



The United States and Canada

WHY IT'S IMPORTANT—

The United States and Canada are peaceful neighbors, sharing the longest undefended border in the world. These two countries have many things in common, including similar ways of life and a democratic heritage. In recent years, free trade has brought their economies closer together. In each country, one finds an increasing number of products that were made in the other country.



World Regions Video



To learn more about the United States and Canada and their impact on your world, view the World Regions video “The United States and Canada.”

NGS **ONLINE**

www.nationalgeographic.com/education



Golden Gate Bridge across the entrance to San Francisco Bay

Unit 2 101

◀ **CONTENTS** ▶

What Makes the United States and Canada a Region?

The United States and Canada span most of North America, stretching from the Pacific Ocean to the Atlantic. These two huge countries share many physical features. Mountains frame their eastern and western edges, cradling a central region of vast plains.

When people first arrived on these plains, they found an immense sea—not of water, but of grass. Beneath the gently rolling landscape lay dark, fertile soil. In time, the grasslands were transformed into some of the world’s most productive farmland.

To the east of the plains stand the ancient, rounded Appalachian Mountains. To the west are the much younger Rocky Mountains, a majestic ribbon of jagged, snowcapped peaks. Still farther west are the Pacific Ranges, which run along the Pacific coast.

Almost every imaginable type of climate—from tundra to desert to tropical savanna—can be found within the borders of these two diverse countries.



1 Six-foot-tall sunflowers thrive on this farm in North Dakota, in the heart of the Great Plains. North Dakota leads the United States in the production of sunflowers. The protein-rich seeds are turned into margarine and cooking oil.





2 Boats line the harbor of a fishing village in Nova Scotia, along Canada's Atlantic coast. Both Canadians and Americans harvest fish and other types of seafood from the Atlantic's bountiful waters.

3 Snow-dusted peaks surround a climber in the Canadian Rockies. The backbone of North America, the Rockies extend from the farthest reaches of Alaska and the Yukon Territory down into the southwestern United States.

4 The only deserts in the region are found in the southwestern United States, in an area of low basins and high, windswept plateaus sandwiched between the Pacific Ranges and the Rocky Mountains. These rippled dunes lie in Utah.

Region of Immigrants

Even the ancestors of Native Americans came from a distant shore. These ancient people may have crossed from Asia to North America by way of a land bridge that spanned what is now the Bering Strait.

Immigrants began arriving from Europe in the 1500s. In the centuries that followed, others came from Africa, Asia, and Latin America. Many made this land their home by choice. Others were forced to come as exiles or slaves.

Today, most people in the United States and Canada live in urban areas. Major cities are ethnically diverse, reflecting an immigrant heritage. The economic strength of both countries was built on the bounty of agriculture. Manufacturing, technology, and service industries have joined agriculture as the region's primary economic activities.



1 The white walls of a Spanish mission, or religious settlement, stand out against a blue New Mexico sky. Hoping to convert the area's native inhabitants to Christianity, the Spanish built many missions in what is now the southwestern United States.

2 Red lights and blues music illuminate a musician's face. The blues, a distinctively American musical style, was developed by African Americans. It sprang from spiritual music and from the wails and calls used by Southern plantation workers.





3 **Lights of Toronto**, Ontario, stretch toward the horizon, brightening the night sky. With 4.7 million inhabitants in its metropolitan area, Toronto is Canada's largest city. It is a thriving center for service industries such as finance and communications.

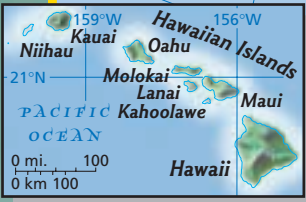
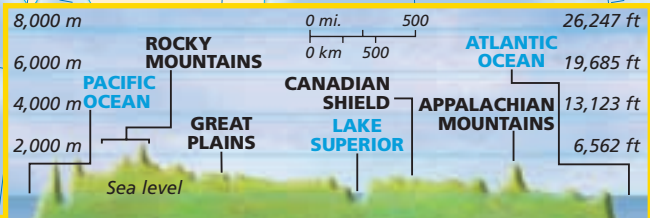
4 **Freshly caught fish** chill in a snow bank outside an Inuit village in Canada's Northwest Territories. The Inuit have lived in the northern parts of Canada and Alaska for about a thousand years. Many still pursue traditional activities such as fishing and hunting.

The United States and Canada

PHYSICAL



Elevation Profile



POLITICAL



MAP Study

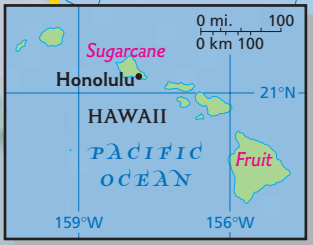
1. In which Canadian province is Calgary located?
2. Through which U.S. states do the Coast Ranges run?

The United States and Canada

POPULATION DENSITY



ECONOMIC ACTIVITY



Resources	
Iron ore	Copper
Petroleum	Zinc
Natural gas	Gold
Coal	Silver









Land Use	
Commercial farming	
Subsistence farming	
Livestock raising	
Nomadic herding	
Hunting and gathering	
Forests	
Manufacturing and trade	
Commercial fishing	
Little or no activity	

MAP Study

1. Where are most of Canada's coal deposits located?
2. How has access to water affected city development? What is the predominant land use near cities?

The United States and Canada






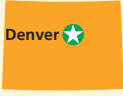









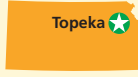








COUNTRY PROFILES

COUNTRY * AND CAPITAL	FLAG AND LANGUAGE	POPULATION AND DENSITY	LANDMASS	MAJOR EXPORT	MAJOR IMPORT	CURRENCY	GOVERNMENT
UNITED STATES  Washington, D.C.	 English	284,500,000 77 per sq. mi. 30 per sq. km	3,717,796 sq. mi. 9,629,091 sq. km	 Machinery	 Crude Oil	U.S. Dollar	Federal Republic
CANADA  Ottawa	 English, French	31,000,000 8 per sq. mi. 3 per sq. km	3,849,670 sq. mi. 9,970,610 sq. km	 Newsprint	 Crude Oil	Canadian Dollar	Parliamentary Democracy














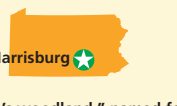







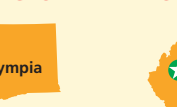


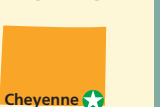
FOR AN ONLINE UPDATE OF THIS INFORMATION, VISIT GEOGRAPHY.GLENCOE.COM AND CLICK ON "TEXTBOOK UPDATES."

U.S. State Names: Meaning and Origin










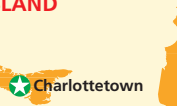



[CLICK HERE](#)

ALABAMA  Montgomery "thicket clearers" (Choctaw)	ALASKA  Juneau "the great land" (Aleut)	ARIZONA  Phoenix "little spring" (Papago), or "dry land" (Spanish)	ARKANSAS  Little Rock "downstream people" (Quapaw)	CALIFORNIA  Sacramento unknown meaning (Spanish)	COLORADO  Denver "red" (Spanish)
CONNECTICUT  Hartford "beside the long tidal river" (Native American)	DELAWARE  Dover named for Virginia's colonial governor, Baron De La Warr	FLORIDA  Tallahassee "feast of flowers" (Spanish)	GEORGIA  Atlanta named for England's King George II	HAWAII  Honolulu unknown meaning (Native Hawaiian)	IDAHO  Boise unknown meaning (Native American)
ILLINOIS  Springfield "tribe of superior men" (Native American)	INDIANA  Indianapolis "land of Indians" (European American)	IOWA  Des Moines unknown meaning (Native American)	KANSAS  Topeka "people of the south wind" (Sioux)	KENTUCKY  Frankfort "land of tomorrow" (Iroquoian)	LOUISIANA  Baton Rouge named for France's King Louis XIV
MAINE  Augusta named for an ancient French province	MARYLAND  Annapolis named in honor of the wife of England's King Charles I	MASSACHUSETTS  Boston "great mountain place" (Native American)	MICHIGAN  Lansing "great lake" (Ojibway)	MINNESOTA  Saint Paul "sky-tinted water" (Sioux)	MISSISSIPPI  Jackson "father of the waters" (Native American)

