

SOCIAL STUDIES  
GEOGRAPHY  
Grade 4  
Working with Latitude and Longitude

**Lesson Components:**

Benchmarks

- G-1A-E1 identifying and describing the characteristics and uses of geographic representations, such as various types of maps, globes, graphs, diagrams, photographs, and satellite-produced images.
- G-1A-E2 locating and interpreting geographic features and places on maps and globes
- G-1A-E3 constructing maps, graphs, charts, and diagrams to describe geographical information and to solve problems
- G-1B-E1 describing and comparing the physical characteristics of places, including land forms, bodies of water, soils, vegetation, and climate

Key Concepts

Compass rose, cardinal directions, intermediate directions, location, direction; hemisphere; continent; equator; North and South Pole; latitude, longitude

Lesson Duration

Two-three days

Purpose/Introduction

See individual lessons attached.

Objectives

1. Identify or describe characteristics of various types of maps. (G-1A-E1)
2. Use a compass rose and cardinal or intermediate directions to interpret a map. (G-1A-E2)
3. Locate places on a map or representation of a globe, such as hemispheres, the seven continents, the United States, major land forms, and major bodies of water or waterways—referring to the North or South Pole, the equator, and latitude or longitude, as needed. (G-1A-E2)

4. Draw, complete, or add features to a map (including such map elements as a title, compass rose, legend, and scale), based on information given in narrative form. (G-1A-E3)
5. Identify examples of various land forms (e.g., continents, islands). (G-1B-E1)
6. Identify or compare the distinguishing characteristics of various land forms and climates. (G-1B-E1)

### Prior Knowledge/Pre-requisites

Knowledge of how to use a compass rose, as well as cardinal and intermediate directions; ability to locate the four hemispheres and major areas of the world

### Materials/Resources

Student textbooks; student notebooks; student folders; wall map of the world and/or of the different hemispheres; blank student desk maps and/or blank map handouts; blank maps of Northern and Southern Hemispheres; blank maps of Eastern and Western Hemispheres; crayons and/or coloring pencils or markers; handheld globes; blank outline maps of the world with the major lines of latitude and longitude; student LEAP folders

### Teacher Preparation

The teacher should be thoroughly familiar with all major features of a world map, and with longitude and latitude. All activities should have been tried by the teacher before being given to students to do.

### Body of the Lesson

See overview of the unit on “Using Latitude and Longitude” and in individual lessons on this topic.

### Assessment

See “Evaluation” sections of individual lessons.

## GRADE 4

### USING LATITUDE AND LONGITUDE

#### Objectives:

1. Students will be able to locate major areas on a map of the world. (G-1A-E2)
2. Students will be able to locate and use the equator, the prime meridian, and the International Dateline to identify the Northern, Southern, Eastern, and Western hemispheres and to help in understanding latitude and longitude. (G-1A-E1, G-1A-E2, G-1A-E3)
3. Students will be able to identify major parallels of latitude and meridians of longitude. (G-1A-E2)
4. Students will be able to compare various world climates in relation to latitude. (G-1B-E1)
5. Students will be able to use latitude and longitude to locate points on a map and globe. (G-1A-E2)

#### Content Outline:

The importance of maps in daily life

The need to be able to locate various areas on a map (G-1A-E2, G-1A-E3)

Basic components of maps (G-1A-E1, G-1A-E2)

Lines of latitude and longitude (G-1A-E2)

The relationship between climate and latitude (G-1B-E1)

Locating various areas in the world by using coordinates of longitude and latitude (G-1A-E2)

## **Lesson 1:** (Cover in one-two days)

Benchmarks: G-1A-E1, G-1A-E2, G-1A-E3, G-1B-E1

Lesson Outline:

***The importance of maps in daily life***  
***The need to be able to locate various areas on a map***  
***Basic components of maps***  
***Lines of latitude and longitude***  
***The relationship between climate and latitude***

Objectives:

1. Students will be able to locate major areas on a map of the world. (G-1A-E2)
2. Students will be able to locate and use the equator, the prime meridian, and the International Dateline to identify the Northern, Southern, Eastern, and Western hemispheres and to help in understanding latitude and longitude. (G-1A-E1, G-1A-E2, G-1A-E3)
3. Students will be able to identify major parallels of latitude and meridians of longitude. (G-1A-E2)
4. Students will be able to compare various world climates in relation to latitude. (G-1B-E1)

Procedures:

Whole group review of the importance of maps in daily life, the need to be able to locate various areas on a map, and basic components of maps.

