

Geography HANDBOOK

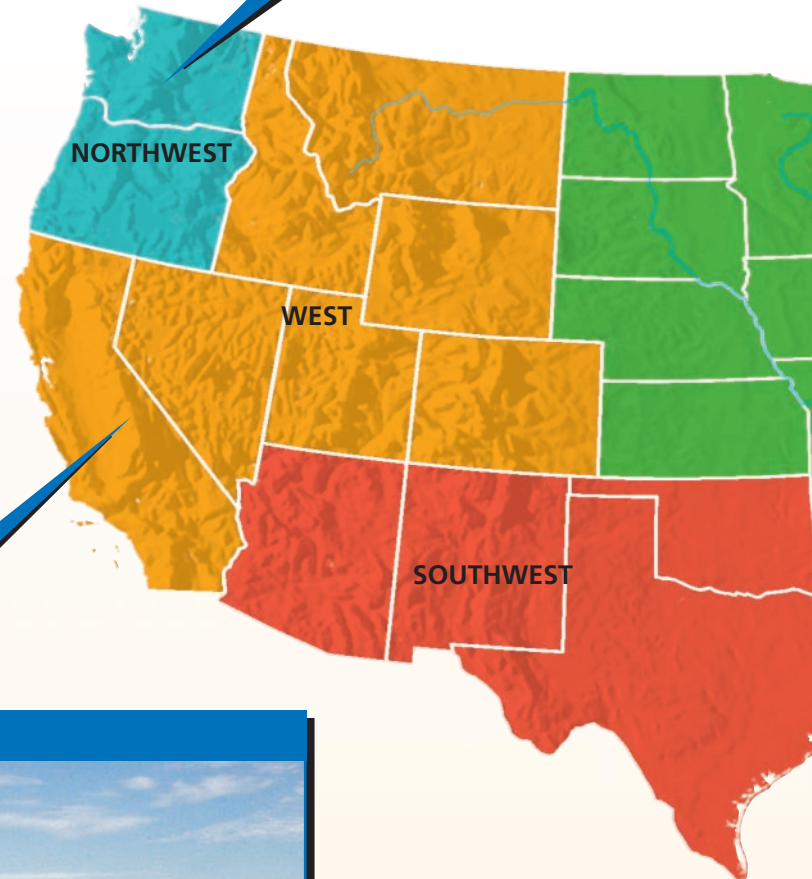
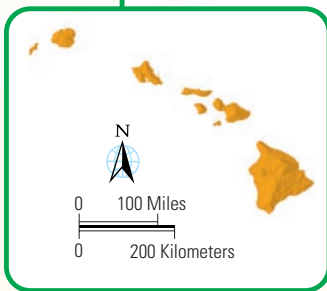
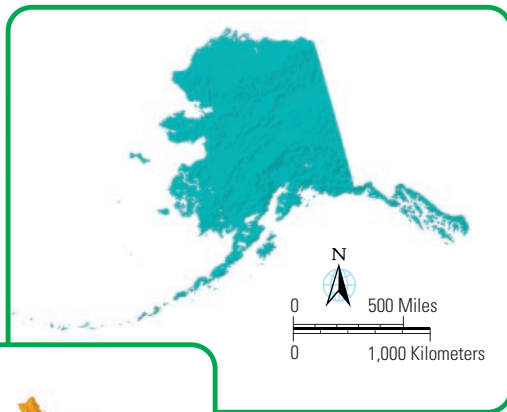
The Landscape of America

The best place to begin your study of American history is with the geography of America. Geography is more than the study of the land and people. It also involves the relationship between people and their environment.

The United States is part of the North American continent. The United States ranks third in both total area and population in the world. It is filled with an incredible variety of physical features, natural resources, climatic conditions, and people. This handbook will help you to learn about these factors and to understand how they affected the development of the United States.



A timber company collects logs in the Northwest.



A cowboy drives cattle in the West.



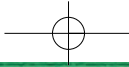
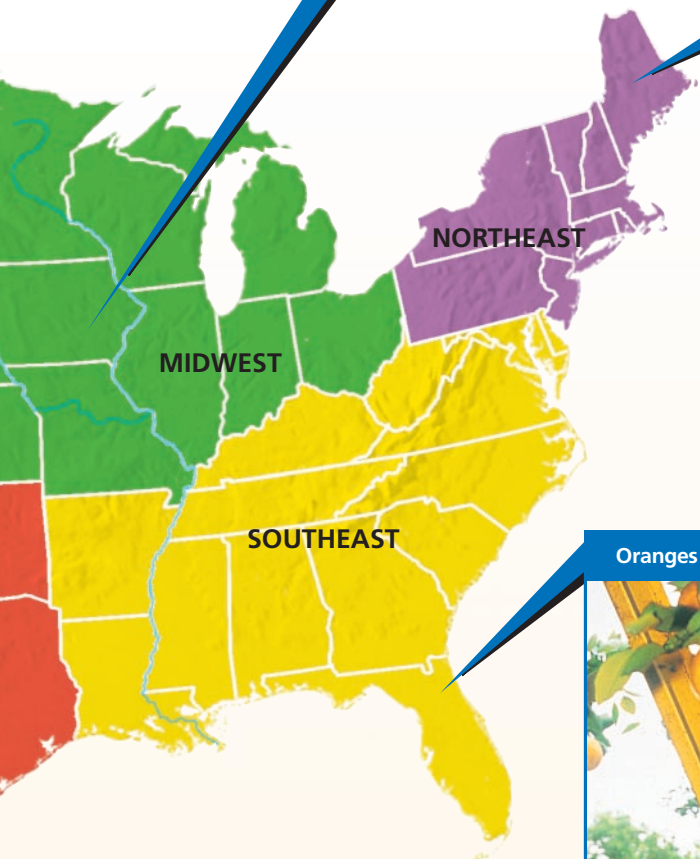


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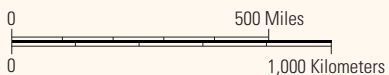
A combine harvests wheat in the Midwest.

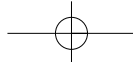


Fishers haul their catch toward shore in the Northeast.



Oranges are big business in the Southeast.





Themes of Geography

One useful way to think about geography is in terms of major themes or ideas. These pages examine the five major themes of geography and show how they apply to Boston, Massachusetts. Recognizing and understanding these themes will help you to understand all the different aspects of geography.

Location

“Where am I?” Your answer to this question is your *location*. One way to answer it is to use *absolute* location. That means you’ll use the coordinates of longitude and latitude to give your answer (see page 8). For example, if you’re in Boston, its absolute location is approximately 42° north latitude and 71° west longitude.

Like most people, however, you’ll probably use *relative* location to answer the question. Relative location describes where a certain area is in relation to another area. For example, Boston lies in the northeast corner of the United States, next to the Atlantic Ocean.

THINKING ABOUT GEOGRAPHY What is the relative location of your school?

Place

“What is Boston like?” *Place* can help you answer this question. Place refers to the physical and human factors that make one area different from another. Physical characteristics are natural features, such as physical setting, plants, animals, and weather. For example, Boston sits on a hilly peninsula.

Human characteristics include cultural diversity and the things people have made—including language, the arts, and architecture. For instance, Boston includes African Americans, as well as people of Irish, Italian, Chinese, and Hispanic ancestry.

