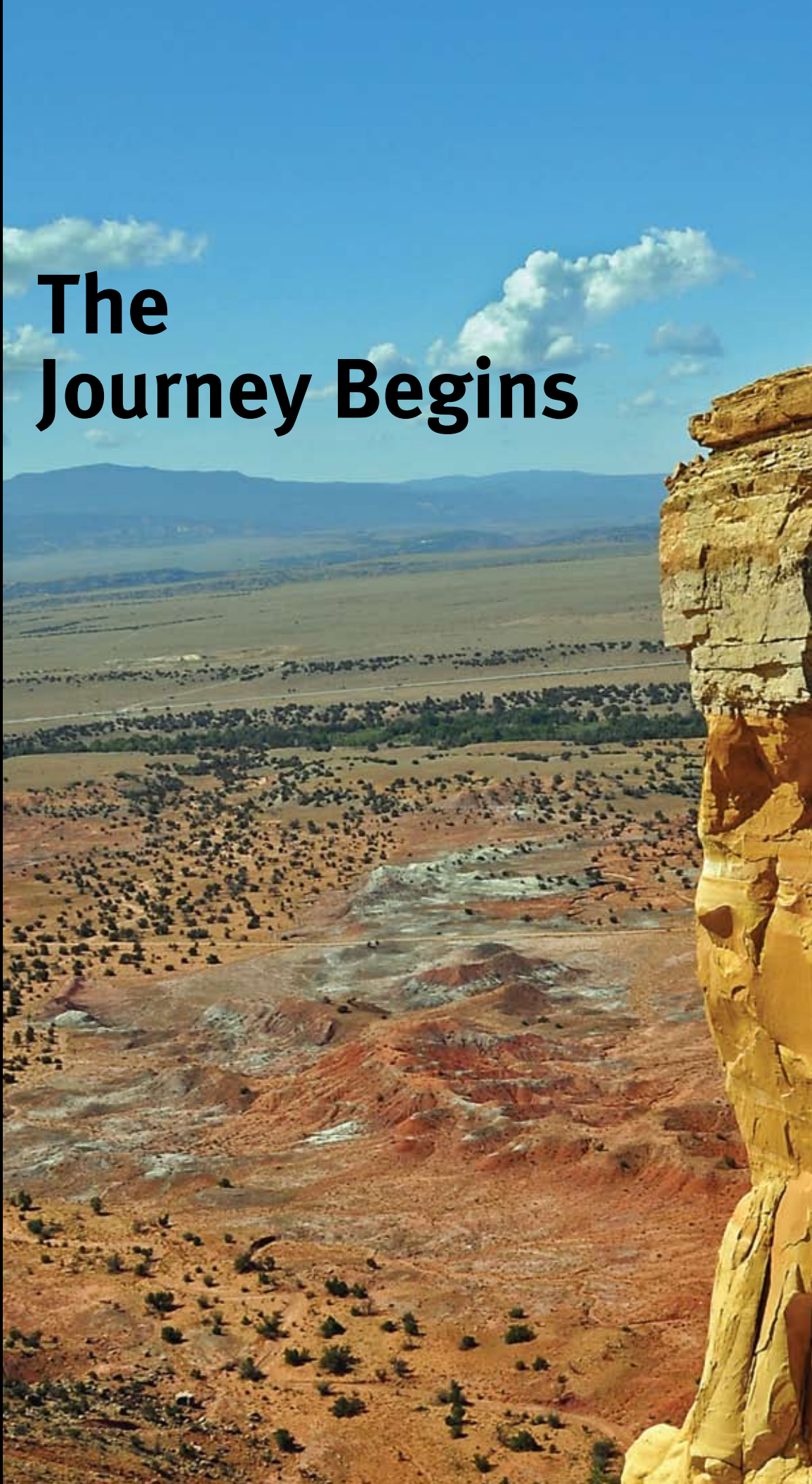How does learning about New Mexico's history and geography help us understand our state today?

The Journey Begins

Chimney Rock is in Dona Ana County in northeastern New Mexico. This naturally formed mountain summit climbs 6,289 feet above sea level. **How does Chimney Rock compare to the landscape around it?**

Comprehension Strategy

Learn to Preview

Good readers learn to preview the chapter before they read. Previewing teaches you about the type of text you are going to read. Previewing can help you know what to look for as you read.

In this chapter, you will preview different parts of a textbook in each lesson. Preview to get an idea of what you will learn about New Mexico's history and geography.

What Is History?

Key Ideas

- Historians study primary and secondary sources to learn about the past.
- It is important to study history from multiple perspectives.
- Historical thinkers ask questions and draw conclusions.

Key Terms

artifact
bias
oral history
perspective
primary source
secondary source

Comprehension Strategy

Preview Images

Notice the word "story" in history? History is the story of the past. It has a plot that can be exciting, surprising, and sad. History is filled with interesting characters, including heroes and villains.

Historians Are Detectives

People who study history are called historians. The main goal of a historian is to understand the past by examining evidence. In many ways, historians are like detectives. Both try to figure out what happened in the past and why it happened. This can become difficult when there is conflicting evidence.

Historians use two kinds of evidence to learn about history—primary sources and secondary sources. After studying these different kinds of sources, historians piece together the story of the past.

Part of the detective work of historians is recognizing possible bias in a source. *Bias* is a one-sided point of view. It is a tendency to have a strong opinion about ideas, people, and events. Bias does not take into account other views. Bias can unfairly influence the views of others.

Tacitus, a Roman politician and author, was probably one of the greatest historians of all time.

Primary Sources

Primary sources are firsthand (eyewitness) accounts or original objects and documents from the past. Primary sources were made, used, or written by people at the time an event happened. Diaries, letters, autobiographies, photographs, paintings, maps, videos, interviews, and newspapers are all examples of primary sources.

Artifacts

Artifacts are objects people made or used in the past. A handmade Indian basket is one example of an artifact. By studying it, you might be able to learn something about the lives and cultures of the people who once used it.

Photographs

Photographs are also primary sources. Photographs show people, places, objects, and events frozen in time. Studying photographs can help you gather information about a certain place, time, or culture.
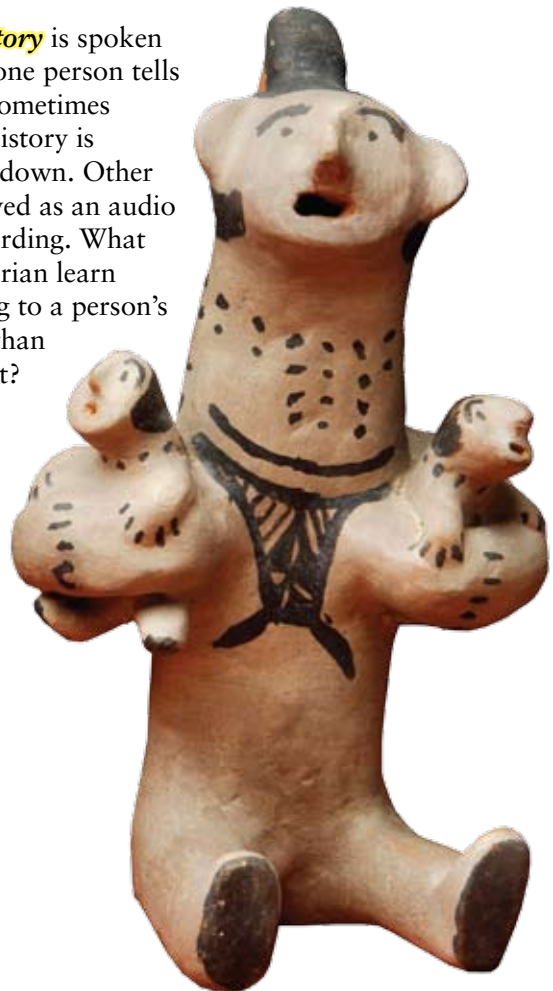
Documents

Documents also reveal information about the past. A document can be a letter, a certificate, a newspaper, or any other written record. Newspapers and magazines can be excellent primary source documents because they recorded important events when they happened. Letters, journals, and diaries are primary sources, too. They not only tell about people, places, and events from the past, but they also often include a person's thoughts about an event and its meaning.

Oral History

Oral history is spoken history that one person tells to another. Sometimes this type of history is later written down. Other times it is saved as an audio or video recording. What might a historian learn from listening to a person's story rather than just reading it?

A stack of newspapers, a photo, and an artifact of a Native American storyteller are examples of primary and secondary sources. **Which ones are primary sources? Why?**

Secondary Sources

This textbook is an example of a secondary source. Another example of a secondary source is a newspaper article written today about something that happened long ago. A **secondary source** is a secondhand account. It is summary of an event based on the study of one or more primary sources. Sometimes secondary sources include facts that were not available at the time of the event.

Art

Paintings, sculptures, and other art, including music, can be both primary and secondary sources. You will often see portraits such as the *Mona Lisa* that are primary sources because they record a person as he or she appeared in life. But paintings are also secondary sources because they can be painted many years after an event occurred or after a person lived. In this way, they retell the past.

Different Perspectives

You have already read about bias. Bias is typically negative. It is different from perspective. **Perspective** means understanding events and people based on the accepted ideas and values of the time period being studied. Ideally, historians look at events from many perspectives and then draw their own conclusion. This conclusion is written from the historian's point of view. As a result, it is important to read more than one historical record. Multiple perspectives will help you piece together your own views on history.

Building Perspective

There are many ways to examine the past. Here are some examples of questions you can explore when you study history.

Technology

- Think about the tools people use to do work. How do the tools change over time?
- What inspires people to create new technologies?
- How does changing technology change the way people work and live?

Geography

- What about a location makes it good for human settlement? Are there things about a location that are barriers to settlement?
- How does location influence historical events?
- What are the effects of a place's natural features, such as climate, mountains, rivers, or swamps?
- How do people interact with their environment? For example, how do they use natural resources to create industries?

Government

- Who holds political power?
- How does a government reflect the values of its citizens?
- How do laws influence people, history, and the economy?
- How do governments keep peace or play a role in wars?

Economics

- How do people make a living?
- What enables people to trade goods and services?
- How do economic considerations affect where people live?
- For what economic reasons might people leave a place?
- How do economic classes (e.g., upper class, middle class, and working class) develop and change over time?

Culture

- How does culture develop?
- How do certain customs reflect the values of a society?
- How do music and art represent a society's culture?
- How do political, economic, and technological changes influence culture? How does culture influence them?

Go to the Source!

Examine a Newspaper

Study the front page of the *New York Tribune* on October 27, 1907. Examine the details of this primary source to learn about that day in history.

OBSERVE	EVALUATE	CONCLUDE
• Who is featured on the front page? Why?	• Did Theodore Roosevelt have much experience in government before he became president? • What other kind of experiences did he have?	• How does this front page compare to the front page of a modern newspaper? Why do you think there is a difference?

Historical Thinking

As you learn about New Mexico's past, you will develop historical thinking skills. Historical thinking will help you understand the past and think critically about issues in the present and future.

When doing historical research, it is important to ask yourself a lot of questions. Focus on the five Ws and an H—who, what, when, where, why, and how.