* COUNTRIES, FLAGS, STATES, AND PROVINCES NOT DRAWN TO SCALE

<p>MISSOURI</p>  <p>Jefferson City</p> <p>"town of the large canoes" (Native American)</p>	<p>MONTANA</p>  <p>Helena</p> <p>"mountainous" (Spanish)</p>	<p>NEBRASKA</p>  <p>Lincoln</p> <p>"flat water" (Native American)</p>	<p>NEVADA</p>  <p>Carson City</p> <p>"snowcapped" (Spanish)</p>	<p>NEW HAMPSHIRE</p>  <p>Concord</p> <p>named for Hampshire, a county in England</p>	<p>NEW JERSEY</p>  <p>Trenton</p> <p>named for Isle of Jersey, a British territory</p>
<p>NEW MEXICO</p>  <p>Santa Fe</p> <p>named for the state's former colonial ruler, Mexico</p>	<p>NEW YORK</p>  <p>Albany</p> <p>named in honor of the English Duke of York</p>	<p>NORTH CAROLINA</p>  <p>Raleigh</p> <p>named in honor of England's King Charles I</p>	<p>NORTH DAKOTA</p>  <p>Bismarck</p> <p>named for the Dakota, a Native American group</p>	<p>OHIO</p>  <p>Columbus</p> <p>"great river" (Native American)</p>	<p>OKLAHOMA</p>  <p>Oklahoma City</p> <p>"red people" (Choctaw)</p>
<p>OREGON</p>  <p>Salem</p> <p>unknown meaning and origin</p>	<p>PENNSYLVANIA</p>  <p>Harrisburg</p> <p>"Penn's woodland," named for the father of Pennsylvania's founder, William Penn</p>	<p>RHODE ISLAND</p>  <p>Providence</p> <p>unknown meaning and origin</p>	<p>SOUTH CAROLINA</p>  <p>Columbia</p> <p>named for England's King Charles I</p>	<p>SOUTH DAKOTA</p>  <p>Pierre</p> <p>named for the Dakota, a Native American group</p>	<p>TENNESSEE</p>  <p>Nashville</p> <p>named for Tanasi, "Cherokee villages" (Cherokee)</p>
<p>UTAH</p>  <p>Salt Lake City</p> <p>"people of the mountains" (Ute)</p>	<p>VERMONT</p>  <p>Montpelier</p> <p>"green mountain" (French)</p>	<p>VIRGINIA</p>  <p>Richmond</p> <p>named for the unmarried Queen Elizabeth I of England, known as "the Virgin Queen"</p>	<p>WASHINGTON</p>  <p>Olympia</p> <p>named in honor of George Washington</p>	<p>WEST VIRGINIA</p>  <p>Charleston</p> <p>began as the western part of Virginia before becoming a state in 1863</p>	<p>WISCONSIN</p>  <p>Madison</p> <p>"grassy place" (Chippewa)</p>
<p>WYOMING</p>  <p>Cheyenne</p> <p>"upon the great plain" (Delaware)</p>					

Canadian Province and Territory Names: Meaning and Origin

<p>ALBERTA</p>  <p>Edmonton</p> <p>named for the daughter of England's Queen Victoria</p>	<p>BRITISH COLUMBIA</p>  <p>Victoria</p> <p>named for Christopher Columbus and the province's British heritage</p>	<p>MANITOBA</p>  <p>Winnipeg</p> <p>"strait of the great spirit" (Algonquian)</p>	<p>NEW BRUNSWICK</p>  <p>Fredericton</p> <p>named for English royal family of Brunswick-Luneburg</p>	<p>NEWFOUNDLAND</p>  <p>St. John's</p> <p>"new found land," named by European explorer John Cabot in 1497</p>	<p>NORTHWEST TERRITORIES</p>  <p>Yellowknife</p> <p>named for lands north and west of Lake Superior</p>
<p>NOVA SCOTIA</p>  <p>Halifax</p> <p>Latin term for "New Scotland," based on province's Scottish heritage</p>	<p>NUNAVUT</p>  <p>Iqaluit</p> <p>"our land" (Inuktitut)</p>	<p>ONTARIO</p>  <p>Toronto</p> <p>meaning unknown (Iroquoian)</p>	<p>PRINCE EDWARD ISLAND</p>  <p>Charlottetown</p> <p>named for the son of England's King George III</p>	<p>QUEBEC</p>  <p>Quebec</p> <p>"place where the river narrows" (Algonquian)</p>	<p>SASKATCHEWAN</p>  <p>Regina</p> <p>"fast flowing river" (Cree)</p>
<p>YUKON TERRITORY</p>  <p>Whitehorse</p> <p>"great river" (Native American)</p>					

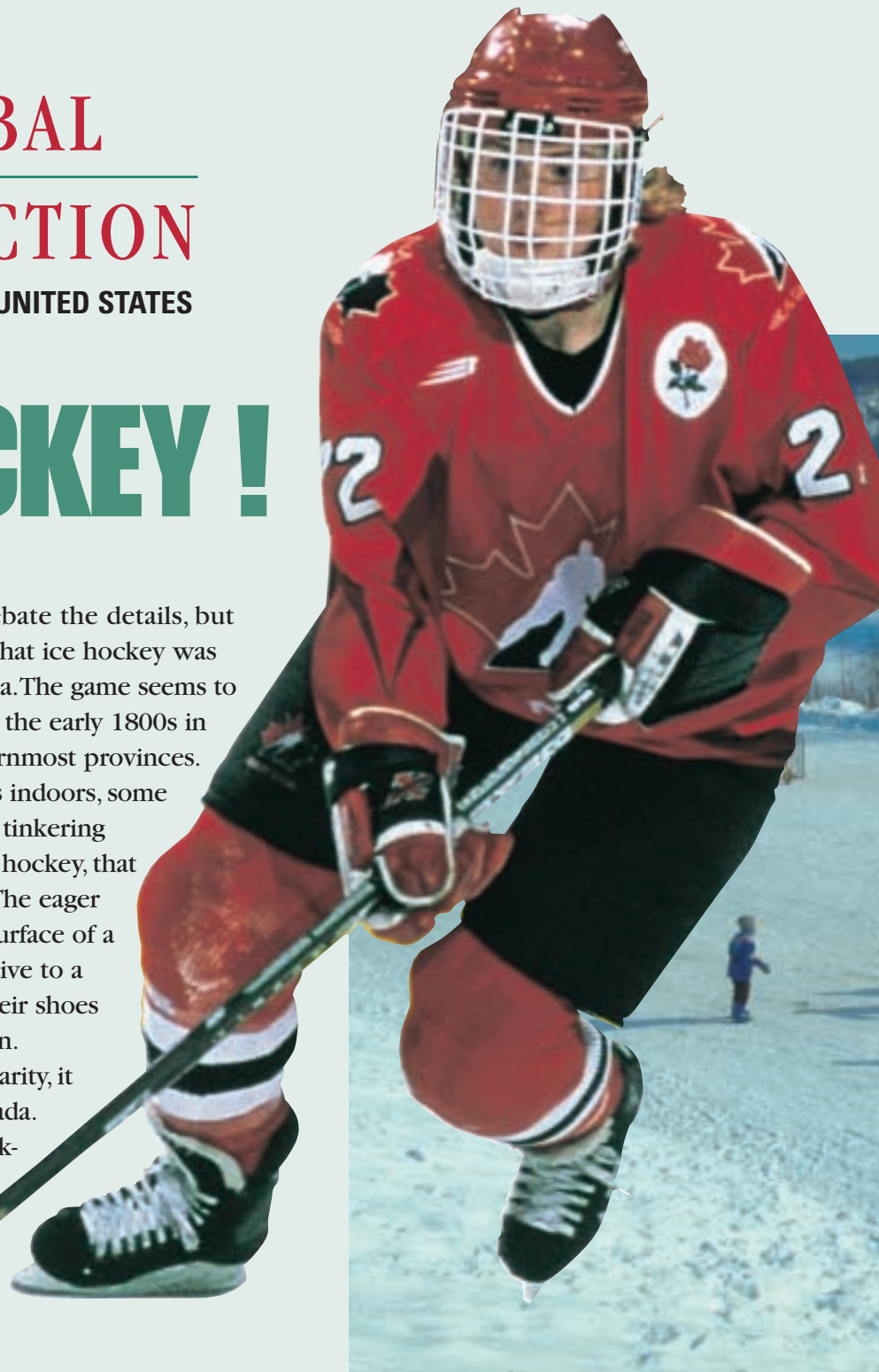
GLOBAL
CONNECTION
CANADA AND THE UNITED STATES

ICE HOCKEY !



Historians still debate the details, but everyone agrees that ice hockey was invented in Canada. The game seems to have originated in the early 1800s in Nova Scotia, one of Canada's easternmost provinces. Not content to spend long winters indoors, some of Nova Scotia's inhabitants began tinkering with an Irish game, similar to field hockey, that was played with sticks and a ball. The eager sportsmen realized that the slick surface of a frozen pond was a worthy alternative to a grassy playing field. They traded their shoes for skates, and ice hockey was born.