THINKING ABOUT GEOGRAPHY What physical and human characteristics make where you live unique?

Region

Geographers can’t easily study the whole world at one time. So they break the world into regions. A *region* can be as large as a continent or as small as a neighborhood. A region has certain shared characteristics that set it apart. These characteristics might include political division, climate, language, or religion. Boston is part of the northeast region. It shares a climate—continental temperate—with the cities of New York and Philadelphia.

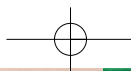
THINKING ABOUT GEOGRAPHY What characteristics does your city or town share with nearby cities or towns?



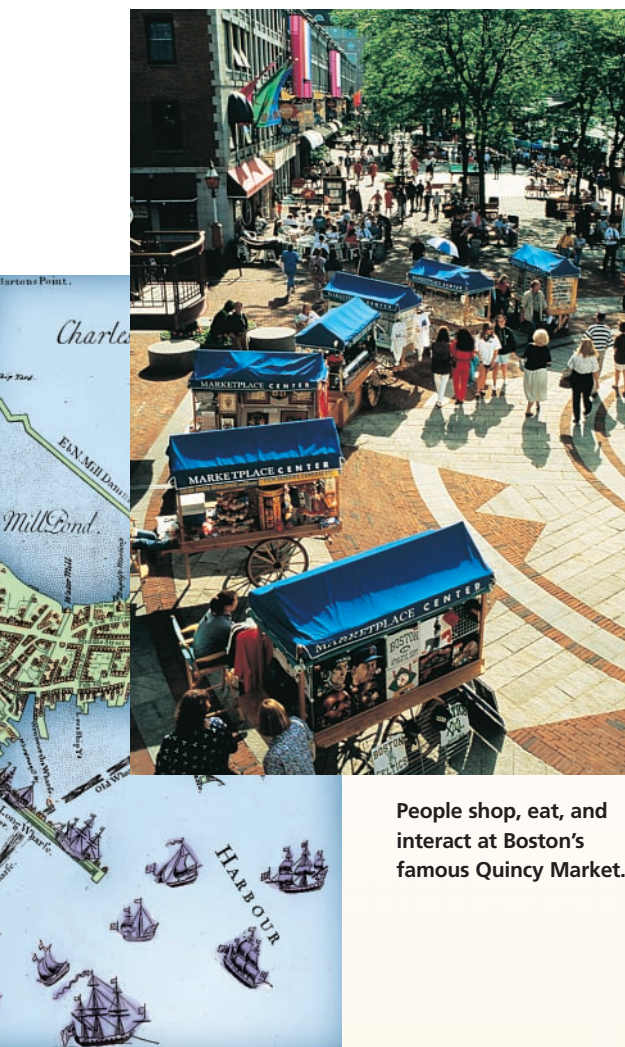
Boston is located on the shores of the Atlantic Ocean.



Boston has grown and changed since this 1722 map.



Airplanes from Boston's Logan International Airport move people and ideas around the globe.



People shop, eat, and interact at Boston's famous Quincy Market.

Movement

Movement refers to the shifting of people, goods, and ideas from one place to another. People constantly move in search of better places to live, and they trade goods with one another over great distances. Movement also causes ideas to travel from place to place. In recent years, technology has quickened the movement of ideas and goods.

Boston became known as the *Cradle of Liberty* because of the movement of ideas. The concepts of freedom and self-government that developed in Boston spread to the other colonies and helped to start the American Revolution.

THINKING ABOUT GEOGRAPHY What are some of the different ways you spread information and ideas?

Human-Environment Interaction

Human-environment interaction refers to ways people interact with their environment, such as building a dam, cutting down a tree, or even sitting in the sun.

In Boston, human-environment interaction occurred when officials filled in swampy areas to make the city larger. In other ways, the environment has forced people to act. For example, people have had to invent ways to protect themselves from extreme weather and natural disasters.

THINKING ABOUT GEOGRAPHY What are ways that people in your city or town have changed their environment?

Themes of Geography Assessment

1. Main Ideas

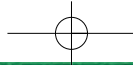
- a. What is the relative location of your home?
- b. What are three characteristics of the region in which you live?
- c. What are at least three ways in which you have recently interacted with the environment?

2. Critical Thinking

Forming and Supporting Opinions Which aspect of geography described in these themes do you think has most affected your life? Explain.

THINK ABOUT

- ways that you interact with your environment
- how you travel from place to place



Map Basics

Geographers use many different types of maps, and these maps all have a variety of features. The map on the next page gives you information on a historical event—the War of 1812. But you can use it to learn about different parts of a map, too.

Types of Maps

Physical maps Physical maps show mountains, hills, plains, rivers, lakes, oceans, and other physical features of an area.

Political maps Political maps show political units, such as countries, states, provinces, counties, districts, and towns. Each unit is normally shaded a different color, represented by a symbol, or shown with a different typeface.

Historical maps Historical maps illustrate such things as economic activity, migrations, battles, and changing national boundaries.

Tools of Geography

The ancient Greeks developed some of the first ways to study geography. Today, geographers and map makers use advanced technology to study geography.

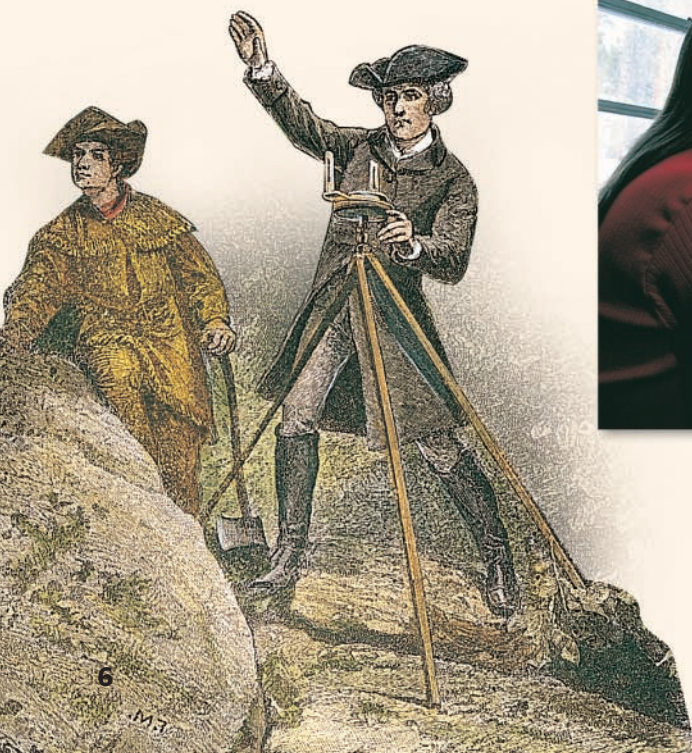
GPS

A Global Positioning System (GPS) is a navigational system that uses at least three satellites to identify a person's absolute location. It is also used to study other aspects of geography.



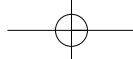
Surveyors

An American surveys the land in the 19th century.

