

RESOURCE LIBRARY
ACTIVITY : 45 MINS

Calculating Population Density

Students calculate population density in the United States and describe some of the patterns in the results.

GRADES

9 - 12+

SUBJECTS

Geography, Human Geography

CONTENTS

2 Links, 1 PDF

OVERVIEW

Students calculate population density in the United States and describe some of the patterns in the results.

For the complete activity with media resources, visit:

<http://www.nationalgeographic.org/activity/calculating-population-density/>

DIRECTIONS

1. Introduce the activity.

Ask: *What do you think the population of the United States is?* Have students check their predictions against the U.S. Census Bureau Population Clock. Then ask students to predict which states are most and least populated. Tell them they can confirm their predictions later in this activity. Explain that students will calculate the population density for each individual state and then the United States as a whole. Write the formula for figuring out population density on the board:

number of people ÷ the area they occupy = population density

2. Have students complete the worksheet.

Provide each student with a copy of the worksheet United States Population Density and a calculator. Have students use QuickFacts on the U.S. Census Bureau website to get current land area and estimated population data. Then ask students to use the population density formula and a calculator to calculate the population density for each state. Next, have students rank the states from highest population density to lowest using numbers 1-50. Finally, to calculate the average for the entire United States, have students first total the land area for each state, then the estimated population for each state, and then use the same formula to calculate population density.

3. Discuss the results as a class.

As a class, identify the states with the highest and lowest population densities. Discuss possible reasons a state might have a high population density, such as:

- a large total population
- a small land area
- a fairly large population, but a significantly smaller land area

Ask: What is the ranking of our state with the current data?

Informal Assessment

Make informal observations as students calculate the density populations for the states. You can also assess students' understandings of population density by asking: *What does the population density of a country or state tell you?*

Extending the Learning

Encourage students to use this same technique to calculate the population density for cities within their own state or for particular countries of interest.

OBJECTIVES

Subjects & Disciplines

Geography

- [Human Geography](#)

Learning Objectives

Students will:

- calculate the population density for each state and the United States as a whole
- identify multiple reasons for high population densities

Teaching Approach

- Learning-for-use

Teaching Methods

- Discussions
- Information organization

Skills Summary

This activity targets the following skills:

- Critical Thinking Skills
 - Analyzing
 - Remembering
 - Understanding
- Geographic Skills
 - [Acquiring Geographic Information](#)
 - [Analyzing Geographic Information](#)

National Standards, Principles, and Practices

NATIONAL COUNCIL FOR SOCIAL STUDIES CURRICULUM
STANDARDS

- **Theme 3:**

People, Places, and Environments

NATIONAL GEOGRAPHY STANDARDS

- **Standard 9:**

The characteristics, distribution, and migration of human populations on Earth's surface

Preparation

What You'll Need

MATERIALS YOU PROVIDE

- Calculators
- Paper
- Pencils
- Pens

REQUIRED TECHNOLOGY

- Internet Access: Required
- Tech Setup: 1 computer per learner

PHYSICAL SPACE

- Computer lab

GROUPING

- Small-group instruction

BACKGROUND & VOCABULARY

Background Information

Population density describes the number of individuals occupying an area in relation to the size of the area they occupy. It's helpful to analyze the population density of the United States at different scales in order to find patterns.

Prior Knowledge

["population density"]

Recommended Prior Activities

- [Introduction to Population Density](#)

Vocabulary

Term	Part of Speech	Definition
area	<i>noun</i>	a geographic region.
population	<i>noun</i>	total number of people or organisms in a particular area.
population density	<i>noun</i>	the number of people living in a set area, such as a square mile.

For Further Exploration

Articles & Profiles

- [National Geographic Magazine: Population 7 Billion](#)

Audio & Video

- [National Geographic Video: 7 Billion](#)

Websites

- [U.S. Census Bureau: U.S. and World Population Clocks](#)
- [U.S. Census Bureau: Homepage](#)
- [Population Reference Bureau: World Population Data Sheet](#)
- [United Nations: Population Division](#)
- [U.S. Census Bureau: International Data Base \(IDB\)](#)



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