As the new game gained popularity, it spread west and north across Canada. By the turn of the century, ice hockey had become Canada's national sport. And it was not just for men. The first all-female



▲ Member of a Canadian women's team racing for the puck

▲ Pick-up game near Canada's Laurentian Mountains



ice hockey game on record was played in Ontario in 1892.

Hockey fever spread southward, too, crossing the U.S.-Canadian border into northern states such as Minnesota, Michigan, Massachusetts, and New York. In 1924 the Boston Bruins became the first U.S. team to join Canada's National Hockey League. Other northern cities, including Chicago and Detroit, soon had teams on the League's roster as well.

At this point, geography checked ice hockey's southward spread. For nearly a quarter century, the game remained a northern pastime. It just didn't catch on in southern states where cold weather was rare and lakes never froze.

Eventually, however, indoor ice rinks, televised hockey games, and a steady influx of Canadian players into the United States overcame the geographic barriers, and the sport found a foothold in nearly every state. Hockey made headlines in 1980 when America's team beat the heavily favored Soviets in the Olympic Winter Games and then went on to win the gold medal. When Canadian superstar Wayne Gretzky came to play in the United States a few years later, hockey's popularity surged again.

Now in-line skates and roller hockey make it possible for would-be players to get a feel for the game no matter where

they live or what the season. Many

major U.S. cities have professional hockey teams, including Phoenix, Dallas, and Miami. In fact, America's Sun Belt alone is home to more hockey teams than there are in Canada! But ice hockey in the United States isn't just for professionals. It's played by kids—both boys and girls—and amateurs throughout the nation.



▲ Hockey legend Wayne Gretzky entering a rink



CHAPTER

5

The Physical Geography of the United States and Canada

GeoJournal

As you read this chapter, note in your journal unusual facts about the physical geography of the United States and Canada—facts that make you ask how or why. Consider using these facts as the main ideas for essays or reports.



Chapter Overview Visit the **Glencoe World Geography** Web site at tx.geography.glencoe.com and click on Chapter Overviews—Chapter 5 to preview information about the physical geography of the region.

CLICK HERE

CONTENTS

Guide to Reading

Consider What You Know

The United States and Canada share the world's longest undefended border. What famous natural feature do both the United States and Canada claim as a tourist attraction?

Read to Find Out

- What are some key similarities and differences in the physical geography of the United States and Canada?
- Why have rivers played such an important role in this region's development?
- What geographic factors have made the United States and Canada so rich in natural resources?

Terms to Know

- divide
- fall line
- headwaters
- fishery
- tributary

Places to Locate

- Mount McKinley
- Rocky Mountains
- Canadian Shield
- Appalachian Mountains
- Colorado River
- Rio Grande
- Mackenzie River
- Mississippi River
- St. Lawrence River
- Great Lakes

◀ Organ Pipe Cactus National Monument, Arizona

The Land

NATIONAL GEOGRAPHIC

A Geographic View

Carving Their Own Way

Grain fields spill their color across the badlands of the Missouri Breaks, a lonesome swatch of eastern Montana where the Great Plains roll to an abrupt and wild end. The Missouri River and its tributaries have cut deep paths through the underlying sandstone and shale, fracturing the open country. Rough and remote spaces rule the Breaks—perfect for folks who insist on carving their own way.

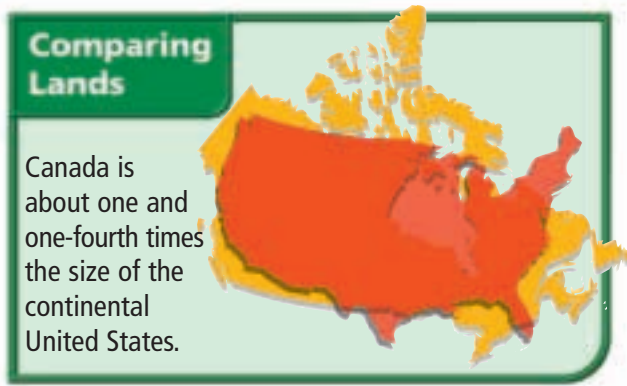
—John Barsness, "The Missouri Breaks," National Geographic, May 1999



The rugged terrain of the Missouri Breaks bears witness to the geologic forces that have shaped the North American continent. The United States and Canada share the northern part of the continent. They form a geographic region of enormous physical variety and natural wealth. Together, Canada and the continental United States cover more than 7 million square miles (18 million sq. km), about 12 percent of Earth's land surface. In this section you will explore the physical geography of these two countries.

Landforms

Mountains rise at the eastern and western edges of both the United States and Canada. In the west young, sharp-edged mountain ranges tower above plateaus that descend to vast, rolling central plains. Mighty rivers and enormous lakes satisfy the thirst of cities, wildlife, and natural vegetation in the two countries' midsections. The fertile plains extend across the continent until they meet the lower, more eroded mountains in the east.



Western Mountains and Plateaus

Collisions between the Pacific and the North American tectonic plates millions of years ago thrust up a series of impressive, sharp-peaked mountain ranges called the Pacific Ranges. Still young in geologic terms, the Pacific Ranges include the Sierra Nevada, the Cascade Range, the Coast Range, and the Alaska Range. The Alaska Range gives rise to the highest point on the continent, **Mount McKinley**, at 20,320 feet (6,194 m).

Like the Pacific Ranges, the **Rocky Mountains** grew as geologic forces heaved slabs of rock upward. The map on p. 117 shows that the snow-covered Rocky Mountains link the United States and Canada and stretch more than 3,000 miles (4,828 km) from New Mexico to Alaska. Some peaks of the Rockies soar to more than 14,000 feet (4,267 m).

Dry basins and plateaus fill the area between the Pacific Ranges and the Rockies. The Columbia Plateau in the north was formed by lava that seeped from cracks in the earth. The heavily eroded Colorado Plateau displays flat-topped mesas and the majestic Grand Canyon of the Colorado River. At its deepest the canyon's steep walls plunge 6,000 feet (1,829 m). The Great Basin cradles Death Valley, the hottest and lowest place in the United States. Canada's Nechako Plateau and Fraser Plateau are colder and narrower than the plateau areas in the United States.

Interior Landforms

East of the Rockies, the land falls and flattens into the Great Plains, which extend 300 to 700 miles (483 to 1,126 km) across the center of the region. The Great Plains are sometimes called the Interior Plains or the High Plains because of their location and elevation, which reaches up to 6,000 feet (1,829 m).

Although the Great Plains appear flat, the land slopes gradually downward at about 10 feet per mile (about 2 m per km) to the heart of the Central Lowlands along the Mississippi River.

Eastern Mountains and Lowlands

East of the Mississippi, the land rises slowly into the foothills of the Appalachian Mountains. At the edge of the Canadian plains, the **Canadian Shield**, a giant core of rock centered on the Hudson and James Bays, anchors the continent. The stony land of the Shield makes up the eastern half of Canada and the northeastern United States. In northern Quebec the Canadian Shield descends to the Hudson Bay.

The heavily eroded **Appalachian Mountains** are North America's oldest mountains and the continent's second-longest mountain range. They extend about 1,500 miles (2,414 km) from Quebec to central Alabama. Coastal lowlands lie east and south of the Appalachians. Between the mountains and the coastal lowlands lies a wide area of rolling hills. Many rivers cut through the Piedmont and flow across to the Atlantic Coastal Plain in the Carolinas. In the southeast the Gulf Coastal Plain extends westward to Texas.

Islands

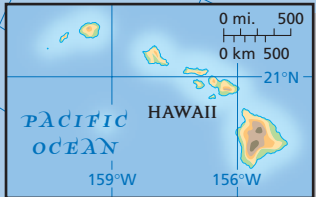
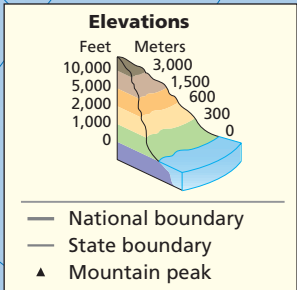
Islands are important in the region. New York City's Manhattan Island, at the mouth of the Hudson River, is a major United States and world economic center. Volcanic mountaintops emerging from the Pacific Ocean formed Hawaii, creating 8 major and 124 smaller islands with a land area of 6,471 square miles (16,760 sq. km). Newfoundland, Prince Edward Island, and Cape Breton Island in the east and Vancouver Island in the west are Canada's most important islands. Near the coast of Canada's Ellesmere Island lies the world's largest island, Greenland. An overseas territory of Denmark, Greenland spans 840,325 square miles (2.2 million sq. km), an area about the size of Alaska and Texas combined.

