

THE PLACE OF MY STATE

TEACHER VERSION

Subject Level:
Elementary School Math

Grade Level:
4

Approx. Time Required:
60 minutes

Learning Objectives:

- Students will be able to round the population numbers of different states to different place values.
- Student will be able to compare data about their state with that of nearby states.

United States® Census Bureau

Classrooms Powered by Census Data

STATISTICS IN SCHOOLS

Activity Description

Students will use a U.S. Census Bureau data tool called State Facts for Students to analyze the population data of their state. They will write the data in several forms, round the numbers, and then compare their state's population with that of a nearby state.

Suggested Grade Level:
4

Approximate Time Required:
60 minutes

Learning Objectives:
- Students will be able to round the population numbers of different states to different place values.
- Student will be able to compare data about their state with that of nearby states.

Topics:
- Population

Skills Taught:
- Comparing and contrasting
- Understanding numerical operations

Materials Required

- The student version of this activity, 3 pages
- Teacher computer with Internet access and a projector to display web sites

A computer with Internet access for each student is optional.

This activity uses the following data tool:

- State Facts for Students
  www.census.gov/programs-surveys/sis/resources/data-tools/state-facts.html

For more information to help you introduce your students to the Census Bureau, read "*Census Bureau 101 for Students.*"

Standards Addressed

See charts below. For more information, read "*Overview of Education Standards and Guidelines Addressed in Statistics in Schools Activities.*"

Common Core State Standards for Mathematics

Standard	Domain	Cluster
CCSS.MATH.CONTENT.4.NBT.A.2 Read and write multi-digit whole numbers using base-ten numerals, number names, and expanded form. Compare two multi-digit numbers based on meanings of the digits in each place, using >, =, and < symbols to record the results of comparisons.	4 NBT – Number & Operations in Base Ten	Generalize place value understanding for multi-digit whole numbers.
CCSS.MATH.CONTENT.4.NBT.A.3 Use place value understanding to round multi-digit whole numbers to any place.	4 NBT – Number & Operations in Base Ten	Generalize place value understanding for multi-digit whole numbers.

Common Core State Standards for Mathematical Practice

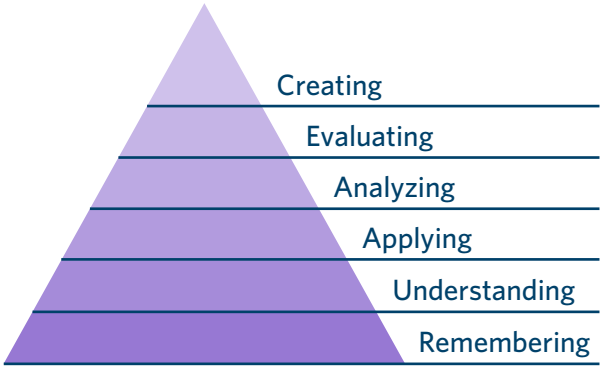
Standard
CCSS.MATH.PRACTICE.MP2. Reason abstractly and quantitatively. Students will find the relationships between numbers and then compare the numbers accurately.
CCSS.MATH.PRACTICE.MP6. Attend to precision. Students will work with lists of large numbers, carefully rewriting, rounding, and comparing them.

National Council of Teachers of Mathematics' Principles and Standards for School Mathematics

Content Standard	Students should be able to:	Expectation for Grade Band
Number and Operations	Understand numbers, ways of representing numbers, relationships among numbers, and number systems.	Understand the place-value structure of the base-ten number system and be able to represent and compare whole numbers and decimals.

Bloom's Taxonomy

Students will ***apply*** their knowledge of place value and of the base-ten number system to write numbers in a variety of ways, round numbers to specified place values, and compare numbers.



Teacher Notes

Before the Activity

This activity assumes that students in the class are between the ages of 8 and 12.

Students must understand the following key terms:

- **Data** – facts usually represented by numbers
- **Population** – the number of people living in an area
- **Place value** – the value of a digit depending on its position within a number
- **Base-ten number system** – our everyday number system (also known as the decimal system) that includes 10 digits to show the numbers 0 through 9 and uses a decimal point to separate whole numbers from decimal fractions
- **Inequality statement** – a statement that shows how two numbers compare, with one being more than (>) or less than (<) the other
- **Rounding** – an action that makes a number simpler but keeps its value close to what it was, resulting in a number that is slightly less accurate but easier to use (e.g., rounding 73 to 70 because it's the closest interval of 10 compared with 80)
- **Standard form** – the usual way of writing numbers (e.g., 876)
- **Expanded form** – a way to write numbers by adding the value of each digit (e.g., 800 + 70 + 6 = 876)
- **Word form** – a way to write numbers using words (e.g., eight hundred seventy-six)

Students should have the following skills:

- Writing a number in different ways (e.g., standard, expanded, and word forms)
- Rounding to a specified place value

Teachers will model writing inequality statements.

