



A Rich Diversity in Climate and Resources

TERMS & NAMES

weather
precipitation
climate
vegetation
economy

MAIN IDEA

A region's climate, vegetation, and natural resources are contributing factors to economic activities.

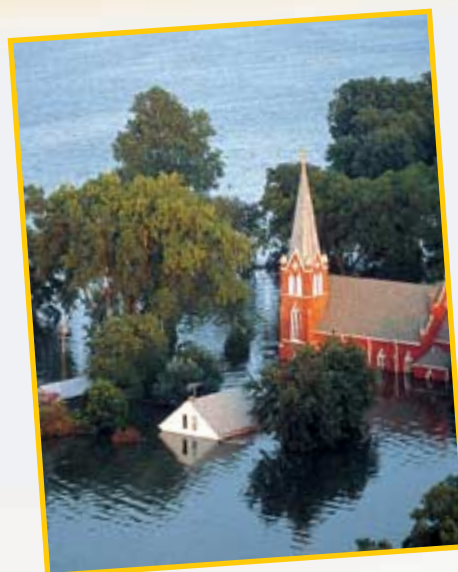
WHY IT MATTERS NOW

The prosperity of people living in the United States and Canada affects the prosperity of the modern global economy.

DATELINE

ST. LOUIS, MISSOURI, U.S.A., OCTOBER 7, 1993—The worst flood in United States history is finally over. Heavy, almost continuous rain fell on much of the upper Midwest. In St. Louis, where the Mississippi and Missouri rivers meet, the flooding began in April and continued for six months.

The disaster affected nine states. Tens of thousands of people had to leave their homes. More than 10,000 homes were destroyed, and 50 people lost their lives.



Human-Environment Interaction • At least 75 towns are under water as a result of the flooding. ▲

Climate and Vegetation

The flood of 1993 was caused by unusual **weather**. Weather is the state of the atmosphere near Earth at a given time and place. It includes temperature, wind, and **precipitation**, or moisture such as rain or snow that falls to Earth. **Climate** is the typical weather in a region over a long period of time. A region's climate helps determine what types of **vegetation**—trees, shrubs, grasses, and other plants—will grow there.



Connections to History

The Dust Bowl Disaster From 1931 to 1939, the southern Great Plains suffered one of the worst droughts in U.S. history. In the 1920s, farmers used up the soil's natural nutrients, and cattle and sheep ranchers destroyed native grasses by overgrazing. When the drought began, crops died, and there were no plant root systems to hold the soil.

The southern Great Plains became known as the Dust Bowl. By 1934, dust storms of topsoil were causing serious damage in 27 states. Ships 300 miles off the Atlantic Coast were covered by blowing dirt. Thousands of people, like this boy, had to leave their farms.



Vegetation Zones

North America's vegetation zones are determined by the climate and physical geography of each area. It is usually warmer in the south and colder in the north, but physical features such as mountains and oceans also affect the climate. Find these vegetation zones on the map on page 77.

Polar and Tundra Northern Canada and Alaska have cool summers and very cold winters. It is usually above freezing (32°F/0°C) there for only two months each year. Precipitation varies from 4 to 20 inches a year. Much of the ground is frozen all year except for the surface, which thaws in summer.

Forest Forests of conifer (evergreen) and broadleaf trees cover much of Canada and the northwest, northeast, and southeast United States. Precipitation averages between 10 and 80 inches annually. Temperatures vary from mild to cold in different forested areas.

Rain Forest Along the Pacific Coast, precipitation can reach 167 inches each year. Rain forests with trees 300 feet tall grow in these areas. The ground is covered in bushes, small trees, and other plants. Moss and lichen are the smallest vegetation. One acre of rain forest might have 6,000 pounds of these tiny plants. The temperature is moderate even in the north, seldom falling below 32°F in winter.

Grassland The center of North America is covered by grasslands. The prairie in the Mississippi Valley may get 30 inches or more of precipitation each year. Grasses are tall and thick. Farther west, the land gets less rainfall—as little as 15 inches in Alberta, Canada—and the grass is shorter. People grow grain and raise cattle in these areas.

Desert The deserts of the American Southwest get less than 10 inches of precipitation a year. Plants in the deserts must be able to endure harsh sun, high temperatures, and little rain. Only the hardiest bushes, shrubs, a few small trees, and cacti survive there.