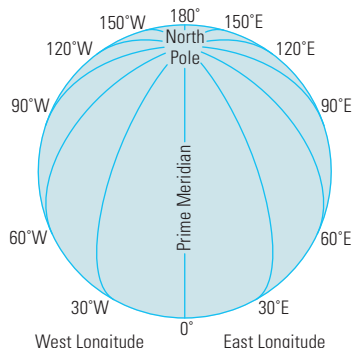


Computers

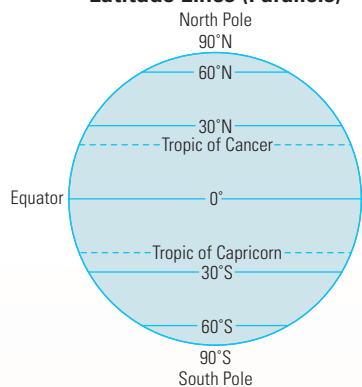
Computers can create electronic maps in which geographers can quickly add or remove features that keep the map current. Computers can also be used to monitor environmental problems such as deforestation and global warming.



Longitude Lines (Meridians)



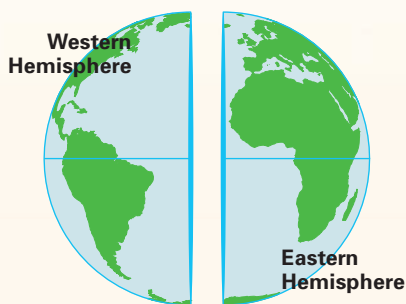
Latitude Lines (Parallels)



Northern Hemisphere



Southern Hemisphere



Longitude lines

- are imaginary lines that run north to south around the globe and are known as meridians
- show the distance in degrees east or west of the prime meridian

The prime meridian is a longitude line that runs from the North Pole to the South Pole. It passes through Greenwich, England, and measures 0° longitude.

Latitude lines

- are imaginary lines that run east to west around the globe and are known as parallels
- show distance in degrees north or south of the equator

The equator is a latitude line that circles the earth halfway between the North and South poles. It measures 0° latitude.

The tropics of Cancer and Capricorn are parallels that form the boundaries of the Tropics, a region that stays warm all year.

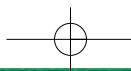
Latitude and longitude lines appear together on a map and allow you to pinpoint the absolute location of cities and other geographic features. You express this location through coordinates of intersecting lines. These are measured in degrees.

Hemisphere

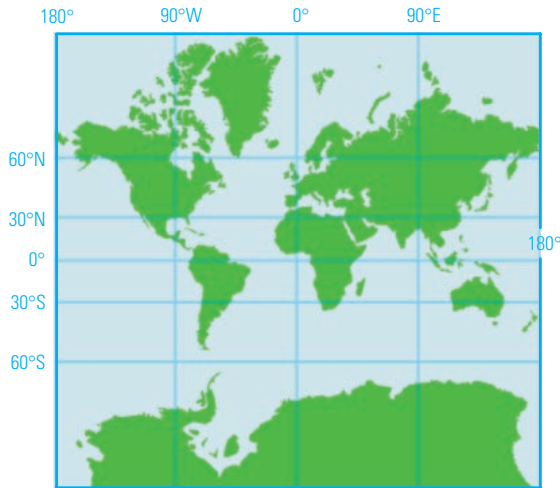
Hemisphere is a term for half the globe. The globe can be divided into Northern and Southern hemispheres (separated by the equator) or into Eastern and Western hemispheres. The United States is located in the Northern and Western hemispheres.

Projections

A projection is a way of showing the curved surface of the earth on a flat map. Flat maps cannot show the size, shape, and direction of a globe all at once with total accuracy. As a result, all projections distort some aspect of the earth's surface. Some maps distort distances, while other maps distort angles. On the next page are four projections.

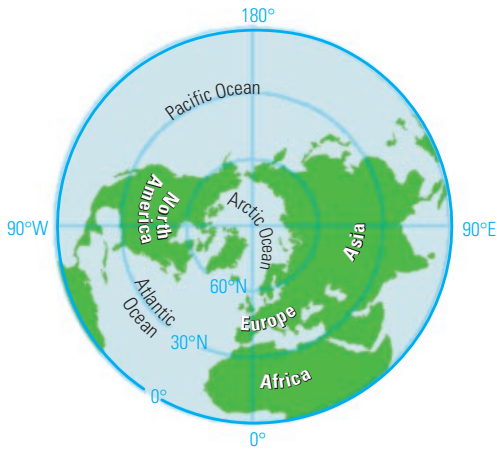


Mercator Projection



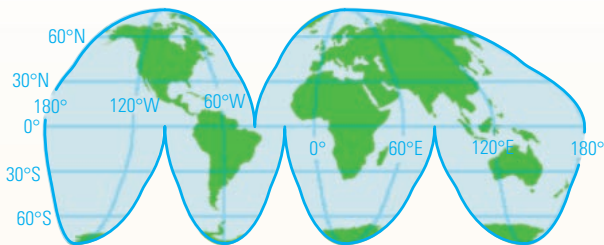
The Mercator projection shows most of the continents as they look on a globe. However, the projection stretches out the lands near the North and South poles. The Mercator is used for all kinds of navigation.

Azimuthal Projection



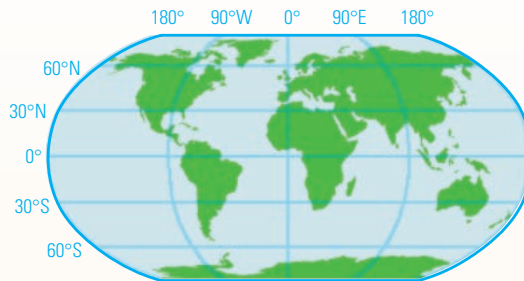
An azimuthal projection shows the earth so that a straight line from the central point to any other point on the map gives the shortest distance between the two points. Size and shape of the continents are also distorted.

Homolosine Projection



This projection shows the accurate shapes and sizes of the landmasses, but distances on the map are not correct.

Robinson Projection



Textbook maps commonly use the Robinson projection. It shows the entire earth with nearly the true sizes and shapes of the continents and oceans. However, the shapes of the landforms near the poles appear flat.

Map Basics Assessment

1. Main Ideas

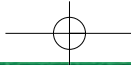
- a. What is the longitude and latitude of your city or town?
- b. What information is provided by the legend on the map on page 7?
- c. What is a projection? Compare and contrast Antarctica on the Mercator and the Robinson projections.

2. Critical Thinking

Making Inferences Why do you think latitude and longitude are so important to sailors?

THINK ABOUT

- the landmarks you use to find your way around
- the landmarks available to sailors on the ocean



Physical Geography of the United States

From the heights of Mount McKinley (20,320 feet above sea level) in Alaska to the depths of Death Valley, California (282 feet below sea level), the geography of the United States is incredibly diverse. In between these extremes lie such varied features and conditions as scorching Arizona deserts, lush Oregon forests, freezing Vermont winters, and sunny Florida beaches. Physical geography involves all the natural features on the earth. This includes the land, resources, climate, and vegetation.



Flowers and brush cover the Coral Pink Sand Dunes in southern Utah.

Land

Separated from much of the world by two oceans, the United States covers 3,717,796 square miles and spans the entire width of North America. To the west, Hawaii stretches the United States into the Pacific Ocean. To the north, Alaska extends the United States to the Arctic Circle. On the U.S. mainland, a huge central plain separates large mountains in the West and low mountains in the East. Plains make up almost half of the country, while mountains and plateaus make up a quarter each.