- Who was involved?
- What happened?
- When did it happen?
- Where did it happen?
- Why did it happen?
- How did the time period, person, or event influence other people or events?

It is also important to ask yourself some questions about the sources you study so that you can determine point of view and bias. Consider the following questions.

- Who created the source?
- What is the person's background?
- Why was the source created?
- What might have influenced the person who created the source?
- Is the source factual, or does it reflect a person's opinion?
- How does this source compare to other sources on the same topic?

Drawing Conclusions

Asking all these questions will help you develop your own views about what happened and why. You will develop your own conclusions. Drawing your own conclusions requires you to compare and contrast information and recognize cause and effect. You will also need to use your imagination to put yourself in the middle of a historic event and consider different viewpoints.

As you develop these skills, you will find yourself using them as you read novels for English, evaluate theories in science, or analyze numbers in math. These skills will help you be a critical and effective thinker.

NEW MEXICO PORTRAIT

Robert J. Tórrez
1949–

Robert J. Tórrez is one of New Mexico's most famous historians. Born and raised in northern New Mexico, he served as New Mexico's official state historian from 1987 to 2000. He has also served as the president of the Historical Society of New Mexico.

As our state historian, Tórrez worked with both primary and secondary sources every day at the New Mexico State Records Center and Archives in Santa Fe. He used books, court records, private letters, maps, official reports, and old newspapers to help people answer important questions about New Mexico history. He compares using primary sources to "listening to voices from the past that tell you about the events those people lived through long ago."

Tórrez uses many primary sources to write whole books, including *Myth of the Hanging Tree: Stories of Crime and Punishment in Territorial New Mexico*. What primary sources do you think he used to gather information about the history of hangings in the 1800s?

Check Your Understanding

Know

1. What is a primary source?
2. What is a secondary source?
3. What is historic perspective?
4. Identify ways you can evaluate information as you do historical research.
5. Tell how Robert J. Tórrez has served New Mexico.

Apply

6. Which of the following are primary sources? Which are secondary sources?
   • A death certificate
   • A biography
   • A textbook
   • A pair of pants and a pair of shoes
   • A postcard
   • Your grandmother's kitchen utensils
   • A film about the Revolutionary War
   • A modern painting of Abraham Lincoln
7. How is the information from a primary source different from that of a secondary source?
8. Discuss how perspective influences a historian's point of view.
9. Explain how asking who, what, where, when, why, and how help you when conducting historical research.
10. What contributions has Robert J. Tórrez made to the history of New Mexico?

Analyze

11. Which do you think is more helpful to historians, primary or secondary sources? Why?
12. Why do you think you are studying state history from a secondary source rather than a primary source?
13. Can one perspective be better than another? Why or why not?
14. How might your historical research be incomplete if you do not question the information you find?
15. What if New Mexico did not have a state historian? How would you learn about our state's past?

The Geographer's View

To better understand New Mexico's past, present, and future, you first need to learn about our state's geography. *Geography* is the study of the earth's land, water, people, plants, and animals. It is also the study of how these things relate to one another. Studying geography will help you understand New Mexico's place in the United States and in the world.
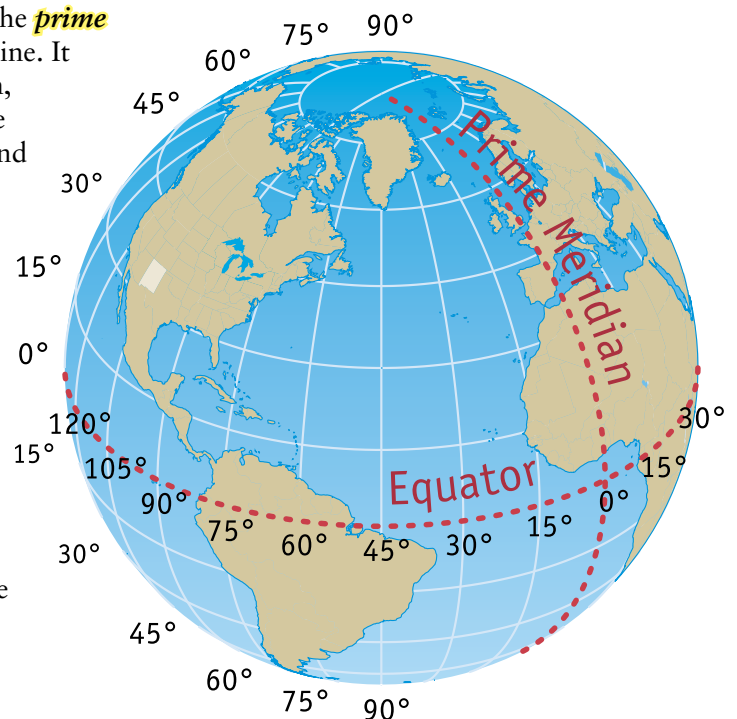
Five Themes of Geography

Like historians, geographers use different methods to study the earth. They study the five themes of geography—location, place, human-environment interaction, movement, and region.

Location

Every place on earth has a location on the planet's surface. Location can be relative or absolute. *Relative location* is the description of where a place is in relation to other places or things. For example, Carlsbad Caverns National Park is about 25 miles north of the Texas border. *Absolute location* is the exact position of a place. Every place on earth has an absolute location. An address is an absolute location. The most common way to describe absolute location is by using lines of latitude and longitude. These are not real lines on the ground; they are lines on a globe or map.

Latitude is the measurement of distances north and south of the equator while *longitude* is the measurement of distances east and west of the prime meridian. Like lines of latitude and longitude, the *prime meridian* is a reference line. It runs through Greenwich, England, and divides the world into the eastern and western hemispheres.

A *hemisphere* is half of the earth. The western hemisphere includes the continents of North America and South America. The equator divides the world into the northern and southern hemispheres. New Mexico is part of both the western and the northern hemispheres.

There is only one absolute location for every place on earth. It can be identified by longitude and latitude. Always list the latitude coordinates (points) first, followed by the longitude coordinates. Both latitude and longitude are measured in degrees. Latitude measurements range from 0° to 90° north or south of the equator. Longitude measurements range from 0° to 180° east or west of the prime meridian.
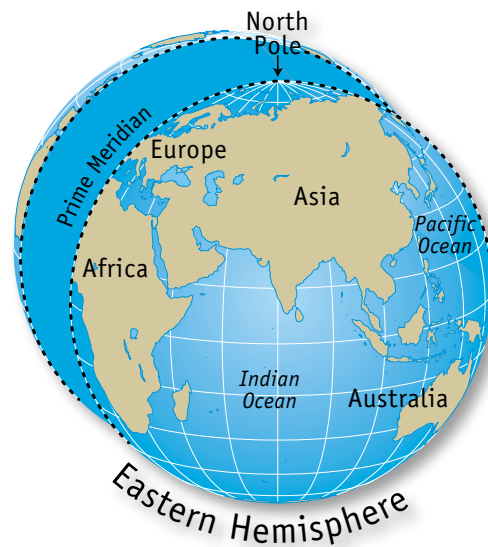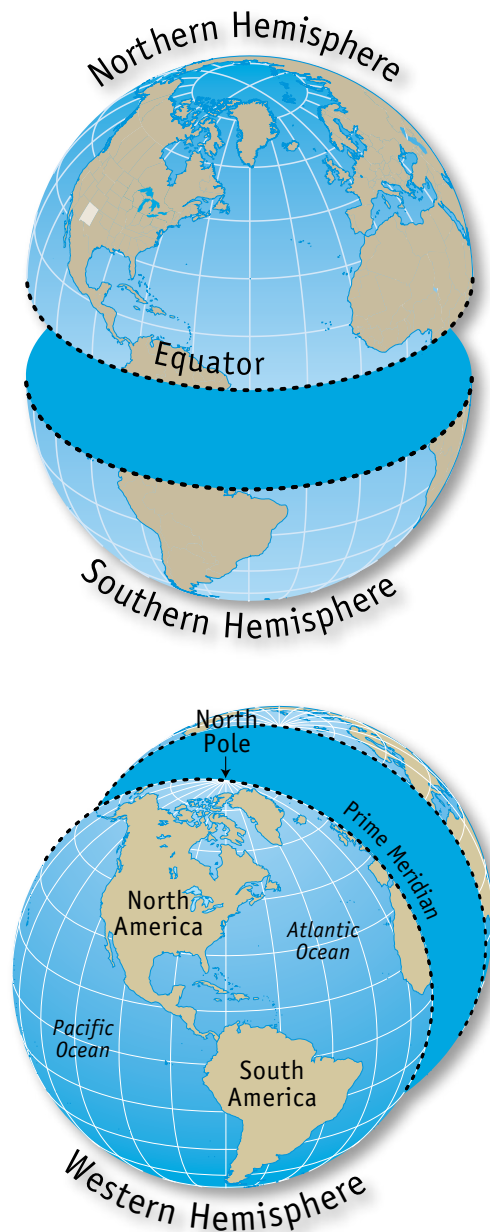
The absolute location by street address of Carlsbad Cavern National Park is 727 Carlsbad Cavern Highway in Carlsbad, New Mexico. But its absolute location using latitude and longitude coordinates is 32°N 103°W.

Place

Geographers describe places by identifying their physical and human characteristics. Physical characteristics include surface features such, as mountains, rivers, lakes, and valleys. Cultural features, such as languages spoken, religions practiced, and political beliefs, are part of the human characteristics of a place. Additionally, manmade features, such as buildings, roadways, housing, and bridges, are all examples of human characteristics.

What Do You Think ?

Use a globe with latitude and longitude to find out where in the world you would be at 50°N 80°W. Where would you be at 22°S 110°E?

In which hemispheres is New Mexico located? Examine the globe on the previous page. Between what coordinates of longitude and latitude does New Mexico appear to be located?

Human-Environment Interaction

In studying the relationship between humans and their environment, geographers look at how people interact with what is around them. For example, the Cochiti Dam was built on the Rio Grande in Sandoval County to provide flood control. However, it also changed the natural landscape of the area. The dam created the Cochiti Lake Recreation Area. New Mexicans and other visitors to the state enjoy camping, boating, swimming, and fishing at this manmade lake. Studying the human-environment interaction helps with responsible use and management of the environment.

Movement

This theme relates to the movement of people, ideas, goods, resources, and communication around the world. Studying movement will help you see the connection between yourself and other regions, cultures, and people in the world.

Region

Places on earth that have at least one common feature are called *regions*. This common feature can be physical, human, or cultural. For example, the Western Hemisphere has three regions—North America, Central America, and South America. The people within these regions share some common characteristics. Many people in South America speak Spanish and are Catholic. This common cultural trait is rooted in their history. Most of the countries of South America were at one time colonies of Spain. New Mexico shares some of that colonial history with the countries of South America.

In North America, the United States is divided into five regions. New Mexico is considered a part of the Southwest region. The states of the Southwest have some similarities in geography, climate, economy, history, and traditions. As a result, they are grouped in the same region.

West

Washington

Oregon

Mo

Idaho

W

Nevada

Utah

Alaska

California

Arizona

Hawaii

Southwe

Regions of the United States

Let's take a closer look at the region we live in and the rest of the regions of the United States. How does the Southwest compare to the other regions? What are the common features of states in each of the regions of the United States?