Whole group discussion of lines of latitude and longitude, and the relationship between climate and latitude.

Identify the following:

lines of latitude, lines of longitude, meridians, parallels, equator, prime meridian, International Date Line, Northern Hemisphere, Southern Hemisphere, Western Hemisphere, Eastern Hemisphere, North Pole, Arctic Circle, Tropic of Cancer, Tropic of Capricorn, Antarctic Circle, South Pole

Locate the following areas on a blank map of the world:

North Pole, Arctic Circle, Tropic of Cancer, equator, Tropic of Capricorn, Antarctic Circle, South Pole  
prime meridian, International Date Line

Northern Hemisphere, Southern Hemisphere, Western Hemisphere, Eastern Hemisphere

North America, South America, Europe, Africa, Asia, Australia, Antarctica

Locate the following lines of latitude on the world map:

90° N, 66 1/2°N, 60°N, 30°N, 23 1/2°N, 0°,  
23 1/2°S, 30°S, 60°S, 66 1/2°S, 90°S

Locate the following lines of longitude on the world map:

0°, 30°W, 60°W, 90°W, 120°W, 150°W, 180°,  
150°E, 120°E, 90°E, 60°E, 30°E

Place review questions in LEAP folders

Materials:

Student textbooks; student notebooks; student folders; wall map of the world and/or of the different hemispheres; blank student desk maps and/or blank map handouts; blank maps of Northern and Southern Hemispheres; blank maps of Eastern and Western Hemispheres; crayons and/or coloring pencils or markers; student LEAP folders

Evaluation:

