Standards for Mathematics – Grade 3](#)

[Montana Content Standards for Mathematics – Grade 4](#)

[Essential Understandings Regarding Montana Indians](#)

Reservation Populations

Blackfeet Reservation

Enrolled members living on or near the Blackfeet Reservation	9,585
Enrolled members living off the Blackfeet Reservation	7,665
Total number of enrolled Blackfeet tribal members	17,250

Crow Reservation

Tribal members living on or near the Crow Reservation	10,000
Tribal members living off the Crow Reservation	5,000
Total number of Crow tribal members	15,000

Flathead Reservation

Enrolled members living on or near the Flathead Reservation	5,000
Enrolled members living off the Flathead Reservation	2,920
Total number of enrolled Flathead tribal members	7,920

Fort Belknap Reservation

Enrolled members living on or near the Fort Belknap Reservation	4,546
Enrolled members living off the Fort Belknap Reservation	2,826
Total number of enrolled Fort Belknap tribal members	7,372

Northern Cheyenne Reservation

Enrolled members living on or near the N. Cheyenne Reservation	4,939
Enrolled members living off the Northern Cheyenne Reservation	5,901
Total number of enrolled Northern Cheyenne tribal members	10,840