Midwest

Montana

Wyoming

Colorado

North Dakota

South Dakota

Minnesota

Wisconsin

Nebraska

Iowa

Michigan

Kansas

Illinois

Indiana

Ohio

Missouri

Northeast

New Hampshire

Vermont

Maine

New York

Pennsylvania

Massachusetts

Rhode Island

Connecticut

New Jersey

Delaware

Maryland

Virginia

West Virginia

Kentucky

Tennessee

North Carolina

South Carolina

Arkansas

Alabama

Georgia

Mississippi

Louisiana

Florida

Southeast

New Mexico

Oklahoma

Texas

hwest

N

W

E

S

The Southwest

Four states make up the Southwest. They are Arizona, New Mexico, Texas, and Oklahoma. The Southwest is located to the east of the Western region. The three biggest states of the Southwest are Arizona, New Mexico, and Texas. They all share a border with Mexico. Oklahoma borders the Midwest region to the north and the Southeast region to the east.

Natural Features

The Southwest has high mountains, flat plains, and low deserts. There are only a few lakes and rivers in the region, so the land and air are very dry. The sun shines hot most of the time, making the desert areas quite warm during the day. The mountains, however, are much cooler than the deserts. The vast Grand Canyon in Arizona is one of the natural wonders of the world.

Aspen and pine trees cover the mountains. Elk, moose, and deer wander through the woods. In some places there are bears, mountain lions, and bighorn sheep. The streams and rivers of the Southwest are full of fish. In Southwest deserts, sagebrush and cactus bloom in the spring. If you look closely, you might see an owl, lizard, tortoise, rattlesnake, or roadrunner.

The Southwest has rich copper, uranium, coal, natural gas, and oil resources, so mining is a big business. Because there is a lot of wide-open space in the Southwest, cattle ranching and farming are also important.

The Grand Canyon in Arizona is one of the natural wonders of the world. Dallas, Texas (inset), is the third-largest city in Texas and the eighth largest in the United States. **What do you think geography has to do with the large population of Dallas?**

Human Features

Many people enjoy the Southwest's warm climate. As a result, more and more people are moving into the region. The Southwest is one of the fastest-growing regions in the United States. Among the largest cities in the Southwest are Phoenix and Tucson in Arizona; San Antonio, Dallas, and Austin in Texas; Oklahoma City and Tulsa in Oklahoma; and New Mexico's Albuquerque.

The pleasant climate, beautiful scenery, and history of the Southwest attract lots of tourists. They come to see such sights as the Grand Canyon; the red rocks of Sedona, Arizona; the Acoma Pueblo in New Mexico; and the Alamo in San Antonio, Texas.
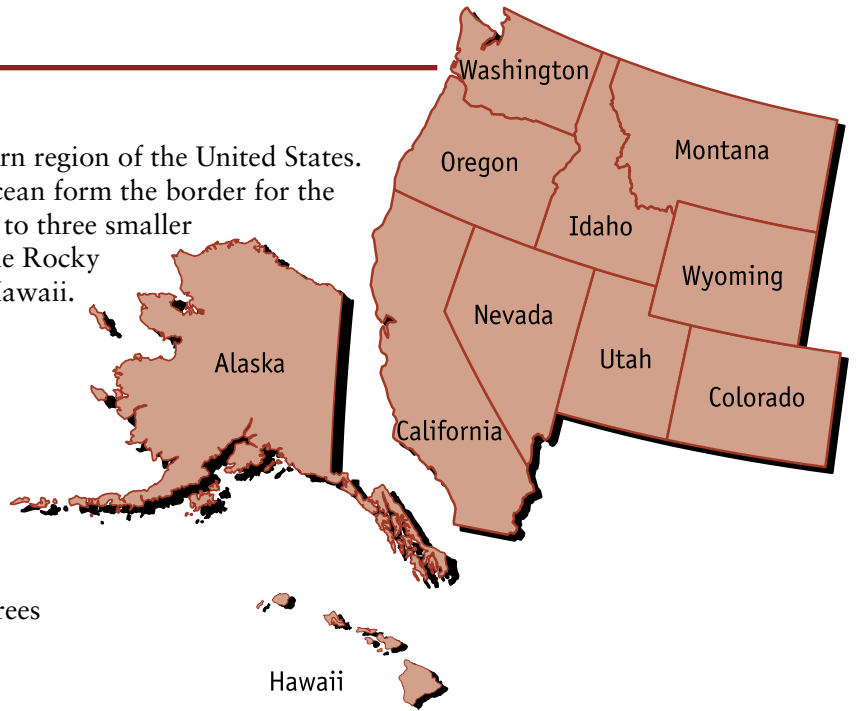
The West

There are 11 states in the Western region of the United States. Canada, Mexico, and the Pacific Ocean form the border for the West. The states of the West belong to three smaller regions—the Pacific Coast States, the Rocky Mountain States, and Alaska and Hawaii. Let's look at the Pacific Coast first.

Pacific Coast States

The Pacific Coast states are California, Oregon, and Washington. They are called this because each state lies along the Pacific Ocean. Some of the largest trees in the world grow in the forests of the Pacific Coast States. Redwoods, pine, spruce, and oak trees are just some of the kinds of trees that grow here. Trees and plants stay very green year-round because the Pacific Coast gets so much rain. The beautiful scenery draws thousands of visitors to the region each year. Many people love to vacation in Southern California and other coastal areas. Some come to see whales, dolphins, and sea lions. Others come to surf or swim in the ocean or take a scenic drive along the Pacific Coast Highway.

Pinnacle Rock at Point Lobos State Reserve in Carmel, California, is said to be "the greatest meeting of land and water in the world." High winds and ocean waves shape the land and plants here.
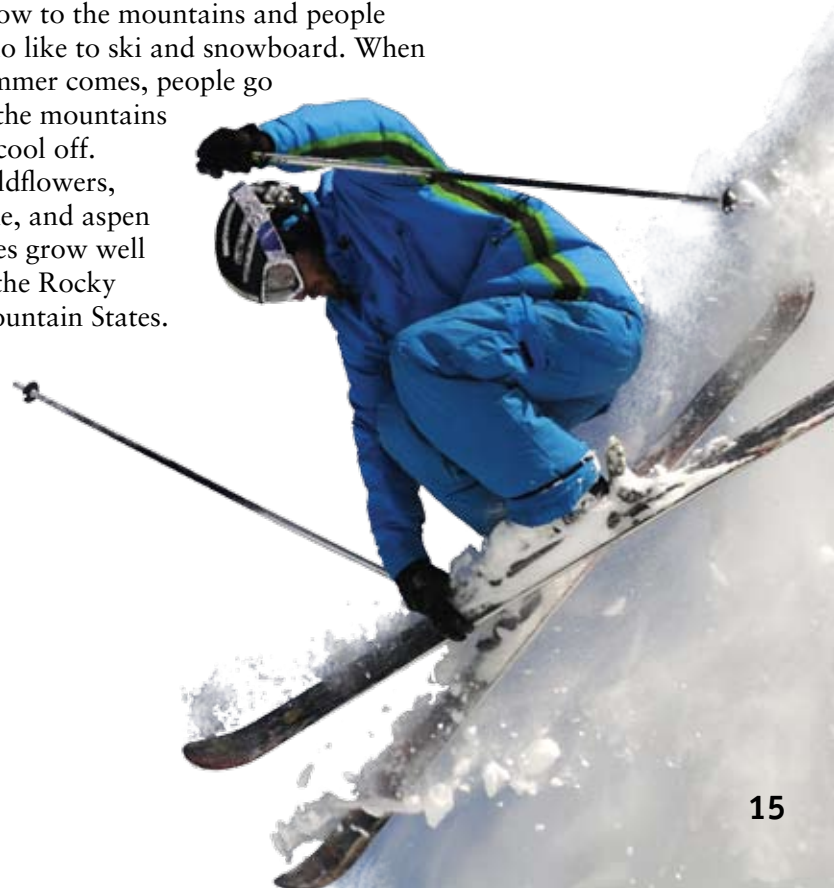
Rocky Mountain States

The Rocky Mountain States are also part of the West. They are called this because the Rocky Mountains run through most of them. The Rocky Mountain States are Colorado, Utah, Nevada, Idaho, Wyoming, and Montana. However, New Mexico is sometimes considered part of this region because the southern end of the Rockies reach into our state. The Rocky Mountain States have both high mountains and deserts. Winters bring snow to the mountains and people who like to ski and snowboard. When summer comes, people go to the mountains to cool off. Wildflowers, pine, and aspen trees grow well in the Rocky Mountain States.

The Pacific Ocean is viewed from Hawaii's Big Island.

Alaska and Hawaii

Did you know that Hawaii and Alaska make up the third group of states in the West? Alaska is the largest state in the United States. In fact, it is almost twice the size of Texas! Alaska is cold most of the year and home to the tallest mountain in North America, Mt. McKinley. People come to Alaska to fish, hunt, and hike. One fascinating fact about Alaska is that it has more elk, bears, and walruses than it does people.

Hawaii is a group of small islands in the Pacific Ocean. The weather on the islands is warm and often rainy all year long. Hawaii's rich soil and warm, humid climate make it the perfect place to grow coffee, sugar, and pineapples. The average year-round temperature in Hawaii is around 80ºF. Many people love to go to Hawaii on vacation. They swim in the ocean, walk along sandy beaches, hike in the mountains, and explore the volcanoes.

The Great Basin

The largest desert in the United States is in the West. Called the Great Basin, it lies between the Rocky and the Sierra Nevada mountain ranges. The sun shines a lot in the Great Basin, and there is very little rain. It is home to lizards, snakes, and prickly cactus.

Human Features

Some of the largest cities in the United States are located in the West, including Los Angeles and San Francisco in California; Seattle, Washington; Portland, Oregon; Las Vegas, Nevada; Denver, Colorado; and Salt Lake City, Utah. Outside the cities, western farmers grow fruits and vegetables, such as apples, grapes, strawberries, lettuce, and cucumbers.

In the rivers of the Great Basin, many people love to fish for bass, trout, and salmon. People in the West also enjoy outdoor sports, such as skiing, snowboarding, mountain biking, hiking, and rock climbing. People from all over the country and the world also like to visit and camp in the many state and national parks out West.

Yellowstone National Park is the oldest and most famous of the national parks in the West. Many people visit the park to see wildlife such as buffalo, bear, moose, and elk.

Many people visit Yellowstone National Park to see Old Faithful, a natural geyser (a hot spring that shoots water and steam high in the air).

The Midwest

The Midwest region is right in the middle of the United States. The states in this region are North Dakota, South Dakota, Nebraska, Kansas, Minnesota, Iowa, Missouri, Wisconsin, Illinois, Michigan, Indiana, and Ohio. Because it is in the middle of the country, the Midwest is often called "America's Heartland."

Natural Features

The Midwest has some rolling hills but is mostly flat. Because of this, it is also referred to as the Great Plains. Much of the Midwest used to be covered in prairie land. A prairie is a wide, grassy area with few trees. Prairie animals, such as deer, prairie dogs, and rabbits, scampered across the ground while hawks, owls, and eagles hunted from the sky. Many years ago, thousands of buffalo grazed the prairies of the Midwest. Now there are few buffalo and very little prairie left.