A Fortune in Water

Freshwater lakes and rivers have helped make the United States and Canada wealthy. Abundant water satisfies the needs of cities and rural areas, provides power for homes and industries, and moves resources across the continent.



The United States and Canada: Physical-Political



0 mi. 500
0 km 500
Azimuthal Equidistant projection

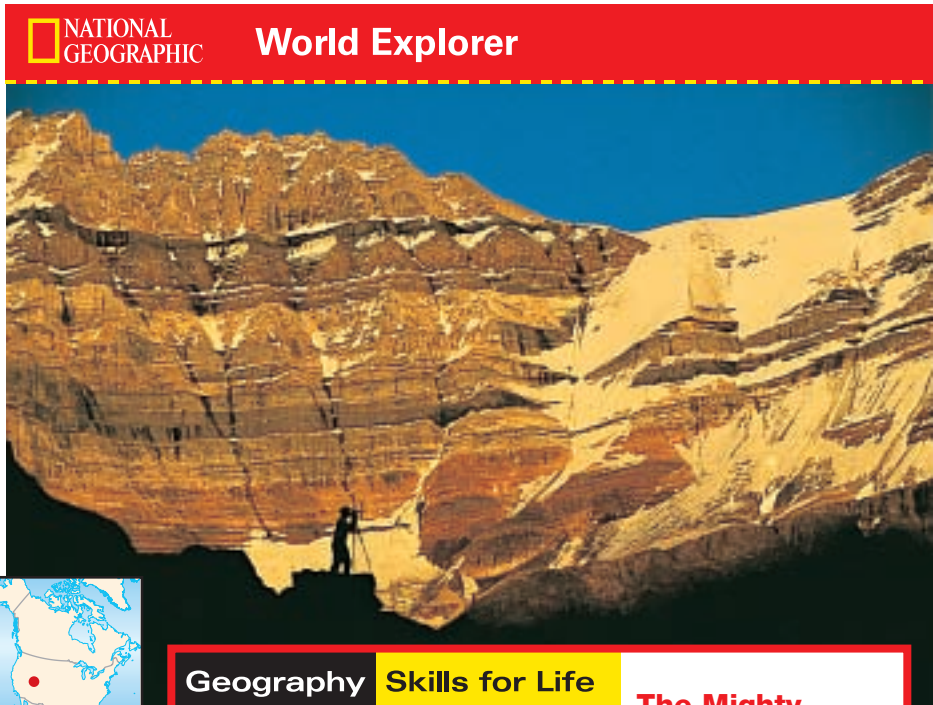
Geography Skills for Life

- 1. Interpreting Maps** Which Canadian provinces border Hudson Bay?
- 2. Applying Geography Skills** How do the Rocky Mountains affect the rivers in the United States and Canada?

Find NGS online map resources @ www.nationalgeographic.com/maps

Rivers from the Rockies

In North America the high ridge of the Rockies is called the Continental Divide, or the Great Divide. A **divide** is a high point or ridge that determines the direction that rivers flow. East of the Continental Divide, waters flow toward the Arctic Ocean, Hudson Bay, the Atlantic Ocean, and the Mississippi River system into the Gulf of Mexico; to the west, waters flow into the Pacific Ocean. Rivers—such as the **Colorado** and the **Rio Grande**—have their **headwaters**, or source, in the Rockies, and many **tributaries**, or brooks, rivers, and streams, connect with one of these rivers. Northeast of the Rockies, the **Mackenzie River**—which flows from the Great Slave Lake to the Arctic Ocean—drains much of Canada’s northern interior.



NATIONAL GEOGRAPHIC

World Explorer

Geography

Skills for Life

The Mighty

Rockies Rising high into the sky, much of the Rocky Mountains are capped with snow year-round.

Place What major rivers have their headwaters in the Rockies?

The Mighty Mississippi

One of North America’s longest rivers, the **Mississippi River**, flows 2,350 miles (3,782 km) from its source. It begins in Minnesota as a stream so narrow that a person can jump across it.

“When I was nine years old, I jumped across the Mississippi. . . . My parents let me know this modest stream I’d taken in stride was actually one of the Earth’s great corridors, dominion of paddleboats and Huck Finn, prime mover of food, fertility, and commerce across our land.”

Barbara Kingsolver, “San Pedro River: the Patience of a Saint,” *National Geographic*, April 2000

The Mississippi, swelled to a width of a mile and a half (2.4 km), empties into the Gulf of Mexico. The Mississippi drains 1,200,000 square miles (3,108,000

sq. km) of land, including all or part of 31 U.S. states and 2 Canadian provinces. It is one of the world’s busiest commercial waterways.

Eastern Rivers

The **St. Lawrence River**, one of Canada’s most important rivers, flows for 750 miles (1,207 km) from Lake Ontario to the Gulf of St. Lawrence in the Atlantic, forming part of the border between Canada and the United States. The Canadian cities of Quebec, Montreal, and Ottawa grew up along the St. Lawrence River and its tributaries and depend on these waters as a transportation resource.

In the eastern United States, a boundary called the **fall line** marks the place where the higher land of the Piedmont drops to the lower Atlantic Coastal Plain. Along the fall line, eastern rivers break into rapids and waterfalls, blocking ships from traveling farther inland. Many key U.S. cities, such as Philadelphia, Pennsylvania; Baltimore, Maryland; and Washington, D.C., grew up along the fall line. They offer port facilities for oceangoing trading vessels. Smaller towns along the fall line, especially

in New England and in the South, tap the water-power of the falls for textile mills and factories.

Niagara Falls is a popular tourist attraction on the Niagara River, which forms part of the border between Ontario, Canada, and New York State in the United States. Niagara Falls is also a major source of hydroelectric power for both countries. Two separate drops form the falls, the Horseshoe Falls adjoining the Canadian bank of the river, and the American Falls adjoining the U.S. bank.

From Glaciers to Lakes

In northern Canada glacial dams created Great Bear Lake and Great Slave Lake. Glaciers also gouged the Canadian Shield and tore at the central section of the continent, leaving glacial basins that became the **Great Lakes**. Lake Superior, Lake Huron, Lake Erie, Lake Ontario, and Lake Michigan

have had their current shapes for only about the last 14,000 years.

Providing a link between inland and coastal waterways has been crucial to the economic development of North America. The greatest of these connections is the Great Lakes–St. Lawrence Seaway, a series of canals, rivers, and other inland waterways linking the Great Lakes with the Atlantic Ocean. The seaway helped make cities along the Great Lakes, such as Chicago, powerful trade and industrial centers. Other important inland waterways include the Gulf Intracoastal Waterway, which connects cities from Florida to Texas with the Mississippi River, and the Atlantic Intracoastal Waterway, which provides sheltered inland channels for navigation between Norfolk, Virginia, and Key West, Florida.

Natural Resources

Ample freshwater is only one of the many natural resources of the United States and Canada. The same geologic processes that shaped the North American landscape left the region rich in a wide variety of resources. Access to this natural wealth has helped speed the industrialization of this region.

Fuels

The United States and Canada have important energy resources such as petroleum and natural gas. Texas and Alaska rank first and second in oil reserves in the United States. Texas also has the greatest reserves of natural gas. Most of Canada's oil and natural gas reserves lie in or near Alberta. Coal in the Appalachians, Wyoming, and British Columbia has been mined for more than 100 years.


Minerals

Mineral resources are also plentiful in the region. The Rocky Mountains yield gold, silver, and copper. Parts of the Canadian Shield are rich in iron and nickel. Deposits of low-grade iron ore exist in northern Minnesota and Michigan. Canada's minerals include 28 percent of the world's supply of potash (mineral salt used in fertilizers), 18 percent of its copper, 14 percent of its gold, and 12 percent of its silver.

