

UNIT 1 | COUNTING POPULATIONS

PEOPLE COUNT

METHOD

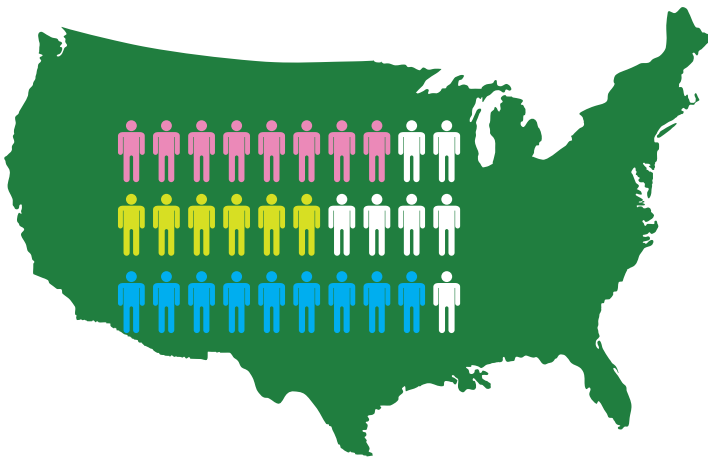
Students conduct a census of their schoolmates' households and then chart and analyze the data to create a bar graph.

MATERIALS

- Student Survey Sheet
- Student Worksheet
- Colored pencils
- Calculators

INTRODUCTION

A **census** is a count of people in a given area or country. In the United States, a census is conducted once every 10 years to determine the country's population. In 1790, Thomas Jefferson directed the first census taken in the United States. The census was conducted by the U.S. Marshals and their assistants who had to supply their own paper for the job! They found that about four million people lived in the United States.



With over 310 million people to count in the United States today, the census is a bit more complex. Each household receives a survey of questions which must be filled out and returned. The answers are then tabulated. For this activity, students will conduct a simple survey of their schoolmates to determine certain characteristics of their households' population.



CONCEPT

By conducting a census, demographers determine the size and characteristics of a human population.

GRADE LEVEL

Upper elementary

SUBJECTS

Math, Social Studies

OBJECTIVES

Students will be able to:

- Define what a census is and explain why it's important.
- Conduct a census of their peers.
- Collect and analyze demographic data.
- Create a bar graph of collected data and interpret results.
- Give examples of how census information can aid in community planning.

SKILLS

Conducting a survey, collecting and analyzing data, making a bar graph

PROCEDURE

1. Tell students that they will be taking a census of the households of other students in the school. Using the Student Survey Sheet, they will question eight other students. For each person they select to survey, students must ask how many people live in the person's household (including themselves), and record the name, age, and gender of each household member.
Note: Before beginning this activity, you may want to check with school administrators to see whether there is an approval policy in your district for conducting surveys.
2. Provide a Student Survey Sheet for each student. Allow students two or three days to collect the data. To avoid just asking students in their own class, they may want to gather some of this data during lunch, recess, before, or after school. If a family has more than six members, students should record the extra people on the back of the survey sheet.
3. After students have gathered their data, they can compile the information on the Student Worksheet and graph the results. Divide students into small groups to answer the follow-up questions on the worksheet, and then come together as a class to go over the Discussion Questions.

DISCUSSION QUESTIONS

1. What is a census? How often does the United States have a census?

A census is a count of people in a given area or country. The U.S. conducts a census every 10 years.

2. Imagine that we took a census of all of the students in our school. What kinds of things can be determined by the population of the school?

Answers will vary but may include: how many students are in each class, how many teachers are at the school, how many lockers are needed, how many art supplies to buy, how many sports teams/clubs to have, etc.

3. What might change if there were more people in the school?

Answers will vary but may include: more people in each class, more food in the cafeteria, there might be fewer books to go around in the library, etc.

4. Why is it important that we have a U.S. Census?

Answers will vary but may include: the census determines a state's representation in Washington D.C., it defines legislature districts and school districts, it establishes where federal funding is distributed, it can identify what kinds of jobs are needed in different areas, it identifies the need for different community services and facilities, it provides retirement and Social Security information, and also for family history and historical purposes.

MEASURING LEARNING

Review the Student Survey Sheet, Student Worksheet, and bar graph to gauge students' understanding of data collection and analysis.

FOLLOW-UP ACTIVITY

Have students access the National Center on Education Statistics website at

<http://nces.ed.gov/nceskids/createagraph/default.aspx> and input their data to create a bar graph online.

Students may need guidance in getting started.

PEOPLE COUNT STUDENT SURVEY SHEET

Name: _____

Date: _____

Use this sheet to conduct a census of EIGHT other students' households. You may gather this information from any eight students in the school. Ask each student you survey the name, age, and gender (male or female) of all the people living in their home, including themselves. If a student does not want to participate in your census, ask someone else.

1	Name	Age	Gender (M or F)
1			
2			
3			
4			
5			
6			
2	Name	Age	Gender (M or F)
1			
2			
3			
4			
5			
6			
3	Name	Age	Gender (M or F)
1			
2			
3			
4			
5			
6			
4	Name	Age	Gender (M or F)
1			
2			
3			
4			
5			
6			

5	Name	Age	Gender (M or F)
1			
2			
3			
4			
5			
6			
6	Name	Age	Gender (M or F)
1			
2			
3			
4			
5			
6			
7	Name	Age	Gender (M or F)
1			
2			
3			
4			
5			
6			
8	Name	Age	Gender (M or F)
1			
2			
3			
4			
5			
6			

PEOPLE COUNT STUDENT WORKSHEET

Name: _____

Date: _____

Using the information from the survey you conducted, fill in the chart below.

Age Group	Total Number	Number of Males	Number of Females
0-4			
5-9			
10-14			
15-19			
20-24			
25-29			
30-34			
35-39			
40-44			
45-49			
50-54			
55-59			
60-64			
65-69			
70-74			
75+			
Total			

Next, take all of the information you have collected and create a bar graph on the grid provided. Along the x-axis (horizontal axis along the bottom of the graph), list the age groups (0-4, 5-9, 10-14, etc.). Along the y-axis (vertical axis along the side of the graph), you'll note the number of people in each age group. Fill in the bar graph with the information you have collected in the "Total Number" column.

1. Which age/gender groups on your chart have the most people?

2. Which age/gender groups have the fewest people?

3. Imagine that all of the households you gathered data for were located on the same city block. What types of businesses might do well if they opened in that neighborhood? (Hint: Think about the goods and services that this particular population would need.)

4. How do you think your chart might change if you surveyed the same people in five years?

5. Would there be another type of business that you might want to open in that neighborhood in five years? Explain.

6. How does knowing the population help us plan to meet the needs of the community?