Three major rivers cut through the Midwest—the Mississippi, the Missouri, and the Ohio rivers. Together, these three rivers form the third-largest river system in the world. The Mississippi flows south from Minnesota to New Orleans, where it empties into the Gulf of Mexico. Many of the ships on the Mississippi carry food and manufactured goods from the Midwest that will be sold throughout the United States and the world.

The Mississippi also connects to the Great Lakes. Several Midwestern States border the Great Lakes. Together, the five Great Lakes form the largest group of freshwater lakes in the world.

The region has four distinct seasons. It can be very cold in the winter. Strong snowstorms, or blizzards, sometimes blow across the plains, endangering people and animals. Summers in the Midwest are usually hot and humid. These conditions often produce tornadoes. These funnel-shaped windstorms drop out of the clouds. They become dangerous when they dip low enough to touch the ground.

Did you know most states in the Midwest region are part of an area called "Tornado Alley"? Tornado Alley stretches from North Dakota to Texas. Tornadoes cause a lot of damage to homes and businesses and often destroy crops and claim lives.

Human Features

Most of the Midwest is ranch and farmland. Farmers in the Midwest grow corn, wheat, soybeans, and many other crops. Ranchers raise cattle, hogs, and chickens. Because this region produces so many kinds of grain and food, it has been called the nation's "Bread Basket."

The Midwest has more than farms, however. It is home to the third-largest city in the country—Chicago. Chicago is an industrial center. Because of its central location, it became an important railroad center in the 19th century. Livestock was shipped there from the ranches of the Midwest and the Southwest. As a result, food processing is still one of the biggest industries in Chicago. Additionally, printing and publishing, manufacturing, and financial services are among the big businesses in Chicago.

What Do You Think ?

What other geographic features do you think make Chicago a good location for companies that do business with the rest of the country and the world?

Skyscrapers line a street in Chicago's financial district. Inset: An alligator suns himself in the Florida Everglades.

The Southeast

The Southeast is bordered by the Atlantic Ocean and the Gulf of Mexico. It includes the states of West Virginia, Virginia, Kentucky, Tennessee, Arkansas, Mississippi, Louisiana, Alabama, Georgia, Florida, South Carolina, and North Carolina.

West Virginia
Virginia
Kentucky
Virginia
North Carolina
Tennessee
Arkansas
South Carolina
Alabama
Georgia
Mississippi
Louisiana
Florida

Natural Features

The Southeast has low mountains and rolling hills. It also has plains, coastlines, and good harbors. A harbor is a body of water protected from winds, waves, and currents and that is deep enough for large ships to dock in. Shrimp, clams, oysters, and fish fill the warm coastal waters of the Southeast, making seafood a big industry.

The Appalachian Mountain range is one of the distinguishing features of the Southeast. It is the oldest mountain range in North America. This chain of mountains stretches from Canada all the way to Alabama. The forests of the Appalachians are home to ash, beech, oak, poplar, and walnut trees. Wood from these trees is used to make furniture, flooring, and other products.

Cypress trees and vines such as kudzu are found in the humid swamps of Louisiana, Mississippi, Alabama, Georgia, and Florida. Alligators, snakes, and lizards make their home in these areas as well.

The Mighty Mississippi

One of the most important natural features in the Southeast is the mighty Mississippi River. It flows through the Southeast on its way to the Gulf of Mexico. Floodwaters from the river have spread dark, rich soils throughout the region. The rich soils of the Southeast are ideal for growing cash crops such as rice, sugar, cotton, tobacco, fruits, and nuts. Cash crops are grown specifically for profit rather than for personal use or to feed livestock.

Human Features

The largest cities in the Southeast include coastal cities such as Jacksonville, Miami, and Tampa in Florida as well as Charleston, South Carolina, and New Orleans, Louisiana. Other big cities include Memphis and Nashville, Tennessee; Atlanta, Georgia; Louisville, Kentucky; Richmond, Virginia; and Charlotte, North Carolina.

Many people who live in the Southeast work in agriculture and industry. Among the big industries in the Southeast are auto manufacturing, telecommunications, textiles (clothing), technology, and banking. Many people make a living in the coal mines of the Appalachians.

The Southeast draws many tourists as well. People come to enjoy a variety of music, such as jazz in New Orleans, bluegrass in Kentucky, and country music at the Grand Ole Opry in Nashville. Many people also enjoy the beaches along the Atlantic and Gulf coasts as well as visiting the old plantations of the Deep South and, of course, Florida's Disney World.

What Do You Think ?
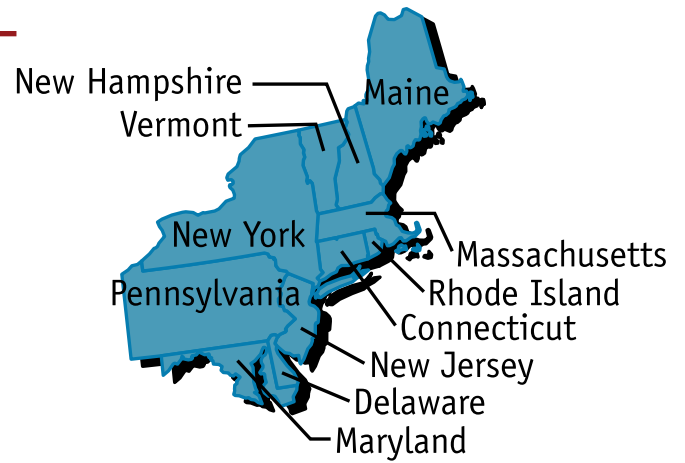
Mt. Mitchell in North Carolina is the highest peak (6,684 feet) in the Appalachians, while Mt. Elbert in Colorado is the highest peak (14,433 feet) in the Rockies. What do you think age has to do with the Appalachians being smaller in size than the Rocky Mountains?

The Smoky Mountains are part of the Appalachian Mountain range. The Smokies lie between Tennessee and North Carolina.

The Northeast

The Northeast lies south of Canada and west of the Atlantic Ocean. Maine, New Hampshire, Vermont, Massachusetts, New York, Pennsylvania, Connecticut, Rhode Island, New Jersey, Delaware, and Maryland are the states that make up this region. Similar to the West, the Northeast can be divided into two smaller regions. Maine, New Hampshire, Vermont, Massachusetts, and Connecticut form the New England region, while New York, New Jersey, Pennsylvania, Delaware, and Maryland form the Mid-Atlantic region.

New Hampshire
Vermont
Maine
New York
Pennsylvania
Massachusetts
Rhode Island
Connecticut
New Jersey
Delaware
Maryland

Natural Features

The Northeast has deep, natural harbors along the Atlantic Coast. These harbors were inviting to the first settlers from England who landed on the shores of Massachusetts in the 1600s. As a result, shipbuilding, fishing, and trade were the main economic activities in this region during colonial times.

A view of the U.S. Capitol in Washington, D.C.

The terrain of the Atlantic Coast varies from the rocky coastline of New England states to the sandy shores of the Mid-Atlantic. Tall grasses grow along much of the coast of the Northeast and seagulls and other shorebirds soar above the water.

As you move west from the coastal plain, the land rises towards the Appalachians. Many kinds of trees and plants, including blueberries,

The many colors of fall are seen in a New Hampshire forest.

Human features

Although the Northeast is the smallest region in size, it is the most densely populated. New York, New York; Philadelphia, Pennsylvania; Boston, Massachusetts; and Baltimore, Maryland are the largest cities in the Northeast. Each has very busy waterfront harbors. Many people live in the areas surrounding these cities because of job and educational opportunities. As a result, the Northeast is also the wealthiest region in the United States.

The Northeast is also a popular tourist destination. Depending on their interests, tourists come to the Northeast year-round. Some come to ski in Vermont, check out the fall colors in New England, spend a week on the beaches of Cape Cod or the Jersey Shore, or see the beautiful cherry blossoms and tulips that bloom in Washington, D.C., in the spring. The Northeast also offers lots of history as well, from Paul Revere's house in Boston to the Liberty Bell and Independence Hall in Philadelphia. There is a lot to see and do in this region!

strawberries, and wildflowers, grow in the forests of the Northeast. There are also black bears, deer, rabbits, foxes, and many other kinds of animals in the woods. There are four major rivers in the Northeast that help to make the region good for farming. Farmers grow corn, apples, peaches, and lots of cranberries. They also raise cows for milk and cheese.

There are four seasons in the Northeast. Winters in the Northeast are cold and wet. Winter storms called Nor'easters sometimes dump heavy rain and snow and can bring the region to a standstill. In the spring, bright green buds bloom on the ground and in the trees and the temperature is pleasant. Summers are typically hot and humid. Autumn in the Northeast—especially New England—brings a spectacular show of colors and crisp, cool temperatures.

New York City at night

Tools of Geography

You have learned that historians use tools to study history. Geographers also use tools to study the earth. These tools include maps and globes, aerial photographs and satellite images, data and graphs, and geographic models. Geographers also use advanced technology. For instance, a Geographic Information System (GIS) allows geographers to see relationships, patterns, and trends in a way that is quickly understood and easily shared.

Geographers create digital maps using special equipment.

A GPS, or Global Positioning System, can tell you exactly where you are at in the world.

Geography's Many Uses

Geography has many uses today. A knowledge of geography helps with city and environmental planning. For example, builders and government leaders have to consider the land when planning huge building projects. Does the area have plants and trees that have to be cleared before building can begin? Is the area wet so that it will need to be drained? Is the area level, or will many truckloads of dirt have to be brought in to level the land? Understanding the geography of a place helps people make the best decisions when determining how to use the land.

Giant radio telescopes at the Very Large Array in New Mexico are used to study the universe.

Special equipment is used to help an engineer survey the land.

Know

1. What is relative location? What is absolute location?
2. What are the regions of the western hemisphere?
3. Look at the map on pages 12–13. How do you know which region is the Southwest?
4. Tell how regions are determined.
5. Name the regions of the United States.
6. List reasons why more and more people are moving to the Southwest.
7. Describe how geography is used in city and environmental planning.

Apply

8. Demonstrate how latitude and longitude are used to find absolute location by determining the absolute location of your town.
9. Study a physical map of the western hemisphere. What physical features are most obvious in each region of the western hemisphere?
10. Explain how the hemispheres are divided. Use the maps on pages 10–11 to help you.
11. Discuss why areas are grouped as regions.
12. Summarize what the states within each U.S. region have in common.
13. Compare the Southwest to other regions of the United States. Why do people choose to live or vacation in the Southwest over other regions?
14. Predict what consequences may come if geography is not considered in city and environmental planning.

Analyze

15. How does using a street address compare to using latitude and longitude to find an absolute location? In what kind of situation would each be helpful?
16. What do you think are the defining physical, cultural, and human features of North America?
17. What information can you learn from the maps in this lesson?
18. From what you read about the regions of the United States, how do you think people in other countries divide their land into regions?
19. Study a physical map of the United States to evaluate its regions. Do you think the regions are divided and labeled accurately? What changes, if any, would you make?
20. What factors play a role in determining where people live? What factors play a role in determining where people vacation?
21. Create a list of questions you would consider if you were planning to build a new community in your state.