Timber

Timber is vital for both countries. Forests and woodlands once covered much of the United

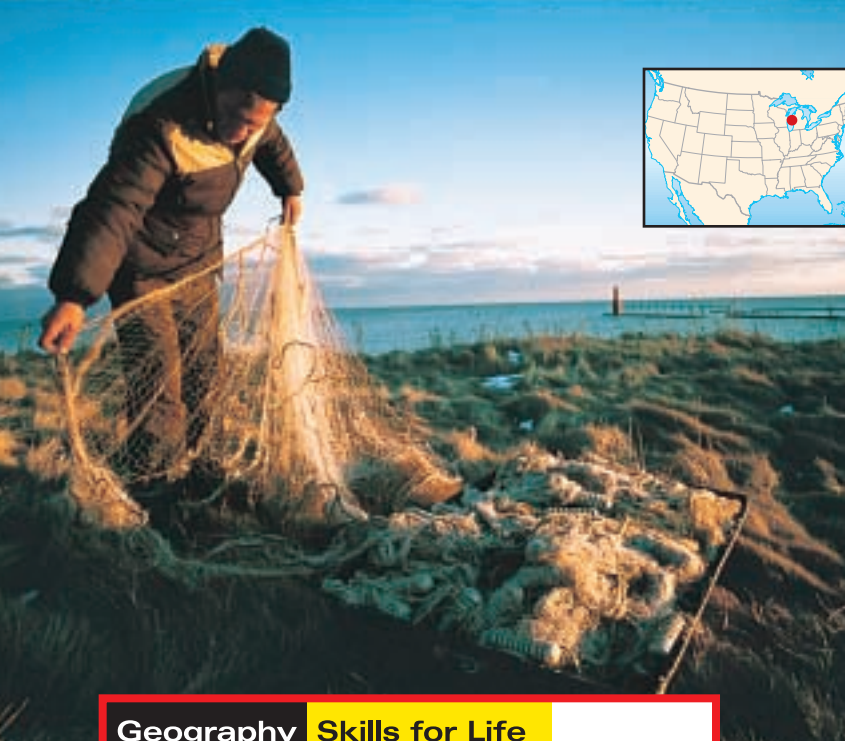
NATIONAL GEOGRAPHIC **World Explorer**



Geography Skills for Life

Copper Mining During the 1990s, this copper mine in Utah produced over 300,000 tons of copper annually.

Place What minerals are mined in the United States and Canada?



States and Canada. Today, however, forests cover less than 50 percent of Canada and about one-third of the United States. Commercial lumbering operations face the challenge of harvesting the region's timber resources responsibly. Positive efforts to preserve the forests include planting new trees to replace those cut for lumber, cooperating to protect the 1,000 species of native animals in the forests, and preserving old-growth forests in areas set aside as national forests.

Economics
Fishing

The coastal waters of the Atlantic and Pacific Oceans and the Gulf of Mexico are important to the region's economy. Rich with fish and shellfish, these waters are important **fisheries**, or places for catching fish and other sea animals. The Grand Banks, once one of the world's richest fishing grounds, covers about 139,000 square miles (360,000 sq. km) off Canada's southeast coast. Fish-

ers have harvested cod from the Grand Banks for at least 500 years. As these waters were overfished, however, stocks decreased, and the Canadian government banned cod fishing in 1992.

Geography Skills for Life

Catch of the Day This fisherman earns his livelihood fishing on Lake Michigan.

Place Why is the Grand Banks important to Canada?

TAKS Practice

SECTION 1 ASSESSMENT

Checking for Understanding

- 1. Define** divide, headwaters, tributary, fall line, fishery.
- 2. Main Ideas** On a sheet of paper, fill in a chart like the one below. Then choose one example of landforms, water, or natural resources and describe its impact on the United States and Canada.

	Landforms	Water	Natural Resources
United States			
Canada			

Critical Thinking

- 3. Drawing Conclusions** Why might fishing disputes arise in the region?
- 4. Identifying Cause and Effect** How did the Great Lakes–St. Lawrence Seaway influence the development of cities in the region?
- 5. Drawing Conclusions** In what ways did the actions of glaciers alter the physical geography of this region, and what effects did those alterations have on the region's development?

Analyzing Maps

- 6. Location** Study the physical-political map on page 117. Describe the landscapes found in the following places: Montana, Texas, and Ontario.

Applying Geography

- 7. Effects of Location** Write a paragraph describing the effects of a physical process, such as weather or gravity, on the flow of rivers in the United States and Canada.

Guide to Reading

Consider What You Know

Think about the climate differences between the United States and Canada. Why do you think Canada is so much colder than the United States?

Read to Find Out

- Which climate zones are found in the United States and Canada?
- In what ways do winds, ocean currents, latitude, and landforms affect the region's climates?
- What kinds of weather hazards affect the United States and Canada?
- How has human settlement affected the natural vegetation of the United States and Canada?

Terms to Know

- timberline
- chinook
- prairie
- supercell
- hurricane
- blizzard

Places to Locate

- Death Valley
- Great Plains
- Everglades
- Newfoundland
- Yukon Territory

Climate and Vegetation

 NATIONAL GEOGRAPHIC

A Geographic View

Life Amid the Glaciers

The diversity of species on nunataks [mountains surrounded by glacial ice] takes patience to grasp. Only the showiest, such as moss campion and orange lichens, grab the eye. Wait and you might glimpse an alert wolf spider or resting butterfly. How did life reach these isolated peaks? Winds bore most pioneers over the glaciers. Plants were carried as seeds. Young spiders sailed in on strands of silk.

—Kevin Krajick, "Nunataks,"
National Geographic, December 1998



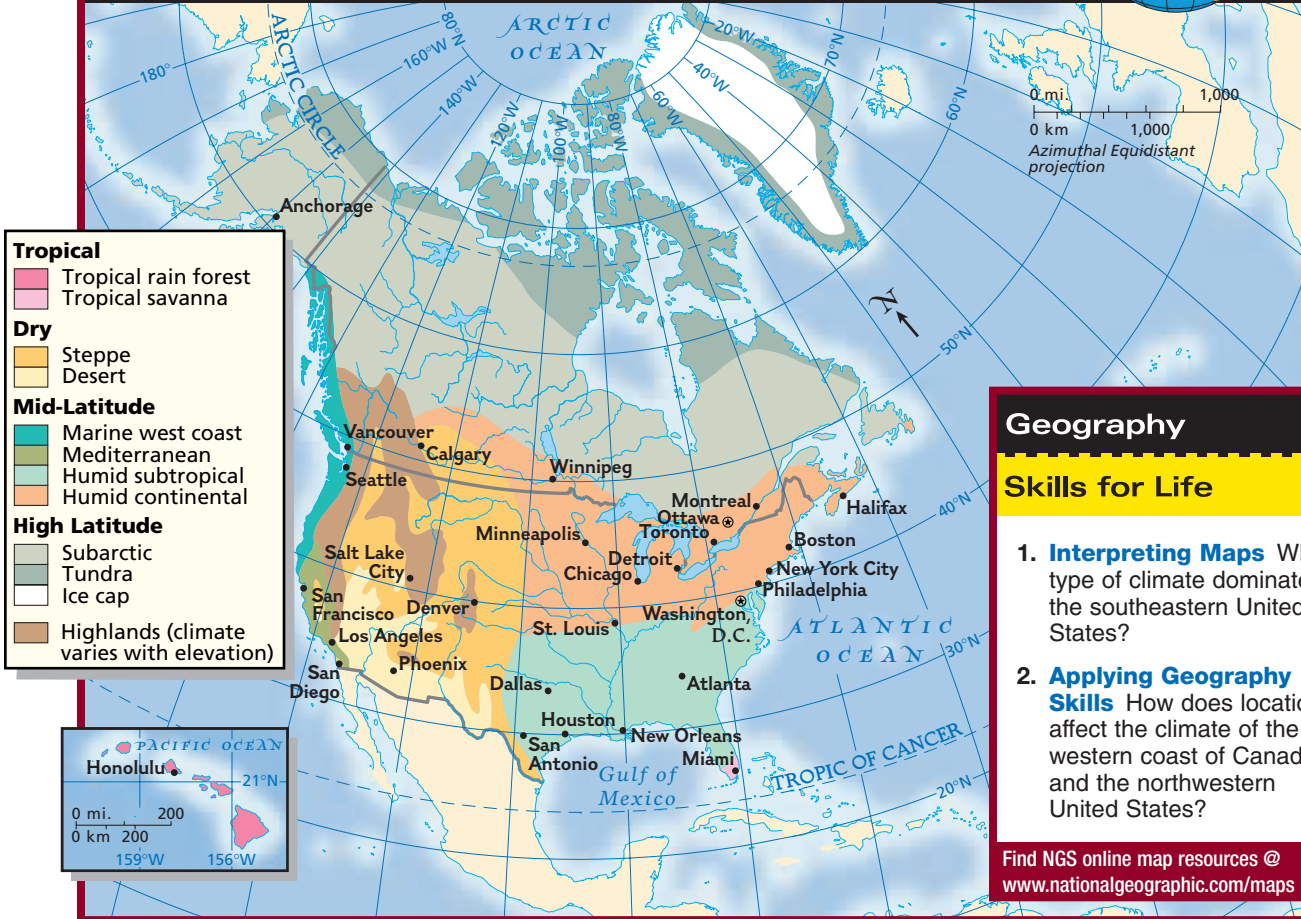
The ice fields of Canada's northwestern Yukon Territory seem at first to be Arctic wastelands. Studying the glaciers, though, are craggy summits encased in glacial ice. Although temperatures there can fall below zero, mini-climates shelter an amazing variety of life forms. Similar diversity characterizes the whole of Canada and the United States. In this section you will learn about the climate regions and natural vegetation of the United States and Canada.