In classrooms where students do not have access to computers, teachers may choose to print the data from State Facts for Students (for their state and a nearby state) so that students can follow along more easily.

During the Activity

Teachers will navigate to State Facts for Students (*www.census.gov/programs-surveys/sis/resources/data-tools/state-facts.html*) on their computer, projecting the web site on the screen, and click on the state where students live. (If students live in different states, teachers should pick the state where most students live.) In classrooms where students have access to computers, teachers will walk students through retrieving the data.

Teachers will complete the activity with students as a class, modeling how to answer each question. Teachers should ask students as they work:

- How did you round to the nearest [one/ten/hundred]?
- How do you know that your answer is correct?

Extension Ideas

- Teachers could ask students to write inequality statements for multiple states (e.g., have students compare three or more states simultaneously to write inequality statements such as $a < c < b$).
- Teachers could direct students to investigate this question: Do bigger states have more people than smaller states?
- Teachers could ask students to compare and contrast other information in State Facts for Students (e.g., the number of 8-year-olds in their state with the number of 8-year-olds in another state).
- Teachers could provide opportunities for students to practice comparing decimals by having them look at the "How People Get to Work" category in State Facts for Students and compare 2010 and 2023 data.
- Teachers could have students create maps of their state. Students could write the population information they found in the activity next to their state, mark the capital of the state, and mark the location of their home or town. Students would use different symbols for the capital and for their home or town, and would draw these symbols in a map key.

Student Activity

Click ***here*** to download a printable version for students.

This activity uses the following data tool:

- State Facts for Students
  www.census.gov/programs-surveys/sis/resources/data-tools/state-facts.html

Student Learning Objectives

- I will be able to round the population numbers of different states to different place values.
- I will be able to compare data about my state with data about nearby states.

How does the population of your state compare with the population of another state? Today we will look at the population of the state where you live. Then we will compare those population data to population data for a state near yours. All of the data are from the U.S. Census Bureau.

The U.S. Census Bureau collects and organizes many different types of information, including population data, for the whole nation. The Census Bureau reports these data for states, counties, and other areas. Then different parts of the government, businesses, and school districts use these data to make decisions that affect the lives of everyone living in the United States — including you!

Let's start by going to State Facts for Students.

Student answers will vary. Sample answers provided assume that the student is a 9-year-old girl who lives in Virginia.

1. I live in the state of **Virginia**. In 2023, the population of my state was **8,715,698** .
2. How old are you?

   9

3. Are you a girl or a boy?

   Girl

4. Complete the table below using the number you found in question 1 (the population of your state in 2023):

	Number in Standard Form	Number in Expanded Form	Number in Word Form
Population of my state in 2023:	8,715,698	8,000,000 + 700,000 + 15,000 + 600 + 90 + 8	Eight million seven hundred and fifteen thousand, six hundred ninety-eight
Population of the kids in my state who were my age in 2023:	105,302	100,000 + 5,000 + 300 + 2	One hundred five thousand, three hundred and two
Population of the kids in my state who are my same gender and were my age in 2023:	51,200	51,000 + 200	Fifty one thousand two hundred

5. Round your state's population number to each of the place values in the table below:

Nearest Ten	Nearest Hundred	Nearest Thousand	Nearest Ten Thousand	Nearest Hundred Thousand
8,715,700	8,715,700	8,716,000	8,720,000	8,700,000

6. Let's look at population data for a state that is next to your state. Now fill in the blanks in the paragraph below.

Student answers will vary. Sample answers provided use North Carolina.

A state that is near mine is **North Carolina**. In 2023, my state had a population of **8,715,698** people. In 2023 the state of **North Carolina** had a population of **10,835,491** people, which is **greater than** (greater than/less than) the population of my state.

7. Write an inequality statement to compare the populations of your state and of the nearby state, using the population numbers you found.

   North Carolina's population (10,835,491) is greater than Virginia's population (8,715,698).

   Teachers may want to explain to students how they can use place value to find their answer. If students first write the number for their state and then write the number for the other state right below it, lining them up by place value, they can see that both numbers have a digit in the millions place — and students know that a 10 in the millions place is bigger than an 8 in the millions place.