

RESOURCE LIBRARY
ACTIVITY : 45 MINS

Introduction to Latitude and Longitude

Students look at lines of latitude and longitude on United States and world maps, discuss why these lines are helpful, and identify landmarks with similar latitude and longitude.

GRADES

3 - 5

SUBJECTS

Geography, Physical Geography

CONTENTS

2 PDFs

OVERVIEW

Students look at lines of latitude and longitude on United States and world maps, discuss why these lines are helpful, and identify landmarks with similar latitude and longitude.

For the complete activity with media resources, visit:

<http://www.nationalgeographic.org/activity/introduction-latitude-longitude/>

DIRECTIONS

1. Discuss with students what they already know about maps.

Divide students into pairs. Give each pair an outline map of the world and an outline map of the United States. Have students circle familiar characteristics and underline or list unfamiliar characteristics. Have a whole-class discussion about what they already know or notice about the maps. Students may recognize the shapes of countries, they may point out their state or region, or they may identify familiar bodies of water.

2. Introduce the concepts of latitude and longitude.

Have students look at the U.S. map and find the lines running across and up and down the page. Tell students that the lines running across the page are lines of latitude, and the lines running up and down the page are lines of longitude. Latitude runs 0–90° north and south. Longitude runs 0–180° east and west. Have students write those labels on the maps. Ask students why they think these lines might have been drawn on the map. Make sure they understand that they are not real lines on the ground; they were added to the map to help people locate places on the map more easily. Point out the degrees of latitude and longitude and the patterns of numbers as you move away from 0°.

3. Have students practice figuring out latitude and longitude.

Have students find the approximate location of their town and mark it with a dot. Ask students to think about what to do if the location is not on a line but in between lines. Model for students how to figure out the town's latitude and longitude. Next, draw two more dots in other areas of the country and have students work independently or in pairs to figure out the approximate latitude and longitude of those places. Finally, have students figure out what city is at approximately 30°N, 90°W (New Orleans, Louisiana) and what city is at approximately 40°N, 105°W (Denver, Colorado).

4. Have students find landmarks with the same latitude and longitude as their location.

Assign each student or pair one of the three locations—home, New Orleans, or Denver. Instruct each pair to find two landmarks, such as cities or physical features, with the same latitude as their location. Then have pairs find two landmarks with the same longitude as their location.

5. Discuss with students why and when latitude and longitude are helpful map tools.

Have students share why latitude and longitude are helpful map tools. Prompt them to explain how latitude and longitude can help them to identify specific locations. Ask: *How easy or difficult would it be to pinpoint a location on a globe without using a coordinate system? Explain.*

Modification

For advanced students, introduce the concept of latitude/longitude in degrees/minutes/seconds. Explain that a degree is divided into 60 minutes. One minute can be further divided into 60 seconds. Example: $38^{\circ}56'23''\text{N}$, $71^{\circ}0'36''\text{W}$

Modification

Take this activity online with MapMaker's, National Geographic's online geovisualization tool, [Latitude and Longitude](#) and/or [Major Meridians and Parallels](#) layers.

Informal Assessment

Have students use the outline maps of the United States and the world to identify:

- states in the U.S. that are on the same line of latitude
- states in the U.S. that are on the same line of longitude
- world landmarks that are on the same line of latitude
- world landmarks that are on the same line of longitude

OBJECTIVES

Subjects & Disciplines

Geography

- [Physical Geography](#)

Learning Objectives

Students will:

- explain why lines of latitude and longitude might be helpful
- determine the latitude and longitude of their town and other places in the country
- find cities with the same latitude and describe their locations
- find landmarks with the same longitude and describe their locations

Teaching Approach

- Learning-for-use

Teaching Methods

- Discussions
- Hands-on learning
- Modeling

Skills Summary

This activity targets the following skills:

- Critical Thinking Skills
 - Applying
 - Remembering
 - Understanding
- Geographic Skills
 - Acquiring Geographic Information
 - Analyzing Geographic Information

National Standards, Principles, and Practices

NATIONAL GEOGRAPHY STANDARDS

- Standard 1:

How to use maps and other geographic representations, geospatial technologies, and spatial thinking to understand and communicate information

Preparation

What You'll Need

MATERIALS YOU PROVIDE

- Pencils
- Pens

REQUIRED TECHNOLOGY

- Internet Access: Optional

PHYSICAL SPACE

- Classroom

GROUPING

- Large-group instruction

BACKGROUND & VOCABULARY

Background Information

Latitude and longitude make up the grid system that helps us identify absolute, or exact, locations on the Earth's surface. You can use latitude and longitude to identify specific locations. Latitude and longitude are also helpful in identifying landmarks.

Prior Knowledge

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Recommended Prior Activities

- [Latitude, Longitude, and Temperature](#)

Vocabulary

Term	Part of Speech	Definition
degree	<i>noun</i>	unit of measurement for latitude and longitude.
landmark	<i>noun</i>	a prominent feature that guides in navigation or marks a site.
latitude	<i>noun</i>	distance north or south of the Equator, measured in degrees.
longitude	<i>noun</i>	distance east or west of the prime meridian, measured in degrees.

For Further Exploration

Websites

- [Geography for Kids: Latitude and Longitude Map Match Game](#)
- [National Atlas: MapMaker Article–Latitude and Longitude](#)



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