A Varied Region

Much of the United States and Canada experiences exactly the types of climate one might expect from the countries' latitudes. Two thirds of Canada and the U.S. state of Alaska lie in higher latitudes and experience long, cold winters and brief, mild summers. Most of the continental United States and the southern one third of Canada lie within more temperate latitudes, where climate regions vary with elevation. Hawaii, the only non-continental U.S. state, has a tropical climate.



The United States and Canada: Climate Regions



Geography

Skills for Life

- Interpreting Maps** What type of climate dominates the southeastern United States?
- Applying Geography Skills** How does location affect the climate of the western coast of Canada and the northwestern United States?

Find NGS online map resources @ www.nationalgeographic.com/maps

Northern Climates

Large parts of Canada and Alaska lie in a subarctic climate zone with very cold winters and extensive coniferous forests. Two-thirds of Canada has January temperatures that average below 0°F (−18°C). In winter, temperatures can fall to −70°F (−57°C) in some places. A persistently high atmospheric pressure area over the Canadian subarctic spawns the cold winds that chill much of the central United States during the winter.

Lands along the Arctic coastline fall into the tundra climate zone. Bitter winters and cool summers in this vast expanse of wilderness make it inhospitable for most plants, and few people live there. Greenland’s tundra vegetation consists of sedge, cotton grass,

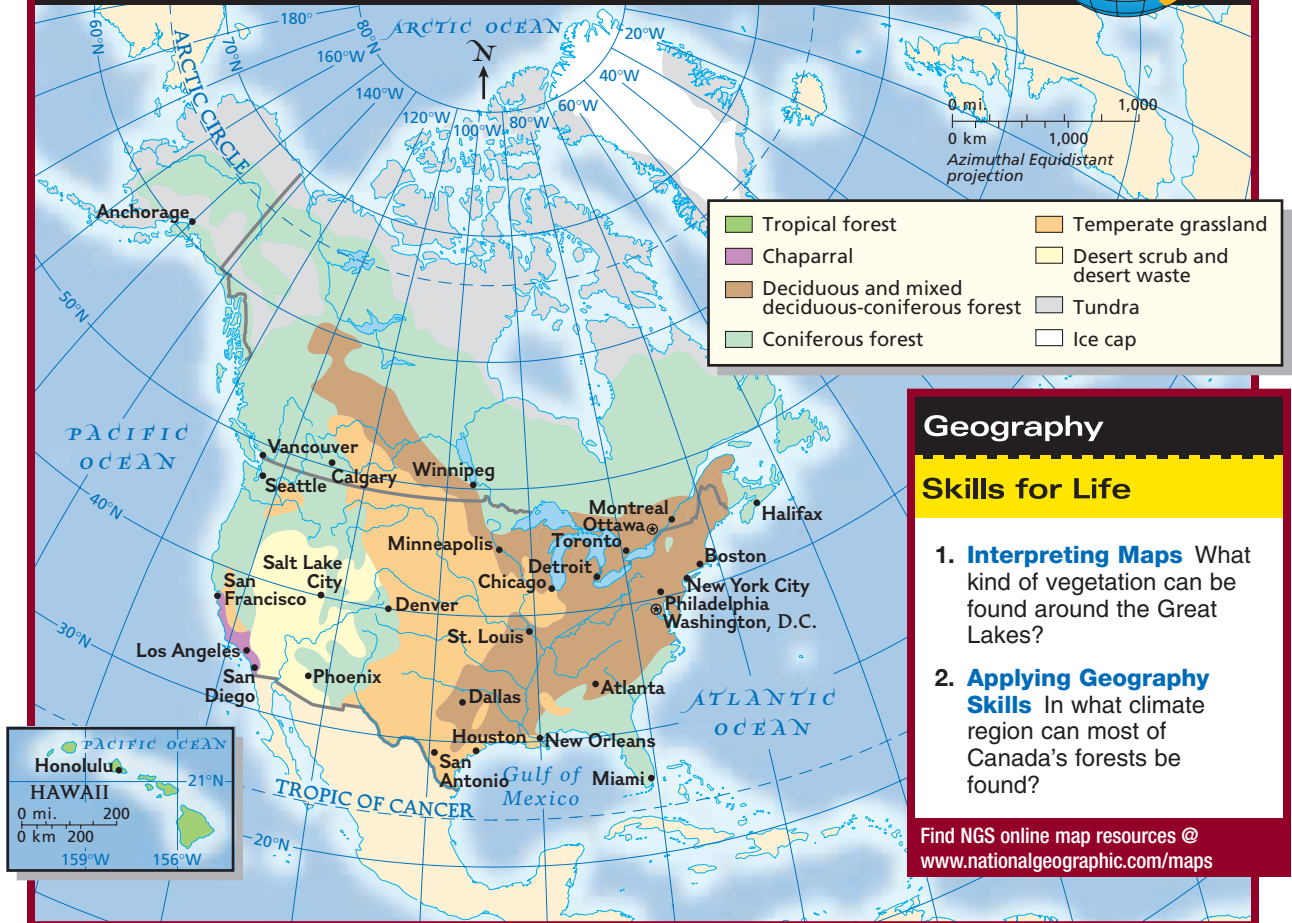
and lichens. The island’s small ice-free areas have few trees, but some dwarfed birch, willow, and alder scrubs do survive. As in other northern climate areas, few people inhabit Greenland because of its harsh climate conditions.

Western Climates

From the cool, wet coast of British Columbia to the hot, dry deserts of California and the snow-capped peaks of the Rocky Mountains, the climate and vegetation patterns in the western areas of the United States and Canada vary widely. This variation in climate and vegetation is the result of the combined effects of latitude, elevation, ocean currents, and rainfall.



The United States and Canada: Natural Vegetation



Geography

Skills for Life

- Interpreting Maps** What kind of vegetation can be found around the Great Lakes?
- Applying Geography Skills** In what climate region can most of Canada's forests be found?

Find NGS online map resources @ www.nationalgeographic.com/maps

Marine West Coast

The interplay of ocean currents and winds with the Pacific Ranges gives the Pacific coast from California to southern Alaska a marine west coast climate. The mountains force the wet ocean air upward, where it cools and releases its moisture. As a result, more than 100 inches (254 cm) of rain soaks parts of this region each year. Coniferous forests, ferns, and mosses are common there. Southern California has a mild Mediterranean climate.

Plateaus, Basins, and Deserts

The rain shadow effect keeps the plateaus and basins that lie between the Pacific Ranges and the Rocky Mountains hot and dry. Much of the area has

a steppe or desert climate. U.S. desert lands in this area, including the Great Salt Lake Desert, Death Valley, the Mojave (moh•HAH•vee) Desert, and the Chihuahuan (chee•WAH•wahn) Desert, bake in the relentless sun. **Death Valley** had the highest temperature ever recorded in the United States, 134°F (57°C). In the western deserts, cacti and hardy wildflowers bloom in the brief spring rains. The areas adjacent to these deserts usually experience a steppe climate with a mixture of desert scrub, grasslands, or coniferous forest, depending on latitude.

Elevation, not latitude, gives the higher reaches of the Rocky Mountains and Pacific Ranges their highlands climate. Coniferous forests cover the middle elevations of the western mountains, but



Geography Skills for Life

Dust Bowl to Recovery Farmland that turned to desert during the 1930s has been revived and today produces crops such as wheat and sorghum.

Human-Environment Interaction How did human activity bring about the Dust Bowl?

beyond the **timberline**, the elevation above which trees cannot grow, only lichens and mosses brave the ever-present cold. In late winter and early spring, a warm, dry wind called the **chinook** (shuh•NUK) may blow down the eastern slopes of the Rockies. Warming at a rate of about 1°F for every 180 feet (or about 1°C for every 99 meters) that it descends, the chinook rapidly melts and evaporates the snow at the base of the mountains.

Interior Climates

Far from large bodies of water that tend to moderate climate, the **Great Plains**, in the center of the continent, have a humid continental climate with bitterly cold winters and hot summers. Although western mountains do block moisture-bearing Pacific winds, the Great Plains benefit from moist winds that blow north along the Rockies from the Gulf of Mexico and south from the Arctic. The humid continental climate extends into southern Canada.