A Tour of New Mexico

Key Ideas

- New Mexico is part of the Southwest region because it shares similar features with neighboring states.
- New Mexico has four natural provinces.
- New Mexico has six life zones.
- New Mexico is an arid state with limited water resources.

Key Terms

butte
demography
Llano Estacado
malpais
mesa
plateau
province
reservoir
tributary

Comprehension Strategy

Preview Key Terms

Now that you are equipped with the methods and tools of a geographer, let's take a tour! Just where is New Mexico? What is our state's relative location? What is our state's absolute location? What are the physical and human characteristics of New Mexico? How do the people of New Mexico interact with the environment? How do New Mexicans connect to the rest of the United States and the world? What common features do we share with fellow citizens and the world?

New Mexico's Location

New Mexico is located in both the northern and western hemispheres on the continent of North America. As you read in the last lesson, New Mexico is in the Southwest region of the United States. The region includes three other states—Texas, Oklahoma, and Arizona. Arizona is on our western border, and Colorado runs along our northern border. To the east are Oklahoma and Texas. Texas is also to our south, as is the country of Mexico. Utah touches our northwest corner in an area called the Four Corners. New Mexico, Utah, Arizona, and Colorado all come together at the Four Corners.

The Four Corners Area
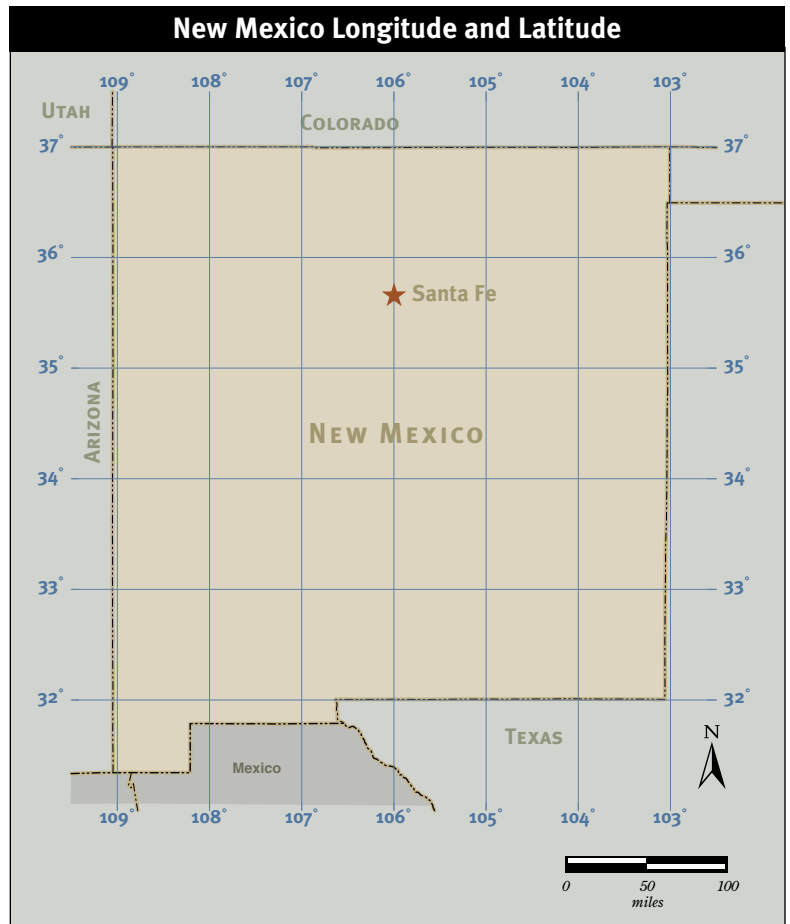
Utah

Colorado

Arizona

New Mexico

Part of the Sunbelt

New Mexico is part of at least two other regions in addition to the Southwest. It is one of the states in the Sunbelt, a region that includes states stretching from the southeastern shores of the Atlantic Ocean to the southern coast of California. The states of the Sunbelt share a warm climate, especially in the winter. Because the Rockies reach into northern New Mexico, our state is sometimes considered part of the Rocky Mountain region.

Fifth-Largest State

New Mexico is the fifth-largest state in the United States. It measures more than 121,000 square miles. Because each state in the United States covers so much land, it is impossible to identify an absolute location for each one. However, describing the latitude and longitude boundaries of a state is possible. For example, New Mexico is located between 31° and 37°N latitude and between 103° and 109°W longitude.
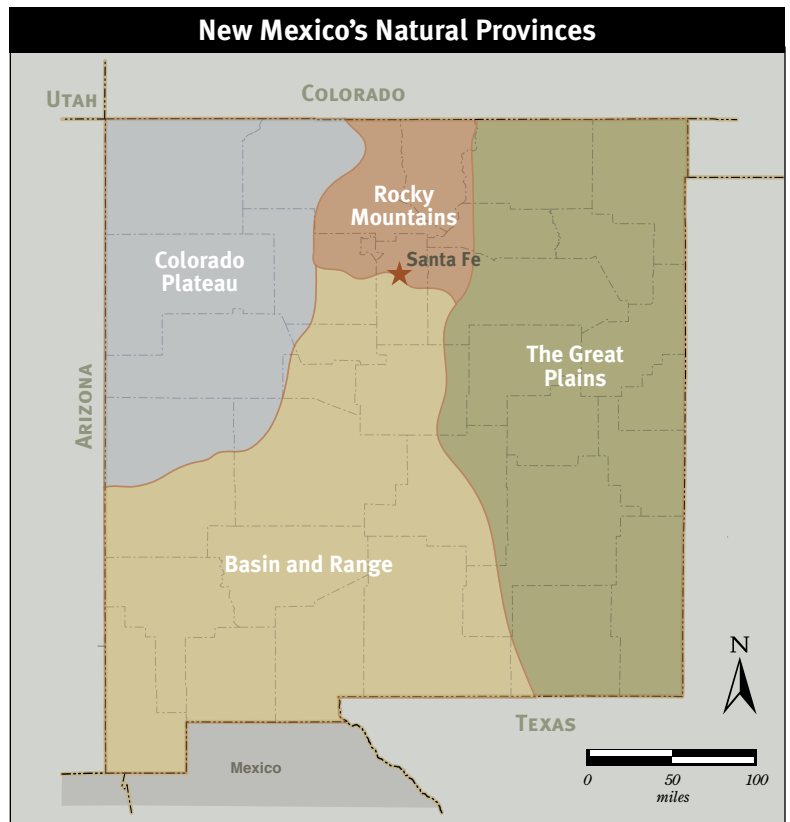

New Mexico Longitude and Latitude

Four Natural Provinces

The best way to look at the landscape of our state is by exploring its four natural provinces. A *province* is an area of land with unique physical features as well as distinct plants and animals. New Mexico's four provinces are part of larger regions within the United States. The four natural provinces of New Mexico are the Rocky Mountains Province, the Colorado Plateau Province, the Great Plains Province, and the Basin and Range Province. Let's take a look at the features of each.

What Do You Think?

Look at a map of the United States. What do you notice about the shapes of states in the East compared to the shapes of states in the West? Why do you think western states are bigger and more rectangular than eastern states?

New Mexico's Natural Provinces

ROCKY MOUNTAINS PROVINCE

The Rocky Mountains extend from central New Mexico to Western Canada. As a result, the north-central portion of our state is called the Rocky Mountain Province. It is characterized by its rugged mountain terrain. The Rockies are divided into four sections—Southern, Central, Northern, and Canadian. New Mexico's mountain province is part of the Southern section.

Two mountain ranges in our state form the southern part of the Rockies. These are the San Juan and Sangre de Cristo mountains. The highest mountain peak in our state is in the Sangre de Cristo Mountains. Wheeler Peak rises 13,167 feet, and it can be seen from Taos.

Climate

The Rocky Mountains Province has unpredictable weather that changes rapidly. In general, this province has mild summers, cold winters, and a lot of rain and snow. In the winter, there can be deep snow, high winds, and sudden blizzards. At night, the temperature may drop to well below zero!

In the spring, the weather is unpredictable. It can be cold and wet in the morning and then dry and warm in the afternoon. In the summer, there are sunny mornings, afternoon thunderstorms, and clear nights. In the fall, cool, crisp days often give way to wind and rain at night. The higher in elevation you travel, the colder and more severe the weather becomes.

The coldest recorded temperature in New Mexico history was on February 1, 1951. It was -50°F in the town of Gavilan in northern New Mexico.

Plant and Animal Life

There are many varieties of animals and plants in New Mexico's Rocky Mountain Province even though the growing season in some years is less than 80 days. The forests are thick with pine, fir, and spruce trees. Hardy plants cling to the rocks and hard soil.

Mule deer, pronghorn antelope, black bears, brown bears, bighorn sheep, wolves, coyotes, and mountain lions all make their homes in this province. These animals have adapted to the steep terrain, and most of them migrate to lower, warmer elevations during the winter. Some animals even shed their dark fur and grow lighter fur so they can blend in with the snow. Bears and mountain lions have big feet so they can walk on the snow without falling through.

Settlement Patterns

Land and climate as well as plant and animal life play a role in human settlement patterns. This was certainly the case in 1610 when Spanish settlers chose Santa Fe as the site for a new capital. Its location at the foot of the Sangre de Cristo Mountains and along a river made it an ideal location. The mountains provided protection from hostile Indian tribes, and the river offered water that could be used for farming. The mountain climate also offered regular rainfall. Today, Santa Fe is the largest city in the Rocky Mountain Province. It is home to more than 67,000 people. Because of its beginnings as a Spanish colony, nearly 50 percent of the people who live in Santa Fe are Hispanic.

At an elevation of 7,000 feet, Santa Fe is the highest capital city in the United States.

Santa Fe is the largest city in the Rocky Mountains Province.

The leaves of the aspen tree rustle in the crisp autumn air.

Our state also includes part of the huge Colorado Plateau. As a result, the Colorado Province covers much of northwestern New Mexico and makes up much of our flatland. A *plateau*, or tableland, is an elevated (raised) area of mostly flat land usually extending from a mountain range. Pajarito Plateau, for example, extends from the Jemez Mountains. Native Americans called this plateau *Tshirege*, meaning "place of the bird people" because it is so high. The city of Los Alamos covers much of the plateau today.

Other flatlands in the plateau province are called mesas and buttes. *Mesa* means "table" in Spanish. Mesas rise from the earth and are so flat on top that they look like tabletops. Black Mesa, south of the town of Socorro and east of the Rio Grande, is seen by all the people who travel down Interstate 25 each day. A *butte* is similar to a mesa, but it is smaller. It is a hill that rises sharply from the surrounding area and has steep sloping sides and a flat top. Mesas and buttes were formed by the wearing down of layers of rock over millions of years.