An abundance of lakes—Alaska alone has three million—and rivers also dot the landscape. Twenty percent of the United States is farmed, providing the country with a steady food supply. Urban areas cover only about two percent of the nation. Refer to the map on the next page for a complete look at the U.S. landscape.

THINKING ABOUT GEOGRAPHY What is the land like around your city or state?



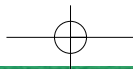
Oil drilled from Alaska helps power the nation's planes, trains, cars, and factories.

Resources

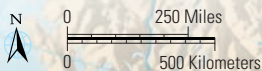
The United States has a variety of natural resources. Vast amounts of coal, oil, and natural gas lie underneath American soil. Valuable deposits of lead, zinc, uranium, gold, and silver also exist. These resources have helped the United States become the world's leading industrial nation—producing nearly 21 percent of the world's goods and services.

These resources have also helped the United States become both the world's largest producer of energy (natural gas, oil, coal, nuclear power, and electricity) and the world's largest consumer of it. Other natural resources include the Great Lakes, which are shared with Canada. They contain about 20 percent of the world's total supply of fresh surface water. Refer to the map on the next page to examine the nation's natural resources.

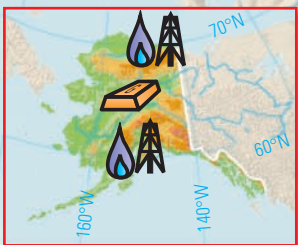
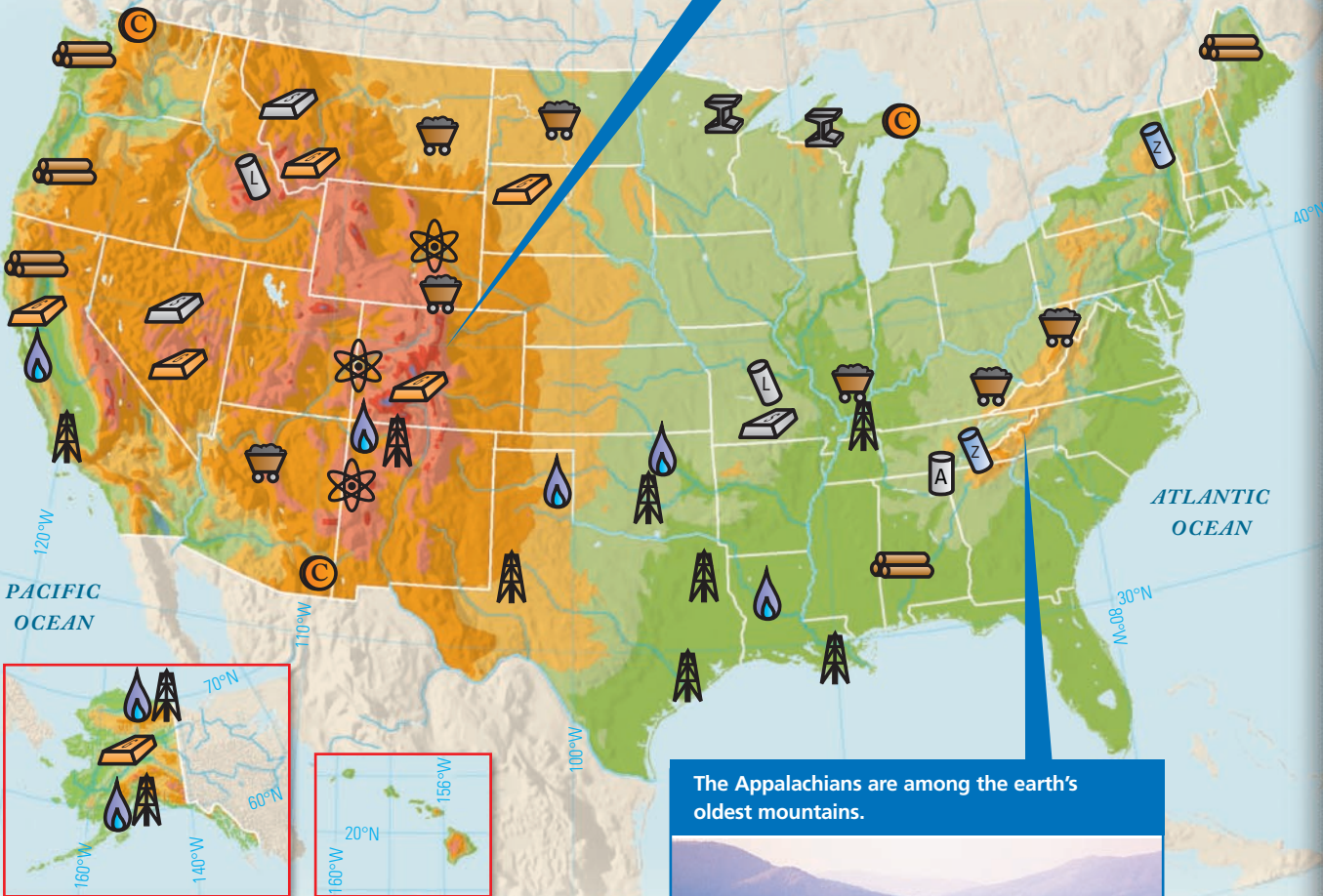
THINKING ABOUT GEOGRAPHY What are the different natural resources that you and your family use in your daily lives?



Land and Resources



Miners extract such minerals as gold, silver, and copper from the Rocky Mountains.



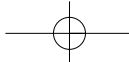
- Aluminum
- Lumber
- Coal
- Natural gas
- Copper
- Oil
- Gold
- Silver
- Iron ore
- Uranium
- Lead
- Zinc

Elevation Key

Feet	Meters
13,120	4,000
9,840	3,000
6,560	2,000
3,280	1,000
1,640	500
656	200
0	0
Below sea level	

The Appalachians are among the earth's oldest mountains.





Climate

People brave the harsh winters in the continental temperate climate of the upper Midwest.

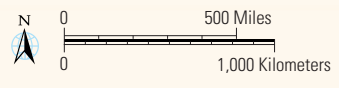
Mount Washington in New Hampshire has experienced one of the world's lowest recorded wind chills of over -100°F , one of the world's highest wind speeds at 231 miles per hour, and a three-day snow fall of 8 feet.

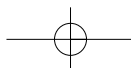


- **Marine**
(mild year-round)
- **Highland**
(cool year-round)
- **Mediterranean**
(warm summers, and rainy, mild winters)
- **Steppe**
(hot summers, cold winters, dry)
- **Desert**
(very hot summers, with cold nights, very dry)
- **Continental temperate**
(mild-to-hot summers, cold winters)
- **Humid subtropical**
(hot summers, mild winters, rainy)
- **Tropical**
(very hot summers, warm winters)
- **Tundra**
(bitterly cold winters, freezing summers)
- **Subarctic**
(very cold winters, cold summers)

Sequoia National Park in California contains the world's largest tree, the General Sherman, a giant sequoia. It measures 103 feet around at its base and is 275 feet high. It weighs about 6,167 tons—over 12 million pounds!

Rain and humidity nourish the lush forests in the humid subtropical climate of the Southeast.





Tourists and residents bask in the sunshine of Waikiki Beach in Hawaii.