Vocabulary

lichen (LY•kuhn): organism that grows with algae on rocks or tree trunks

Reading Social Studies

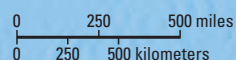
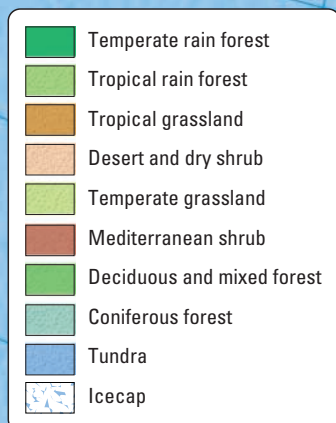
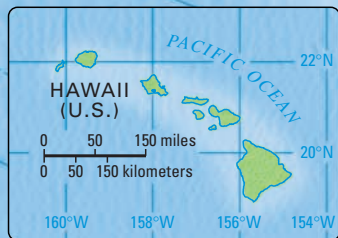
A. Recognizing Effects How do climate and geography influence the attraction of people to an area?



Vegetation Zones of Canada and the United States

GEOGRAPHY SKILLBUILDER: Interpreting a Map

1. **Region** • What kind of vegetation zone covers most of Canada?
2. **Region** • What part of the United States is covered by temperate grassland?





Natural Wealth

The United States and Canada are rich in natural resources. This wealth has influenced their economic development.

Region • The Mississippi River has been an important commercial shipping route for more than a century. ▼



Land and Power Resources The farmlands of the midwestern United States and the prairies in the central provinces of Canada have rich soil. Forests are found in western Canada and the northwestern, northeastern, and southeastern United States. There are oil fields in Alberta, Canada; in Texas, California, Louisiana, Oklahoma, and Alaska; and in the Gulf of Mexico. Coal is in Canada's western provinces; in the Appalachian Mountains; and in Illinois, Indiana, and Wyoming.

Water Resources Water routes affect where people and industry are located. Settlers in North America followed rivers to areas where fresh water and good soil permitted farming and raising cattle. Businesses grew in new commu-

nities. People still use rivers to ship natural resources, such as timber and coal, and as trade and travel routes. Fishing is a food source and an industry. Rivers and lakes supply water and power, and offer recreational activities.

BACKGROUND

The Mississippi River is the largest river in North America. From its source, Lake Itasca in Minnesota, to its mouth in the Gulf of Mexico, it flows for 2,350 miles. The name Mississippi is from the Native American Algonquian language and means "Big River."



The Cajuns: Americans with Canadian Roots The French settled in Acadia, which is now Nova Scotia, Canada, in 1604. The British gained control of much of Nova Scotia, and in 1755, they expelled most French Acadians. Many of the displaced settlers relocated to southern Louisiana, which was under the rule of France at that time.

Known as Cajuns, the descendants of those French Canadians share a special cultural heritage. Their language has French, English, Spanish, German, and Native American influences. Their music is played with fiddles, accordions, and guitars and has a unique sound. The man shown at left plays the accordion at a Cajun music festival in Louisiana.

THINKING CRITICALLY



- 1. Recognizing Effects** What effect did Britain's rule over Nova Scotia have on the French in Acadia?
- 2. Recognizing Important Details** What are some features of the Cajun culture?



Neighbors and Leaders

More than 200 million people cross the U.S.-Canadian border every year. Trade between the two countries exceeds \$1 billion a day. They cooperate on issues as diverse as national security and defense, the environment, air traffic, and fishing regulations. A United States president described the relationship between these countries.

A VOICE FROM THE UNITED STATES

Geography has made us neighbors, history has made us friends, economics has made us partners, and necessity has made us allies.

John F. Kennedy

Reading Social Studies

B. Finding Causes
What common interests make the United States and Canada allies and partners?

Both countries have strong economies and are leaders in world trade. An **economy** is the way that business owners use resources to provide the goods and services that people want.

Citizenship IN ACTION



The Nature Conservancy The Conservancy works with communities to protect natural areas, plants, and animals. It has safeguarded 12 million acres and 1,400 land preserves, such as this one, in the United States. In its Great Lakes Program, and in Minnesota, the Conservancy is working with Canadian and U.S. groups to protect wildlife and 10,000 acres of the last tallgrass prairie on the U.S.-Canadian border.

SECTION 2 ASSESSMENT

Terms & Names

- 1. Identify:** (a) weather (b) precipitation (c) climate
(d) vegetation (e) economy

Taking Notes

- 2.** Make a chart such as this one to list details about vegetation zones of the United States and Canada.

Polar and Tundra	Forest	Rain Forest	Grassland	Desert

Main Ideas

- 3. (a)** How do climate and geography affect vegetation?
(b) What natural resources are found in North America?
(c) How have waterways affected settlement and development in the United States and Canada?

Critical Thinking

4. Drawing Conclusions

How does the variety of vegetation zones affect the economies of the United States and Canada?

Think About

- ♦ crops and resources found in each vegetation zone
- ♦ world economy

ACTIVITY -OPTION-

Choose one of the vegetation zones discussed in the section. Draw a **picture** showing what the land looks like.