Prairies

In the Great Plains of the United States and Canada, **prairies**, or naturally treeless expanses of grasses, spread across the continent's midsection. Each year, rainfall ranging from 10 to 30 inches (26 to 76 cm) waters tall prairie grasses, such as switchgrass and bluestem. Towering 6 to 12 feet (1.8 to 3.7 m) high, these grasses can grow as much as half an inch (1.3 cm) a day. In the Great Plains and the eastern United States, violent spring and summer thunderstorms called **supercells** spawn tornadoes, twisting funnels of air whose winds can reach 300 miles (483 km) per hour.

History

The Dust Bowl

The tangled roots of prairie grasses once formed dense, solidly packed layers of sod on the Great Plains. Then settlers broke up the sod to grow crops. When dry weather blanketed the plains in the 1930s, the wind eroded unprotected topsoil, reducing farmlands across several U.S. states to a barren wasteland called the Dust Bowl. The resulting economic hardships, made worse by the Great

CLICK HERE



Student Web Activity Visit the **Glencoe World Geography** Web site at tx.geography.glencoe.com and click on Student Web Activities—Chapter 5 for an activity about the physical features of North America.

Depression, caused mass migrations of people. Since the 1930s, improved farming and conservation methods have restored this region's soil.

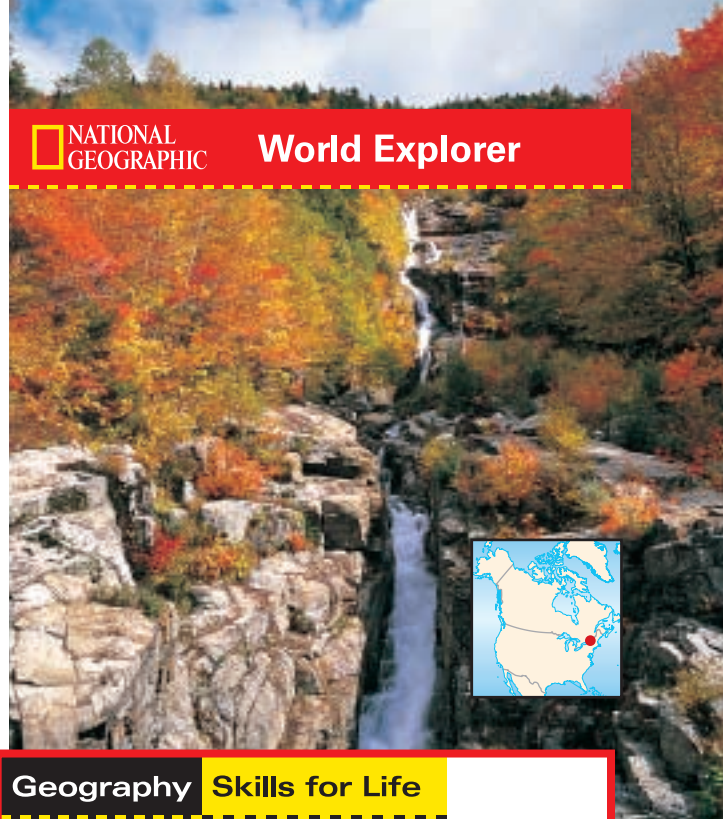
Eastern Climates

The humid subtropical climate of the southeast has long, muggy summers and mild winters. Deciduous forests extend as far south as Louisiana, but land has been cleared for farming along the Mississippi River. Wetlands and swamps like Florida's **Everglades** shelter a great variety of vegetation and wildlife. In late summer and early autumn, **hurricanes**—ocean storms hundreds of miles wide with winds of 74 miles per hour (119 km per hour) or more—can pound the region's coastlines.

A humid continental climate extends from the northeastern United States into southeastern Canada. In Canada, a band of deciduous and mixed deciduous-coniferous forestland more than 1,375 miles (2,213 km) wide sweeps from **Newfoundland** into the subarctic **Yukon Territory**. In the United States, deciduous forests grow at lower elevations in the south. In winter, much of northern North America experiences **blizzards** with winds of more than 35 miles per hour (56 km per hour), heavy or blowing snow, and visibility of less than 1,320 feet (402 m) for three hours or more. On the East coast hazardous winter weather may disrupt travel.

Tropical Climates

Within the continental United States, only the extreme southern tip of Florida has a tropical savanna



Geography Skills for Life

New Hampshire Forest During autumn in the northeastern United States, deciduous forests show a dazzling display of colors.

Place Where are humid continental climate regions located in the United States and Canada?

climate. Hawaii, 2,400 miles (3,862 km) west of the mainland, and the Caribbean island of Puerto Rico have tropical rain forests. The wide variety of climates and vegetation in the United States and Canada has helped shape the region's history.

TAKS Practice

SECTION 2 ASSESSMENT

Checking for Understanding

- 1. Define** timberline, chinook, prairie, supercell, hurricane, blizzard.
- 2. Main Ideas** Use a Venn diagram to compare the climate and vegetation of the United States and Canada.



Critical Thinking

- 3. Making Comparisons** How do the Pacific winds and the Arctic winds differ in their impact on climate?
- 4. Problem Solving** How might the conditions that caused the 1930s Dust Bowl disaster have been avoided?
- 5. Comparing and Contrasting** How do hurricanes and tornadoes differ?

Analyzing Maps

- 6. Region** Study the maps on pages 122 and 123. Identify the three largest climate regions and the vegetation common in each.

Applying Geography

- 7. Effects of Climate** Describe and explain the environmental factors that have affected human migration in the region.

Learning the Skill

A **relief map** is a special purpose map that shows variation in height, or elevation, of land areas. All elevation is measured from sea level, the average level of water in the world's oceans. Mapmakers label this elevation level zero feet (0 m). The actual elevation of some places is shown as a negative number because they lie below sea level.

It is not possible for a relief map to show the elevation of every single inch of land. As a

result, areas are grouped together. A map may show all areas with an elevation between sea level and 1,000 feet (305 m) colored green. Within that area no hill will be higher than 1,000 feet (305 m) and no valley lower than sea level.

Follow these steps to read a relief map:

- **Note the title of the map.**
- **Study the map key.** Relief maps generally use colors or shaded areas to identify elevation.

- Compare the relief map with other maps. Observe how elevation affects climate, population distribution, and economic activity in an area.

Practicing the Skill

Refer to the relief map shown here to answer these questions.

1. What is the color of the map's highest elevation?
2. What elevation range does the color green indicate in feet? In meters?
3. What color is the elevation range of 2,000 to 5,000 feet (600 m to 1,500 m)?
4. At what elevation is the state of Mississippi?
5. What are the elevation levels as you travel west from New Jersey to Ohio?

Appalachian Region: Physical-Political



Applying the Skill

Compare the relief map of the United States and Canada on page 117 with the population density map on page 109. Then write a paragraph explaining how elevation affects population distribution.



The **Glencoe Skillbuilder Interactive Workbook, Level 2** provides instruction and practice in key social studies skills.



SECTION 1

The Land (pp. 115–120)

Terms to Know

- divide
- headwaters
- tributary
- fall line
- fishery

Key Points

- Canada and the continental United States have similar landforms, shaped by similar geologic processes. Both have high, sharp mountains and dry plateaus in the west; rolling, grassy plains in the center; and lower, older mountains and coastal lowlands in the east.
- The region's waterways, including rivers, lakes, coastal waters, and intracoastal channels, played a vital role in settling the land and continue to serve as commercial highways.
- The Continental Divide divides the region into two large drainage areas. To the east of the Divide, waters flow to the Arctic Ocean, to Hudson Bay, to the Atlantic Ocean, or to the Gulf of Mexico. To the west, they flow into the Pacific Ocean.
- Glacial movement shaped much of the North American landscape.
- The geologic factors that shaped the United States and Canada also provided the region with a wealth of natural resources.

Organizing Your Notes

Use a table like the one below to help you organize the notes you took as you read this section.