Climate

The United States contains a variety of climates. For example, the mean temperature in January in Miami, Florida, is 67° F, while it is 11° F in Minneapolis, Minnesota. Most of the United States experiences a continental climate, or distinct change of seasons. Some regional climatic differences include hot and humid summers in the Southeast versus hot and dry summers in the Southwest. Harsh winters and heavy snow can blanket parts of the Midwest, the Northeast, and the higher elevations of the West and Northwest. Refer to the map on the previous page to see the nation's climatic regions.

Human activities have affected the climate, too. For example, pollution from cars and factories can affect local weather conditions and may be contributing to a dangerous rise in the earth's temperature.

THINKING ABOUT GEOGRAPHY How would you describe the climate where you live?



This mountainside burns with the autumn foliage of New Hampshire.

Vegetation

Between 20,000 and 25,000 species and subspecies of plants and vegetation grow in the United States—including over 1,000 different kinds of trees. Climate often dictates the type of vegetation found in a region. For instance, cold autumns in the Northeast contribute to the brilliantly colored autumn leaves. Rain nourishes the forests in the Northwest and Southeast. The central plains, where rainfall is less heavy, are covered by grass. Cactus plants thrive in the dry southwestern deserts.

Along with natural vegetation, climate dictates the nation's variety of planted crops. For example, temperate weather in the Midwest helps wheat to grow, while warm weather nourishes citrus fruit in Florida and California.

THINKING ABOUT GEOGRAPHY What kinds of trees or plants grow in your region?

Physical Geography Assessment

1. Main Ideas

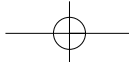
- a. What are the different aspects of physical geography?
- b. Which state contains the largest variety of climates?
- c. What two states contain most of the country's oil resources?

2. Critical Thinking

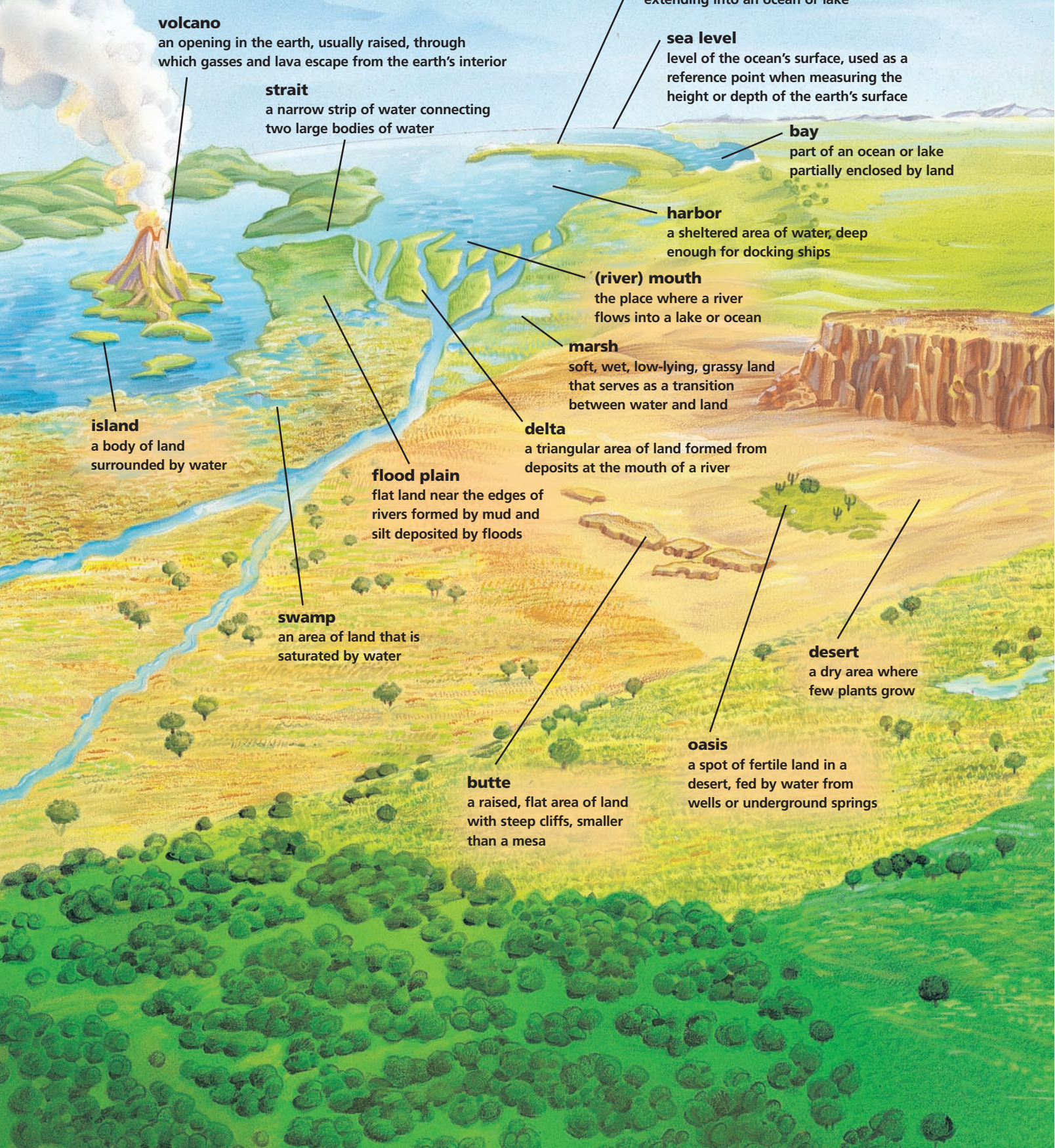
Drawing Conclusions What do you think are the advantages of living in a country with diverse physical geography?

THINK ABOUT

- the different resources available in your region
- the variety of recreational activities in your region



Geographic Dictionary



volcano
an opening in the earth, usually raised, through which gasses and lava escape from the earth's interior

strait
a narrow strip of water connecting two large bodies of water

cape
a pointed piece of land extending into an ocean or lake

sea level
level of the ocean's surface, used as a reference point when measuring the height or depth of the earth's surface

bay
part of an ocean or lake partially enclosed by land

harbor
a sheltered area of water, deep enough for docking ships

(river) mouth
the place where a river flows into a lake or ocean

marsh
soft, wet, low-lying, grassy land that serves as a transition between water and land