Climate

The dry climate of the Colorado Plateau Province is a result of the rain shadow effect caused by the Sierra Nevada mountains to the west. Air travels east, over the Pacific Ocean, and gathers moisture. As the air reaches the Sierra Nevada, the mountains suck most of the moisture out of the air. The air that eventually flows into New Mexico holds very little moisture, which causes our hot, dry climate.

Plant and Animal Life

Since the land of the Colorado Plateau Province varies from arid deserts to tall mountains, the plants and animals that live there vary greatly, too. The plateau supports desert plants, such as blackbrush or shadscale as well as rich, grassy meadows and even forests of quaking aspen. As you might have guessed, the wildlife of the Colorado Plateau is extremely diverse. Mice, rats, prairie dogs, gophers, squirrels, and more live at lower elevations, while elk, mule deer, white-tailed deer, and mountain lions live at the higher elevations.

Settlement Patterns

Because of the dry climate and rugged terrain, the Colorado Plateau Province is not as populated as other parts of the state. However, it is home to at least 70,000 Navajo Indians. The Navajo Nation—the largest Indian reservation in the United States—lies within the plateau province. The Navajo Nation covers the Four Corners region of New Mexico, Arizona, Utah, and Colorado. Many Navajo today make a living as farmers and ranchers. In addition to farming, many New Mexicans have settled in this region because of its mineral resources. The Colorado Plateau Province is a major source of oil, gas, coal, and uranium. The largest city in this province is Farmington, which lies just at the eastern edge of the Navajo Nation. Many people who live in the area work in nearby coal mines. Because of its proximity to the Navajo Nation, Farmington has the highest percentage of Native Americans of any city with a population of 15,000 or more in the United States.

Volcanic Features

Much of the Colorado Plateau Province was shaped by volcanic activity. Millions of years ago, volcanoes erupted, leaving great fields of dried lava. You can still see these fields of lava, or *malpais*, near the towns of Grants and Carrizozo. In some areas, volcanic rock has pushed up through the earth to form mountains. Mount Taylor, in the San Mateo Mountains west of Albuquerque, is a good example of a large, inactive volcano. It rises to a height of 11,301 feet.

Volcanic activity shaped much of the Colorado Plateau Province. This "dead" volcano is located to the west of Albuquerque. **What is a dead volcano?**

The eastern part of New Mexico is part of the Great Plains Province. This province includes some of the flattest land in the world. The *Llano Estacado*, or "staked plains," is located here. This dry, treeless area covers more than 30,000 square miles in New Mexico and Texas.

Climate

This province is part of what was once called the Great Desert. Francisco Coronado, the first European to travel the area, said, "I reached some plains so vast that I did not find their limit anywhere I went, although I traveled over them for more than 300 leagues . . . with no more landmarks than if we had been swallowed up by the sea . . . there was not a stone, nor bit of rising ground, nor a tree, nor a shrub, nor anything to go by."

The semi-arid province has long, hot summers and cold winters. There is very little rainfall, and it remains so hot during the summer that most of the rain that falls evaporates immediately. The main sources of water in the province are the Canadian and Pecos rivers. Dams provide water to many of the towns, farms, and ranches in the Great Plains Province. As a result, farming and ranching are still the main economic activities in this province. Cattle and sheep graze on the grasslands, and farmers grow crops, such as cotton, corn, and wheat. Because this province is very dry, farmers rely on irrigation to bring water to their crops.

Plant and Animal Life

The lack of water in the Great Plains Province gets so little water, there are no trees except the tiny shin oak and mesquite. Other desert plants that thrive in this province are the Chihuahuan desert scrub, creosote bush, javelina, and prickly pear cactus. The dry heat of the Great Plains Province drives away most animals, but a few are able to flourish there. These include big free-tailed bats, coyotes, diamondback rattlesnakes, kangaroo rats, roadrunners, and even vampire bats.

What Do You Think

There are a number of theories about how the *Llano Estacado* got its name. Some people believe Spanish explorers named the area for the stakes they drove into the ground to mark their way. Others say the plateau was named for the lines of steep cliffs throughout the area. Still others say the name comes from the many spiky yucca plants found in the plateau. What do you think?

Settlement Patterns

The Great Plains Province is the least populated of the four natural provinces. However, the province does include four of New Mexico's largest cities—Roswell, Clovis, Hobbs, and Carlsbad. Because farming on the plains can be so difficult, many New Mexicans have moved to these cities seeking jobs and educational opportunities. Unlike other parts of the state, this province was settled mostly by white Protestants. As a result, the population outside of city areas is mostly white.

Carlsbad Caverns are among the largest caverns in the world. Spectacular rock formations called stalagmites and stalactites impress thousands of tourists who visit the caverns every year.

Stalagtites hang from the ceiling of a cave at Carlsbad Cavern in southeastern New Mexico. **What do you call the formations that rise up from the cave floor?**

A lone tree grows in the desert of the Great Plains Province.

Basin and Range Province

The fourth province of New Mexico is called the Basin and Range Province. It is located in the south-central part of the state between the Rio Grande and Pecos rivers. This province is part of the larger Basin and Range Region that covers portions of eight southwestern states. In our state, the province features small mountain ranges separated by nearly flat, dry plains, called basins. The mountains here rise about 3,000 to 5,000 feet above the basins. The San Andres, Sacramento, and Guadalupe mountains all lie within the Basin and Range Province.

One of the many features of this province is the Rio Grande Rift. It is a crack in the earth's crust that runs along the Rio Grande for about 450 miles from Leadville, Colorado, to Las Cruces, New Mexico. It was formed when the Colorado Plateau pulled away from the Great Plains millions of years ago. This movement caused the earth to stretch and crack. The soil in the rift area along the Rio Grande is more fertile than in the rest of the state. As a result, there are many farms in this area of the state.

Climate

Along our state's southern border, the growing season can last for more than 200 days. This province is hot, hot, hot! The hottest recorded temperature in New Mexico was on July 14, 1934. It was 116°F in Orogrande! Like the Colorado Plateau Province, the dry climate of this province is caused by the rain shadow effect. The Basin and Range Province has few streams, but rain sometimes gathers in the lowest basins and forms shallow lakes.

Plant and Animal Life

This province contains desert grasslands and scattered mountains covered with mesquite-tarbush desert scrub, creosote bush, and large patches of palo verde cactus shrub and saguaro cactus. Among the many animals and birds that makes their homes in the Basin and Range Province is our state bird, the roadrunner.

White Sands

One of the most notable features of the Basin and Range Province is the white sand desert west of the city of Alamogordo. The bright shimmering sand is actually a mineral called gypsum. Gypsum has blown off the nearby San Andreas Mountains and collected in the area over thousands of years. The wind still blows the sand, forming large dunes that are beautiful to see. Every year more than half a million tourists visit the White Sands National Monument to see what has been called our country's largest sand pile. There is very little plant or animal life in the white sands. The animals that do live there—mostly mice and lizards—have turned white over the years and now blend in with the sand.

The monument is largely surrounded by the White Sands Missile Range, where the U.S. military tests various kinds of weapons. The missile range includes the Trinity Site, where the first atomic bomb was tested during World War II. Tourists can visit the Trinity Site on only two days of the year—one in April and the other in October. Otherwise, the missile range is closed to visitors.
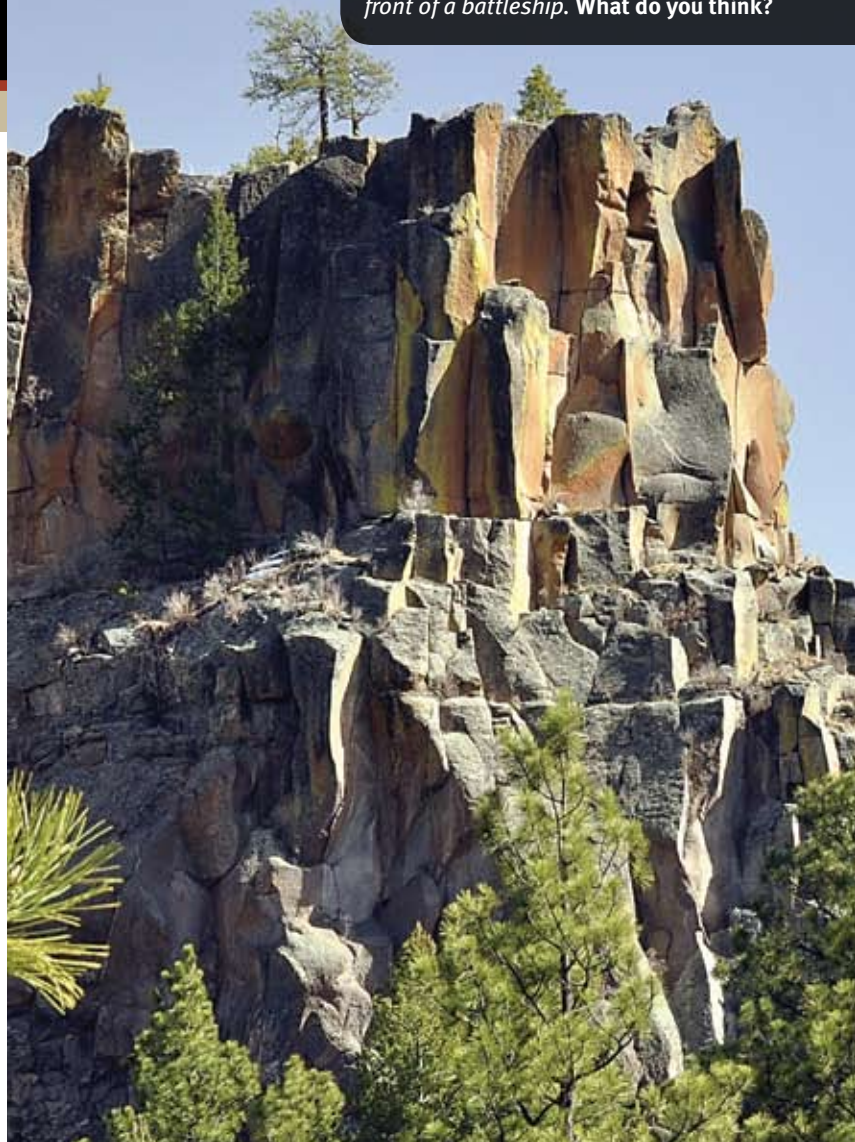
Settlement Patterns

The two largest cities in New Mexico—Albuquerque and Las Cruces—lie within the Basin and Range Province and the Rio Grande Rift. Both cities began as farming communities because of the fertile soil and access to the waters of the Rio Grande. They were both were colonized by the Spanish around the same time as Santa Fe. Similar to Santa Fe, there are a number of Indian pueblos in this province.

The areas surrounding Albuquerque and Las Cruces are still farmed today, but both cities are also industrial centers. The aerospace industry is one of the biggest employers. Because Albuquerque gets so much sun—nearly 300 days of the year are sunny—it has attracted solar energy companies.

A much younger city in this province is Alamogordo in Otero County. It was founded in 1898 when the railroad put it on the map. Many people settled in the area during World War II when the Alamogordo Army Air Field opened as a training center for military pilots. Today, the air field is known as Holloman Air Force Base. After the war, the U.S. government began developing missiles at the base. Today, Alamogordo's population includes a large percentage of government workers and retirees as well as people who work in the tourist industry.