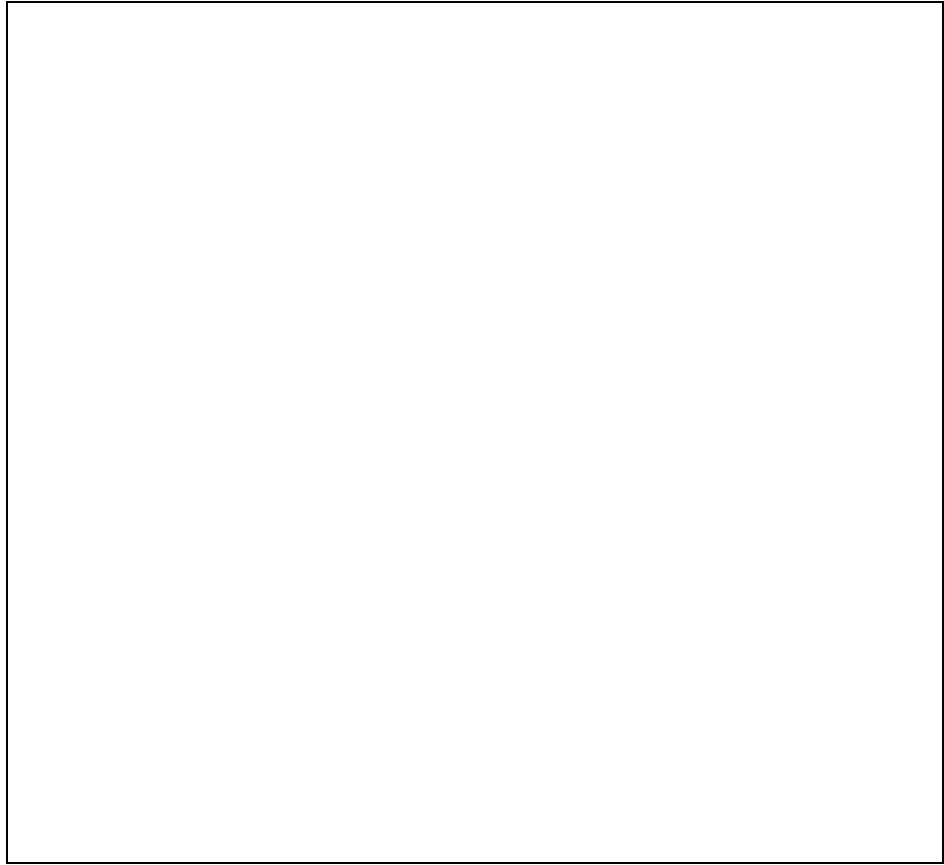
Whole class review of today's lesson

Place maps in student folders, which will be graded at the end of this unit.

Place the following handout in student LEAP folders and answer them for homework, using the maps completed today:

1. Which of the following is a continent that is entirely in the Southern Hemisphere:
  - A. North America
  - B. Africa
  - C. Australia
  - D. Europe
  
2. Which of the following is a continent that is entirely in the Northern Hemisphere:
  - A. Australia
  - B. North America
  - C. South America
  - D. Antarctica
  
3. Which of the following is a continent that is entirely in the Western Hemisphere:
  - A. Africa
  - B. Europe
  - C. Asia
  - D. South America
  
4. Which of the following latitudes would have the coldest climate in the Northern Hemisphere:
  - A.  $0^{\circ}$
  - B.  $30^{\circ}\text{N}$
  - C.  $30^{\circ}\text{S}$
  - D.  $60^{\circ}\text{N}$
  
5. If you took a trip to  $90^{\circ}\text{S}$  latitude on the globe, which of the following items would be most important to bring with you:
  - A. a swimsuit
  - B. a heavy coat
  - C. suntan oil
  - D. a tennis racket

6. In the blank box, draw a globe and answer the questions below the box:



- A. Label the following on your globe:

90°N, 60°N, 30°N, 0°, 30°S, 60°S, 90°S lines of latitude

North Pole, South Pole, Equator, Tropic of Cancer,  
Tropic of Capricorn

Northern Hemisphere, Southern Hemisphere

- B. Suppose your family decided to move to a place that is located on your globe between 90°N and 60°N parallels. Describe the type of climate there and the kind of clothing that you would have to wear.

## Lesson 2:

Benchmarks: G-1A-E2

Lesson Outline:

### ***Locating various areas in the world by using coordinates of longitude and latitude (G-1A-E2)***

Objectives:

1. Students will be able to use latitude and longitude to locate points on a map and globe. (G-1A-E2)

Procedures:

Discuss answers to yesterday's LEAP review questions.

Using handheld globes, students will work in pairs and find various locations using coordinates of longitude and latitude.

Working in pairs, students will locate and label the following areas on world maps according to their coordinates:

Continents:

Europe	(50°N, 20°E)
Africa	(0°, 30°E)
Asia	(30°N, 90°E)
Australia	(30°S, 140°E)
North America	(40°N, 90°W)
South America	(20°S, 60°W)
Antarctica	(90°S, 0°)

Countries:

Brazil	(0°, 60°W)
United States	(30°N, 90°W)
Canada	(60°N, 90°W)
Iran	(30°N, 60°E)
Argentina	(30°S, 60°W )

Cities:

New Orleans	(30°N, 90°W)
Galapagos Islands	(0°, 90°W)
St. Petersburg, Russia	(60°N, 30°E)
Cairo, Egypt	(30°N, 30°E)

Materials:

Handheld globes, wall map of the world, outline maps of the world with major lines of latitude and longitude on them

Evaluation:

Review of latitude and longitude

Students will place today's maps in their folders and will turn them in to be graded.