delta
a triangular area of land formed from deposits at the mouth of a river

island
a body of land surrounded by water

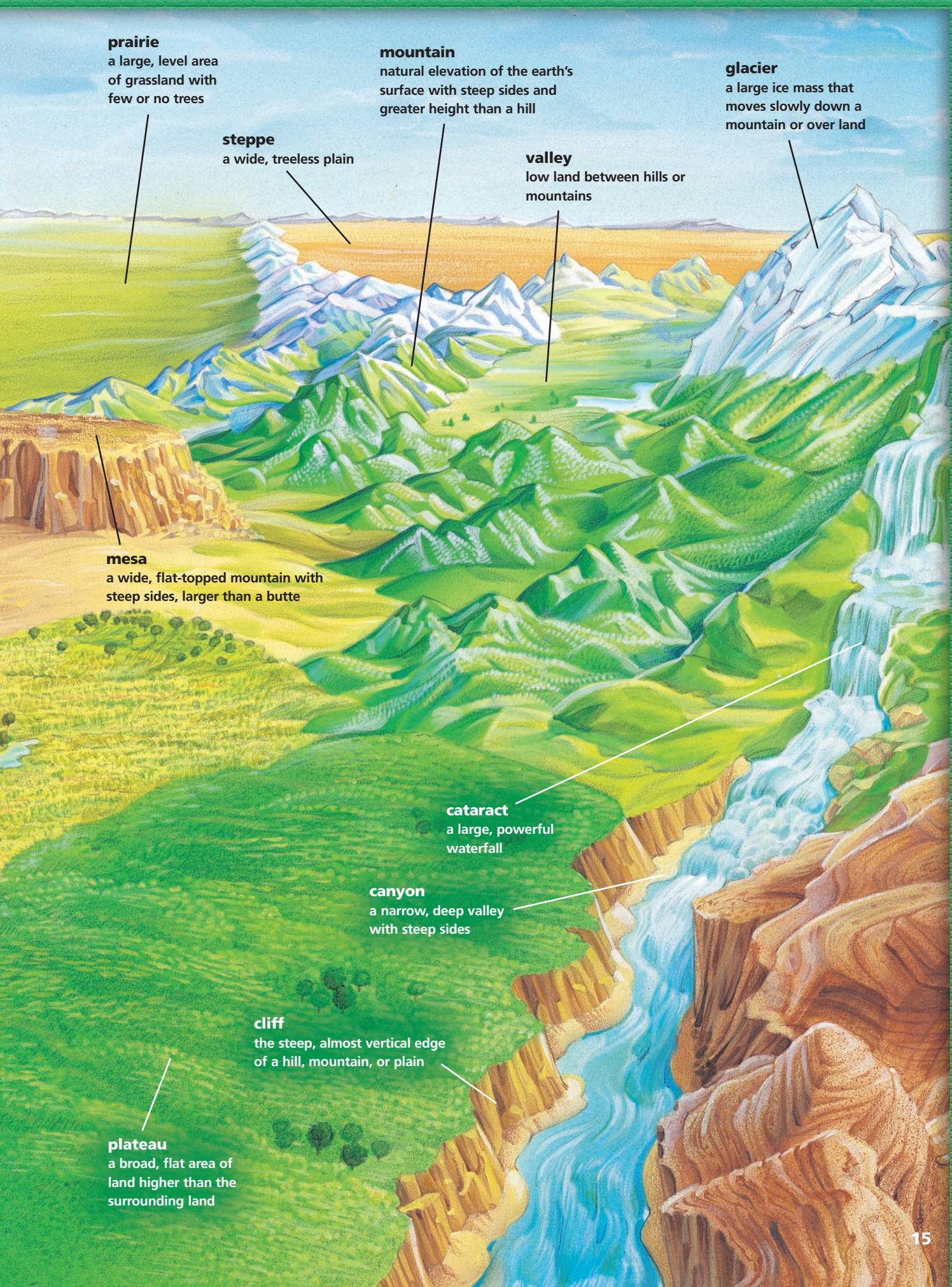
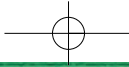
flood plain
flat land near the edges of rivers formed by mud and silt deposited by floods

swamp
an area of land that is saturated by water

desert
a dry area where few plants grow

oasis
a spot of fertile land in a desert, fed by water from wells or underground springs

butte
a raised, flat area of land with steep cliffs, smaller than a mesa



prairie
a large, level area
of grassland with
few or no trees

mountain
natural elevation of the earth's
surface with steep sides and
greater height than a hill

glacier
a large ice mass that
moves slowly down a
mountain or over land

steppe
a wide, treeless plain

valley
low land between hills or
mountains

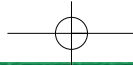
mesa
a wide, flat-topped mountain with
steep sides, larger than a butte

cataract
a large, powerful
waterfall

canyon
a narrow, deep valley
with steep sides

cliff
the steep, almost vertical edge
of a hill, mountain, or plain

plateau
a broad, flat area of
land higher than the
surrounding land



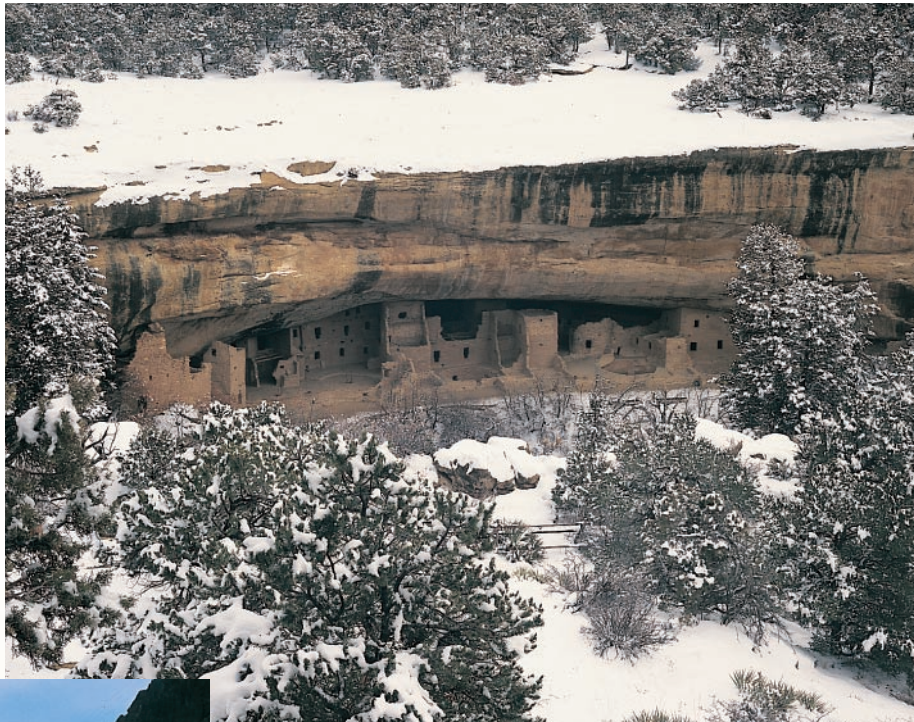
Human Geography of the United States

Human geography focuses on people's relationships with each other and the surrounding environment. It includes two main themes of geography: human-environment interaction and movement. The following pages will help you to better understand the link between people and geography.

Humans Adapt to Their Surroundings

Humans have always adapted to their environment. For example, in North America, many Native American tribes burned forest patches to create grazing area to attract animals and to clear area for farmland. In addition, Americans have adapted to their environment by building numerous dams, bridges, and tunnels. More recently, scientists and engineers have been developing building materials that will better withstand the earthquakes that occasionally strike California.

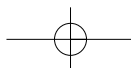
THINKING ABOUT GEOGRAPHY What are some of the ways in which you interact with your environment on a daily basis?



Early Americans of the Southwest protected themselves from the weather by building cliff dwellings.



The Hoover Dam, located on the Colorado River between Arizona and Nevada, provides electricity for Arizona, Nevada, and Southern California.



An oil spill from the ship *Exxon Valdez* harmed wildlife, such as this bird, in Prince William Sound, Alaska, in 1989.