The Mescalero Apache Reservation in Otero County is also within the Basin and Range Province. The reservation was created in the 1870s by the U.S. government. The 720-square-mile reservation is a small part of the land that the tribe once roamed as hunter-gatherers. Today, about 4,000 tribal members live on the reservation. Many Mescalero Apache make a living as cattle ranchers. However, the reservation's biggest business is its casino and ski resort.

The Power of the Sun

The Basin and Range Province has a valuable resource that will help meet the energy needs and provide job opportunities for the region's growing population. The world's biggest solar farm is being constructed in the desert near Deming. When completed, it is expected to supply enough energy to power 240,000 homes.

The sun is a magnificent source of free energy. Solar panels can collect energy directly from the sun. Solar energy is clean and can be stored for use at a later time. When solar panels were first built, they were large, heavy, and expensive. Today, they are lighter weight, more efficient, and much less expensive.

Life Zones

You have just read about New Mexico's four provinces and main features. Climate and plant and animal life can also be organized into life zones.
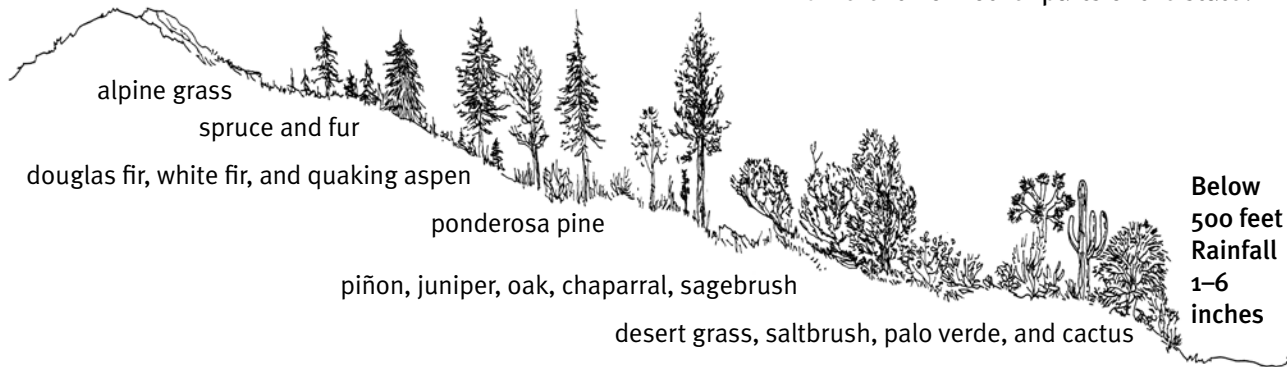
New Mexico has six life zones. A life zone, which is also called a biome, is the ecosystem of plants and animals that live in an area. Elevation influences what is found in each zone because plant and animal life changes with altitude. The chart on this page summarizes the life zones found in New Mexico.

12,000 feet Rainfall 30–35 inches

alpine grass

spruce and fur

douglas fir, white fir, and quaking aspen

ponderosa pine

piñon, juniper, oak, chaparral, sagebrush

desert grass, saltbrush, palo verde, and cactus

Below 500 feet Rainfall 1–6 inches

Life Zone	Provinces	Elevation	Description	Common Plants and Animals
Lower Sonoran	Great Plains, Basin and Range	Up to 4,500 feet	This zone includes much of the Rio Grande and Pecos River valleys. Its fertile soil and warmer temperatures make this the state's best farming and grazing land.	**Plants:** grasses, mesquite, creosote bush, four-winged saltbrush, cottonwood, yucca, a variety of cacti **Animals:** pronghorn antelope, cattle, coyotes, desert fox, jackrabbits, javelinas, kangaroo rats, lizards, prairie dogs, snakes, squirrels
Upper Sonoran	Great Plains, Basin and Range, Colorado Plateau	4,500 to 7,500 feet	The largest zone covering two-thirds of the state. It includes the high plains in the northeast and most of Albuquerque and Santa Fe. Extensive grasslands make this zone good for cattle ranching and dry farming.	**Plants:** piñon pine, a variety of juniper trees, oak trees, blue grama and buffalo grasses, sagebrush **Animals:** antelope, cattle, coyote, deer, prairie dogs
Transition	Basin and Range, Rocky Mountains	7,000 to 8,500 feet	This is a major timber zone. Its cooler, wetter climate makes this zone ideal for tall trees, wildlife, and wildflowers.	**Plants:** ponderosa pine, scrub oak, wildflowers, such as columbine, pennyroyal, New Mexico groundsel, orange Indian paintbrush, bright red penstemon, purple lupine **Animals:** black bears, bobcats, chipmunks, deer, elk, mountain lions, quails, wild turkeys
Canadian	Basin and Range, Rocky Mountains	8,500 to 11,500 feet	This zone includes the White, Mogollon, Jemez, Las Tusas, and Sangre de Cristo mountains. Rainfall and snowmelt from this zone supply water to the dryer zones below.	**Plants:** aspen, blue spruce, Douglas fir, white fir, limber pine **Animals:** bears, Bighorn sheep, deer, elk, minks, muskrats
Hudsonian	Rocky Mountains	11,500 to 12,000 feet	This is a very narrow zone where the tree line ends. It is used for sheep grazing in summer.	**Plants:** alpine fir, bristlecone pine, corkbark fir, Englemann spruce, Siberian juniper **Animals:** bighorn sheep, elk, mountain goats, small rodents, birds
Arctic-Alpine	Rocky Mountains	Above 12,000 feet	The smallest zone, it includes mountain peaks, such as those near Santa Fe and Taos. Snow often remains through late summer.	**Plants:** a treeless zone, but with some grasses, shrubs, and flowers **Animals:** pikas, marmots, and other that may graze here from lower zones in summer

A Very Dry State

As you have read, New Mexico is very arid, or dry. Most of the state gets less than 20 inches of rain per year. Most of the rainfall we get comes in the summer monsoon season. During those months, there are brief heavy thunderstorms, usually in the afternoon. Besides the lack of rainfall, New Mexico has few rivers or natural lakes. In fact, our state has less land covered by water than any other state in the United States. In many parts of New Mexico, people must dig wells hundreds of feet into the ground to find water.

Much of New Mexico's water starts as snow high in our mountains. In the spring and summer, the snow melts and runs off our mountains into streams. Many of our mountain streams run together, forming tributaries. A *tributary* is a stream or smaller river that flows into a larger body of water, such as a river or lake.

Five Main Rivers

There are five major rivers that flow through our state. The largest is the Rio Grande followed by the Pecos River. The Rio Grande starts in the mountains of southern Colorado. It flows southward for 470 miles through New Mexico. The Pecos River, which is a tributary of the Rio Grande, starts in the Sangre de Cristo Mountains and flows southward into Texas. The three other major rivers are the Canadian, San Juan, and Gila rivers.

Meeting Our Needs

In most years, our rivers have enough water for all our needs. But in some years, there is not enough rain or snow, and we suffer droughts. At those times we have to strictly conserve our use of water or there will not be enough for everyone. In other years, there has been too much water in our rivers and there have been terrible floods. In 1929, floods in the Rio Grande Valley were so bad that they destroyed the little town of San Marcial and forced most of its residents to flee.
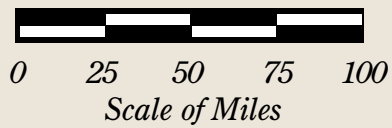

A flood devastated the small town of San Marcial, New Mexico, in 1929. **During what season did the flood likely occur?**

San Juan River
Navajo Res.
Heron Res.
El Vado Res.
Abiquiu Res.
Rio Chama
Rio Grande
Cimmaron River
Eagle Nest Lake
Corrizo Creek
Canadian R.
Mora River
Ute Creek
Canadian River
Bluewater Lake
Rio Puerco
Gallinas R.
Conchas Lake
Ute Res.
Rio San Jose
Pecos R.
Laguna del Perro
Lake Sumner
Rio Grande
Pecos River
San Francisco R.
Elephant Butte Reservoir
Gila River
Caballo Res.
Lake Lucero
Lake McMillan
Mustang Creek
Pecos R.
Salt Lake
Simon Creek
Playas Lake
Red Bluff Reservoir

New Mexico's rivers carry much-needed water to all the regions of our state. **Which rivers are near where you live?**

0   25   50   75   100
Scale of Miles

N

Dams and Lakes

Dams were built to help prevent floods like the one in San Marcial and to store water in reservoirs. A *reservoir* is a natural or manmade pond or lake used for the storage of water. Manmade reservoirs are formed when large dams are placed on rivers. All of New Mexico's large lakes, including those behind El Vado and Conchas dams, are manmade.

Elephant Butte Reservoir is the state's largest manmade lake, stretching a distance of 40 miles. Completed in 1916, Elephant Butte's dam helps protect towns to its south, including Truth or Consequences and Las Cruces. It is also an important recreation spot. Each year, more than a million people go to Elephant Butte's lake to boat, swim, camp, and fish.