Physical Feature	Location
Cascade Range	
Great Plains	
Canadian Shield	
Appalachian Mountains	

SECTION 2

Climate and Vegetation (pp. 121–125)

Terms to Know

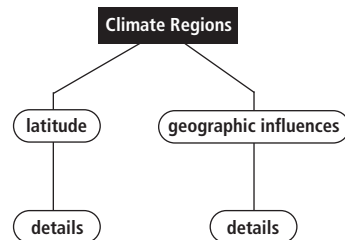
- timberline
- chinook
- prairie
- supercell
- hurricane
- blizzard

Key Points

- The region encompassing the United States and Canada experiences a great variety of climates.
- Some climate regions of the United States and Canada are influenced primarily by latitude.
- Wind, ocean currents, rainfall patterns, and elevation moderate the effects of latitude in other climate zones of the United States and Canada.
- Climatic factors cause hazardous seasonal weather patterns in the United States and Canada, including spring and summer tornadoes, and summer and fall hurricanes, and winter blizzards.
- The region's natural vegetation reflects its climatic variety, but human interaction with the environment has greatly altered natural vegetation.

Organizing Your Notes

Use diagrams like the one below to organize your notes under the following headings: Climate Regions, Seasonal Weather Patterns, and Vegetation.



Reviewing Key Terms

Write the key term that best completes each sentence. Refer to the Terms to Know in the Summary & Study Guide on page 127.

- _____ supply great quantities of fish and other sea animals to North America.
- The warm, dry wind, or _____, melts snow at the base of the Rockies.
- Lichens and mosses grow above the _____.
- Spring and summer tornadoes are spawned by a violent thunderstorm called a(n) _____.
- Farmers on the wide grasslands, or _____, of the Great Plains broke up sod to grow crops.
- Many North American rivers have their _____, or source, in the Rocky Mountains, where a(n) _____ determines the direction of the rivers' flow.
- Important cities grew up along the _____, where the Piedmont drops to the Atlantic Coastal Plain.
- A(n) _____ of the Mississippi River may be a stream or small river.

Reviewing Facts

SECTION 1

- How were the Pacific Ranges formed?
- What effect does the Continental Divide have on the direction rivers flow?

SECTION 2

- What kind of climate is common in most of the United States and southern Canada?
- Name two types of vegetation in this region.

Critical Thinking

- Analyzing Information** What geologic processes shaped much of this region?
- Drawing Conclusions** Why should the United States and Canada protect their natural vegetation?
- Classifying Information** On a web diagram, fill in information about the kinds of vegetation found in each of the region's climate zones.



Locating Places

The United States and Canada: Physical Geography

Match the letters on the map with the physical features of the United States and Canada. Write your answers on a sheet of paper.

- | | | |
|--------------------------|----------------------|----------------------|
| 1. Rocky Mountains | 5. Great Lakes | 9. Pacific Ranges |
| 2. Great Plains | 6. Mississippi River | 10. Mackenzie River |
| 3. Appalachian Mountains | 7. Hudson Bay | 11. Rio Grande |
| 4. Canadian Shield | 8. Great Bear Lake | 12. Great Slave Lake |





Self-Check Quiz Visit the **Glencoe World Geography** Web site at tx.geography.glencoe.com and click on Self-Check Quizzes—Chapter 5 to prepare for the Chapter Test.

Using the Regional Atlas

Refer to the Regional Atlas on pages 106–109.

- 1. Region** How are the eastern and western halves of the United States and Canada different?
- 2. Location** On the physical map, locate rivers that flow into the Mississippi. Then use the economic activity map to make a list of products that might be shipped using these rivers.

Thinking Like a Geographer

The region of the United States and Canada possesses natural resources that people depend on for survival. Choose one section of the region, and write a paragraph explaining how people depend on a natural resource in that area.

Problem-Solving Activity

Group Research Project The flooding of the Mississippi River floodplain in 1993 caused billions of dollars worth of damage and raised questions about the wisdom of controlling the flow of major rivers with dams and levees. Should rivers be allowed to take their natural course? In your group, choose who will argue for controlling rivers and who will argue against it. Be sure to give a fair presentation of the data, including supportive evidence on the pros and cons.

GeoJournal

Expository Writing Using the information you logged in your GeoJournal as you read, write a paragraph explaining how one of the region's physical features affects its inhabitants. Use your textbook and Internet resources to make your explanation clear and accurate.



Technology Activity

Using the Internet for Research

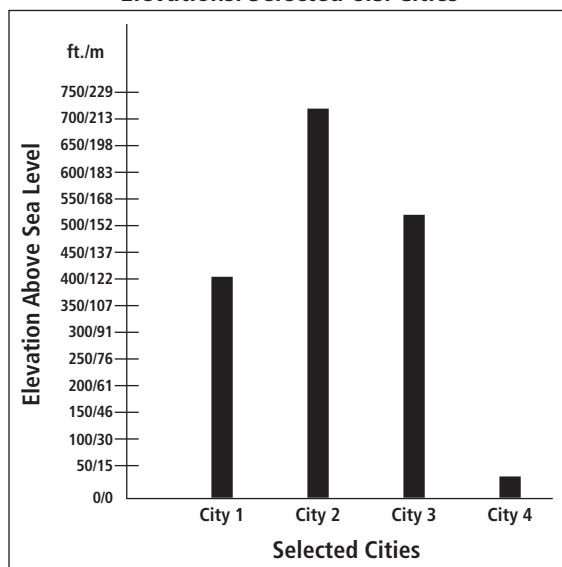
Think about the effects of physical processes, landforms, and climate. Then use reliable Internet resources to find out more about one way in which life in your area is shaped by physical geography. Write a report, and share it with the class.



TAKS Test Practice

Choose the best answer for the following multiple-choice question. If you have trouble answering the question, use the process of elimination to narrow your choices.

Elevations: Selected U.S. Cities



1. Given the information shown in the bar graph, which city is most likely located east of the fall line in the eastern United States?

- A City 1 C City 3
B City 2 D City 4



To determine which city is east of the fall line, remember that the fall line is where the higher land of the Piedmont drops to the lower Atlantic Coastal Plain to the east. Eliminate those choices that do not indicate a city on the coast, near sea level.

Geography Lab Activity

Comparing Soils



▲ Students collect soil samples for experiments.

You may think that all soil is alike, but there are many different varieties. Several factors account for soil differences. The parent rock, or the type of rock from which soil is formed, is one factor. Weathering breaks down parent rock to produce different types of soil. For example, if limestone is the parent rock, it will produce a different soil than if sandstone were the

parent rock. Climate, types of vegetation, and the slope of the land surface also affect soils.

The color of the soil indicates the presence of certain minerals or other substances. Sandy soil is usually light in color. Soil rich in humus is dark in color because of the presence of decaying plant and animal matter. Red soils are colored by large amounts of iron-bearing minerals. Different types of soil are found in the United States, including mountain soils, prairie soils, river soils, glacial soils, and desert soils.

1 Materials

- Computers with Internet access
- Large map of your state, with counties outlined and identified
- Small plastic envelopes or bags for soil samples
- Labels for the plastic envelopes or bags
- Pushpin or thumbtacks

2 Procedures

In this activity, you will use the Internet and other resources to compare soils in your state and explain why differences exist among them.

1. Using the Internet, locate e-mail addresses for as many other schools throughout your state as you can. Save the e-mail addresses in your program's address book.
2. Collect the e-mail addresses and postal addresses of your friends and relatives throughout your state.
3. Coordinate all of the addresses to ensure that there is full coverage and that counties or regions are not duplicated.
4. Send e-mail messages or handwritten notes to all your partners, asking each to send you a small soil sample of his or her area. Ask partners to identify exactly where the soil came from (for example, "from my yard," or "from the hillside behind my house"). Explain that you are trying to identify why soil samples are different within an area. Ask that the soil samples be sent as soon as possible.

5. Ask partners to sterilize the soil in a 350° oven for about 15 minutes before sealing the cooled soil sample in a small plastic bag.
6. As soil samples arrive, put each one in a separate plastic envelope or bag. Label each envelope or bag with the name and location of the person who sent it. Using the map below, try to identify the type of soil your partners sent.
7. Research to find the characteristics of that area's soils. Does the soil sample reflect information found in your research?
8. Using the pushpins, place each soil sample on the map in the area of its origin.
9. Describe how the location of where these soils were found affects how they are similar to or different from each other.

3 Lab Report

1. How many soil samples were collected?
2. What were some of the factors that accounted for the differences in the soils?
3. **Drawing Conclusions** Write a paragraph explaining how the differences in the soils collected do or do not reflect the economic activity of at least two areas of the state. Give reasons for your conclusions.

4 Find Out More

Identify a climate area in Canada or the United States, and research to find out, for example, how soils in that climate differ from each other. How has the climate affected the soil? The area's vegetation?



Did You Know?

People in many parts of the world have used soil to build homes. Adobe houses are made of sun-dried bricks of clay soil and straw. Soils with about 70 percent sand and 30 percent clay can be compacted to form bricks or walls for durable rammed-earth houses.

◀ Different types of soils are found in the United States.