Humans Affect the Environment

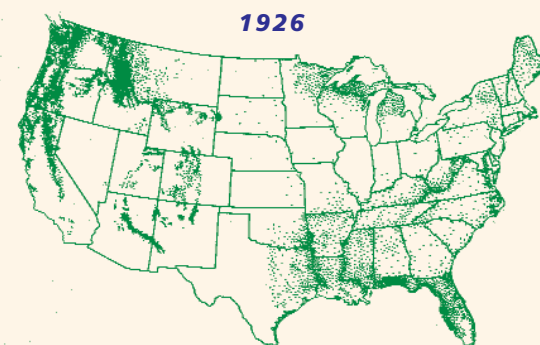
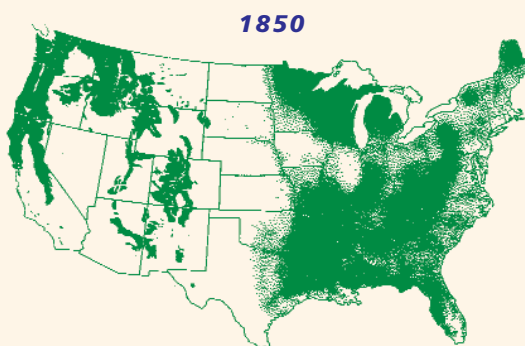
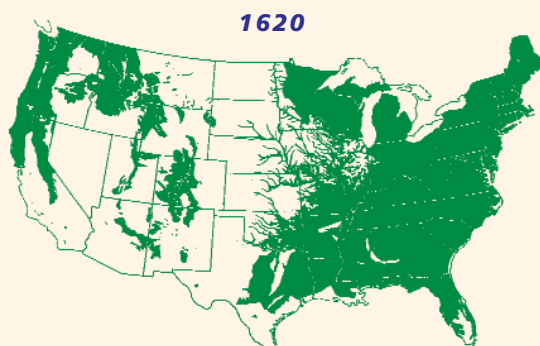
When humans interact with the environment, sometimes nature suffers. In the United States, for example, major oil leaks or spills occur each year—fouling shorelines and harming wildlife. Building suburbs and strip malls has also destroyed forests, farmland, and valuable wetlands.

THINKING ABOUT GEOGRAPHY What are some of the environmental problems in your city or town?



Children plant trees along a Chicago expressway.

Destruction of Original Forests

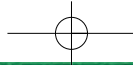


These maps show that, over the years, human beings have nearly cut down all the original forests in the United States. Each dot represents 25,000 acres.

Preserving and Restoring

Americans—as well as people all over the world—have been working hard to balance economic progress with conservation. For example, car companies in the United States and around the world are working to develop pollution-free vehicles. In 1994, the average American family of four recycled around 1,100 pounds of waste. And, in the 1990s, Americans have planted more than two million acres of new trees each year.

THINKING ABOUT GEOGRAPHY What are some of the ways in which you help the environment?



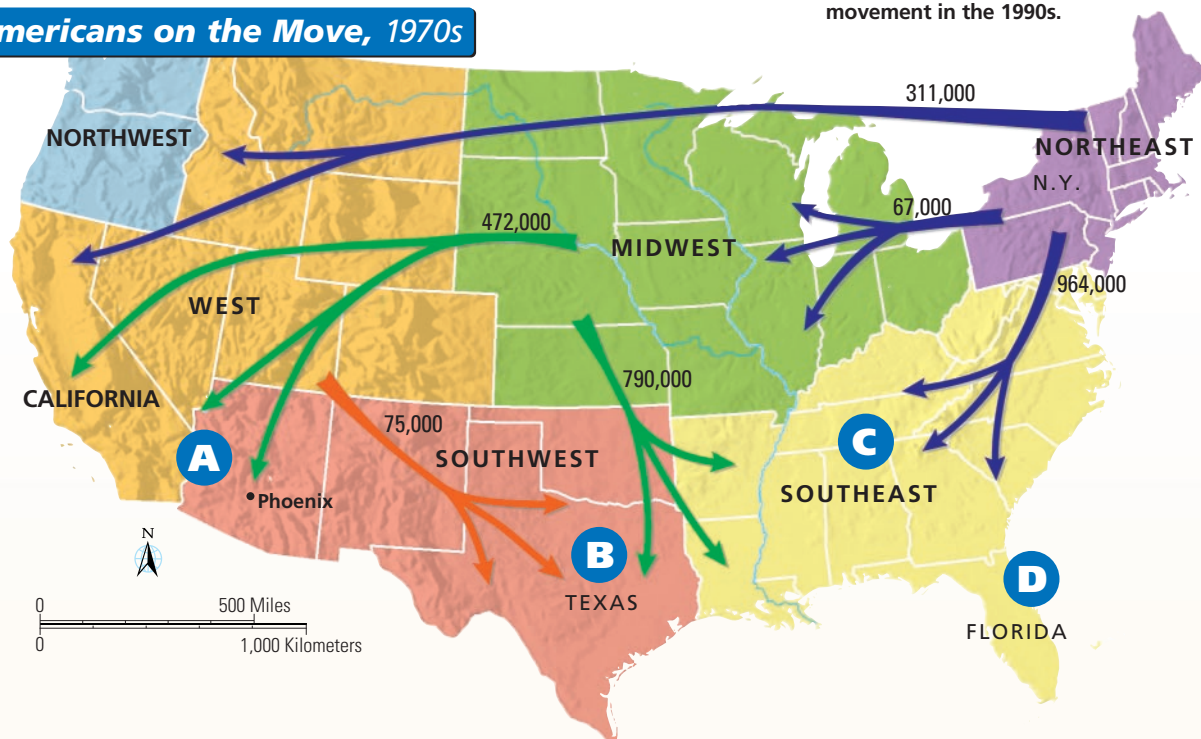
Human Movement

In prehistoric times, people roamed the earth in search of food. Today in the United States, people move from place to place for many different reasons. Among them are cost of living, job availability, and climate. Since the 1970s, many Americans—as well as many new immigrants—moved to the Sunbelt. This region runs through the southern United States from Virginia to California. Between 1950 and 1990, that region’s population soared from 52 million to 118 million.

THINKING ABOUT GEOGRAPHY Has your family ever moved? If so, what were some of the reasons?

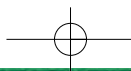
This map shows human movement in the 1970s. The information below explains some of the results of this movement in the 1990s.

Americans on the Move, 1970s



- A** By 1996, the Phoenix-Mesa metropolitan area reached a population of 2.75 million, more than the number of people living in the entire state in 1980.
- B** Between 1990 and 1994, Texas overtook New York as the nation’s second most populous state, behind California.
- C** One of the nation’s fastest growing areas was the Southeast, where population growth ranged from six to nine percent between 1990 and 1994. Jobs grew in the area by 14 percent.
- D** Florida’s population is growing so much that it could become as populous as New York state by around 2020.

New home developments cover the desert in Las Vegas, Nevada.



In the late 19th century, millions of immigrants arrived on the shores of the United States.



The Sears Tower overlooks Chinatown in Chicago.

Humans Spread Ideas and Information

Throughout U.S. history, people from all over the world have come to the United States. They have brought with them food, music, language, technology, and other aspects of their culture. As a result, the United States is one of the most culturally rich and diverse nations in the world. Look around your town or city. You'll probably notice different people, languages, and foods.

Today, the spreading of ideas and customs does not rely solely on human movement. Technology—from the Internet to television to satellites—spreads ideas and information throughout the world faster than ever. This has created an ever-growing, interconnected world. As the 21st century opens, human geography will continue to play a key role in shaping the United States and the world.

THINKING ABOUT GEOGRAPHY How have computers and the Internet affected your life?

Human Geography Assessment

1. Main Ideas

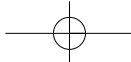
- What are some of the ways that people have helped to restore the environment?
- What are some of the ways that residents of your region have successfully modified their landscape?
- What are some of the reasons that people move from place to place?

2. Critical Thinking

Recognizing Effects In what ways has technology helped bring people in the world together?

THINK ABOUT

- the different ways in which people communicate today
- the speed in which people today can communicate over long distances



GEOGRAPHY HANDBOOK ASSESSMENT

TERMS

Briefly explain the significance of each of the following.

1. physical map
2. political map
3. longitude
4. latitude
5. hemisphere
6. projection
7. flood plain
8. sea level
9. human geography
10. human movement

REVIEW QUESTIONS

Themes of Geography (pages 4-5)

1. What is the difference between *absolute* location and *relative* location?
2. What is meant by the theme of place?
3. What are the themes of movement and human-environment interaction?

Map Basics (pages 6-9)

4. What do you think are some of the benefits of using technology to study geography?
5. What are the three major kinds of maps?
6. What are latitude and longitude lines?

Physical Geography (pages 10-13)

7. How have the natural resources in the United States helped its economic development?
8. What are the different climates within the United States?

Human Geography (pages 16-19)

9. How is human geography different from physical geography?
10. What aspects of human geography might cause people to move?

CRITICAL THINKING

1. **Forming and Supporting Opinions** Which of the five themes of geography do you think has had the most impact on history? Why?
2. **Analyzing Causes** How do the climate and natural resources of an area affect its economy?
3. **Drawing Conclusions** How have computers helped geographers make more accurate maps?
4. **Making Inferences** Why do you think the Mercator projection is used for all types of navigation?
5. **Recognizing Effects** How does a diverse landscape help or hurt the economy of an area?

GEOGRAPHY SKILLS

1. INTERPRETING MAPS: Movement

Basic Map Elements

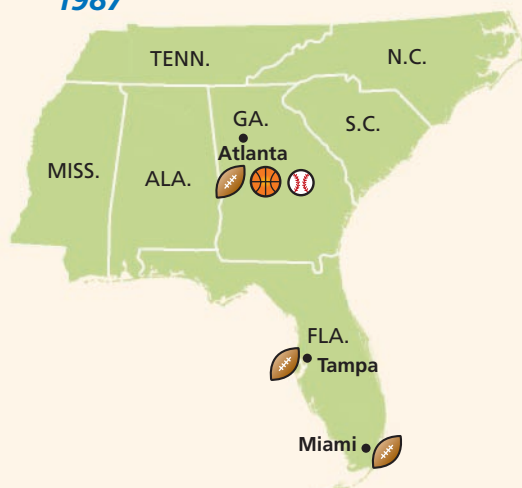
- a. What region of the United States is shown?
- b. Compare the number of teams on the 1987 map and the 2000 map. How many more teams are on the 2000 map?

Interpreting the Map

- c. What geographic theme(s) is most responsible for the increase in sports teams in this region?
- d. According to the map, which sport enjoyed the biggest surge in popularity in this region?

Major League Sports in Southeast Cities

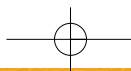
1987



2000



	Baseball (MLB)
	Hockey (NHL)
	Men's Basketball (NBA)
	Women's Basketball (WNBA)
	Football (NFL)
	Soccer (MLS)

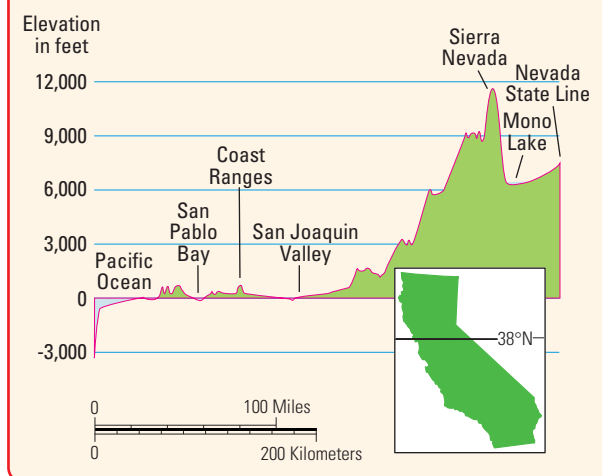


GEOGRAPHY SKILLS

2. INTERPRETING MAPS: Region

Study the map and then answer the questions.

California: Cross section at 38° N



Basic Map Elements

- What are the different landforms on the map?

Interpreting the Map

- What is the level of the San Joaquin Valley? How many miles does it take to get from there to the highest point in California at the 38th parallel?

3. INTERPRETING PRIMARY SOURCES

In 1803, President Thomas Jefferson appointed Meriwether Lewis to explore the lands of the Louisiana Purchase. Jefferson gave him these instructions:

The object of your mission is to explore the Missouri river . . . by its course & communication with the waters of the Pacific Ocean, may offer the most direct & practicable water communication across this continent, for the purposes of commerce. . . .

Other objects worthy of notice will be the soil & face of the country, its growth & vegetable productions . . . the mineral productions of every kind. . . . climate as characterized by the thermometer . . . the dates at which particular plants put forth or lose their flowers, or leaf, times of appearance of particular birds, reptiles, or insects.

Thomas Jefferson, quoted in *The Journals of Lewis and Clark*

- What was Jefferson expecting to find in the West?
- Why might the president want to know about the land's soil and vegetable production?
- What aspect of human geography might be of interest to the president?

ALTERNATIVE ASSESSMENT

1. INTERDISCIPLINARY ACTIVITY: Math

Plotting Latitude and Longitude On a piece of graph paper, sketch a map of the United States. Be sure to draw in state boundaries, too. Then, using an atlas as a reference, draw and mark the latitude and longitude lines that cross the nation at five degree intervals. Plot the estimated longitude and latitude location of your city or town. Determine at which degrees the lines intersect where you live. Repeat this exercise for at least five different places you have visited or would like to visit within the United States.

2. COOPERATIVE LEARNING ACTIVITY

Making a Map How well do you know the neighborhood around your school? Form groups of three to four students. Then work together to draw a map of the neighborhood around your school. Include:

- streets
- residences
- stores
- geographic features
- important landmarks

The map should be accurate but not too cluttered with unnecessary details. Compare your group's map with those of the other groups in the class.

3. TECHNOLOGY ACTIVITY

Writing Directions Several Internet sites provide detailed maps of the United States. They also provide driving directions to most places in the country.

- Locate one of these map sites on the Internet.
- Think of a place in the United States that you would like to visit.
- Work with the computer to find the best route for reaching it.

Write out clear directions as well as the total mileage of your trip. Also, note the type of map it is and the features it highlights.

For more important geography sites . . .



4. HISTORY PORTFOLIO

Review your alternative assessment activities. Use comments made by your teacher or classmates to improve your work.

Additional Test Practice,
pp. S1-S33



TEST PRACTICE
CLASSZONE.COM