River Valleys

The rivers of New Mexico flow through river valleys, or lowlands. Most people in our state live in these river valleys because they need water from our rivers. The soil in our river valleys is the most fertile in the state and is good for growing alfalfa, beans, and corn. Farmers irrigate their crops by digging ditches that run from our rivers. These ditches are known as acequias. We will learn more about acequias later in this book. The soil is also often good for growing trees, including cottonwood and pecan trees. Wooded areas along our rivers are called bosques.
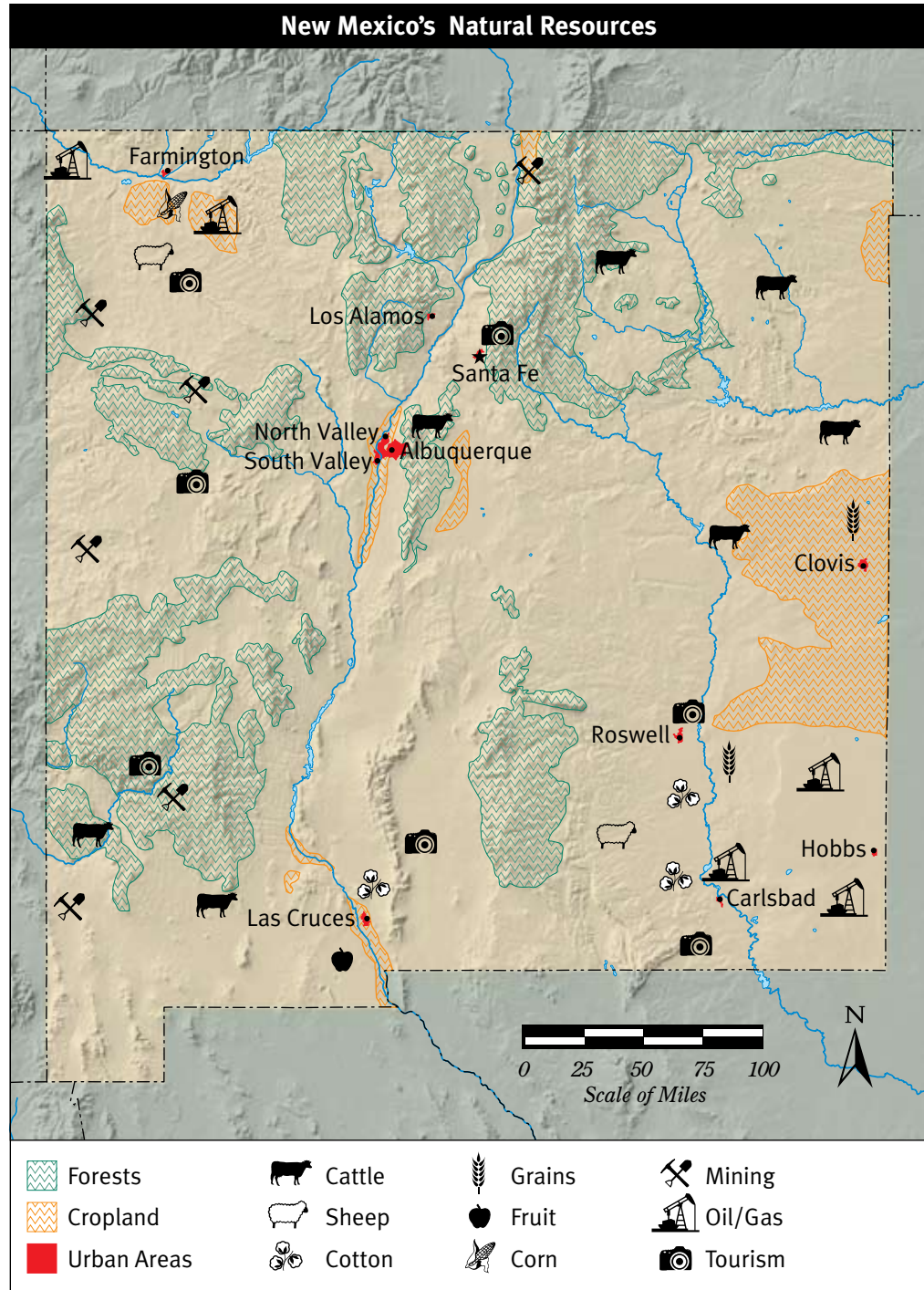
The Continental Divide

Another important physical feature of our state is the Continental Divide. It cuts through the Basin and Range and Plateau provinces. The Continental Divide is formed by a series of mountain ridges extending from Alaska to Mexico. The ridges form a line that divides the flow of water to opposite sides of the continent. If you were to fly a plane over New Mexico and look out the window, you would notice that all the rivers, tributaries, and streams flow in opposite directions at the Continental Divide. All rivers east of the ridge line flow to the east, while all the rivers west of the ridge line flow to the west. The Continental Divide divides the entire continent of North America.

Continental Divide in the United States

CANADA

Pacific Ocean

Atlantic Ocean

MEXICO

N

New Mexico's Natural Resources

Without a doubt, water is our state's most vital resource. While water is often hard to come by, mineral resources are not. New Mexico ranks seventh in mineral production in the United States. Topping the list are petroleum, natural gas, potash, uranium, and copper. Potash is used in agriculture as a fertilizer. Uranium is used in bomb-making and in nuclear power plants as fuel. Oil and gas are mined on the Colorado Plateau in northwestern New Mexico near Farmington. Important oil and gas fields are also found in southeastern New Mexico in Lea and Eddy counties. New Mexico's mountains and hills also have many valuable minerals, including gold, silver, copper, coal, and gravel.

New Mexico's Natural Resources

Farmington
Los Alamos
Santa Fe
North Valley
South Valley · Albuquerque
Clovis
Roswell
Hobbs
Carlsbad
Las Cruces

N

0   25   50   75   100
Scale of Miles

Legend			
Forests	Cattle	Grains	Mining
Cropland	Sheep	Fruit	Oil/Gas
Urban Areas	Cotton	Corn	Tourism

Caring for the Environment

Throughout history, people have used our natural resources to provide for their families. We have used the land for farming, ranching, and mining. Although we have benefited from these activities, it is important to protect our resources as well.

Many years ago, people often did not take care of the land and its resources very well. Sometimes soil, timber, and water were wasted. Land was over grazed, leaving the soil to be blown away or washed down rivers and streams. This loss of valuable soil is called erosion.
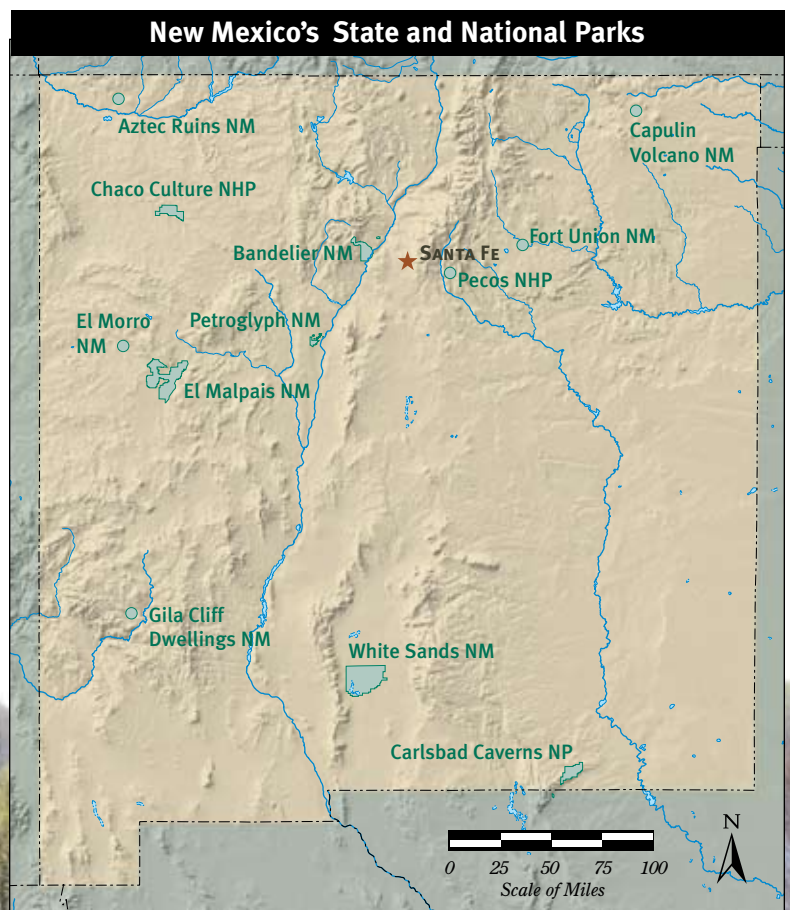
In other parts of the state, lumber companies cut down trees for lumber without planting new ones. Fires destroyed millions of acres of land in New Mexico. People have often wasted our precious water supply as well.

After 1900, however, people began to think about using natural resources more wisely. They passed laws that made it illegal for people or factories to pollute the soil, air, and water. The government also began to set aside land for state and national parks, national forests, and wildlife refuges.

A controlled burn is a technique sometimes used by farmers to help renew the soil and stimulate new plant growth. **How do you think fire renews the soil?**

Later, wilderness regions were set aside so the land would remain in a natural state forever. Visitors have to hike in, ride horses, or drive on narrow dirt roads, so they leave no traces that they have been there. Trees cannot be cut, and the land cannot be farmed or changed by humans.

Today, people are working together to keep our state a great place to live. They are working to develop responsible methods of transportation, such as commuter trains and expanded bus service. They are working to balance the people's need to use the land with preserving the land for future generations.

New Mexico's State and National Parks

Aztec Ruins NM
Capulin Volcano NM
Chaco Culture NHP
Fort Union NM
Bandelier NM
SANTA FE
Pecos NHP
El Morro NM
Petroglyph NM
El Malpais NM
Gila Cliff Dwellings NM
White Sands NM
Carlsbad Caverns NP

N

0   25   50   75   100
Scale of Miles

The People of New Mexico

Our journey through New Mexico takes a look not just at the history and geography of the state but also the people. *Demography* is the study of the characteristics of human populations, such as size, growth, density, distribution, and other vital statistics. Who lives here? Where do they live? Where did they come from? What do the people do?

The United States is a very diverse nation, and New Mexico is a very diverse state. New Mexicans and their ancestors come from all the continents of the world. They speak many different languages; practice many different religions; and live in cities, suburbs, and rural areas.

The Journey Continues

Now that you have some basic background on history and geography, you are ready to take a closer look at the unique history of New Mexico. As you read the pages of this book, you will see how the land and people of New Mexico have shaped its history, government, and economy. You will also see how New Mexico's past connects with the history of the United States.

In a way, our land is like a huge stage on which all of our history has played. Although the characters and stories have changed over the years, the stage is much the same. How and why people came here, the difficulties they met and overcame, how they provided for their families, and what awaits us in the future are all part of our journey. Let's begin!

Shiprock Mountain in northwestern New Mexico can been seen from other states in the Four Corners region. **What states make up the Four Corners region?**

Check Your Understanding

Know

1. What are some unifying characteristics of each of New Mexico's four provinces?
2. Tell how the lands of the four provinces supports life.
3. Identify the largest population groups that live in each of New Mexico's four provinces.
4. Why did Spanish settlers choose Santa Fe for a new capital in 1610?
5. Why is nearly 50 percent of the population of Santa Fe Hispanic?
6. What is being built in the Basin and Range Province to meet growing energy needs?
7. List three ways that New Mexicans have adapted to living in a very dry state.
8. Write some of New Mexico's most important natural resources.
9. Identify three maps or charts from the lesson and tell what information they give.

Apply

10. How do the unifying characteristics of New Mexico's provinces compare to the unifying characteristics of the U.S. regions?
11. Discuss why different plants and animals live in each province.
12. Explain why the population of each province differs.
13. Consider how the geographic factors of Santa Fe met the needs of Spanish settlers in 1610. What geographic factors draw people to Santa Fe today?
14. Summarize the population settlement patterns of each of New Mexico's four provinces.
15. What might happen to energy resources if the population of New Mexico continues to grow?
16. Predict how life in New Mexico would be different without reservoirs.
17. Predict what people or places might use New Mexico's natural resources.
18. Draw an image of one common plant and one animal found in each of New Mexico's life zones. Use the chart on page 34 to help you.

Analyze

19. How would you divide your own community into regions? Explain your reasoning.
20. How might plant and animal life in each of the provinces be different if they all received consistent rainfall throughout the year?
21. Do you think the largest population groups in each province will change over the next 100 years? Why or why not?
22. Predict what geographic factors in other regions of the United States draw large populations. Provide at least five examples.
23. If all of New Mexico had a climate like the Rocky Mountains Province, how might the settlement patterns be different?
24. In what ways does a growing population affect the environment and natural resources?
25. Do you think it is okay to build dams to create reservoirs in areas where water is scarce? Explain your answer.
26. What natural resources do you think New Mexicans need that are not found in the state?
27. What other kinds of maps might you include in this chapter?

Study a Map

Maps are like pictures. They say a lot with few words. Maps are important tools for geographers. Although there are many kinds of maps, such as physical maps, resource maps, and political maps, they typically share some common features:
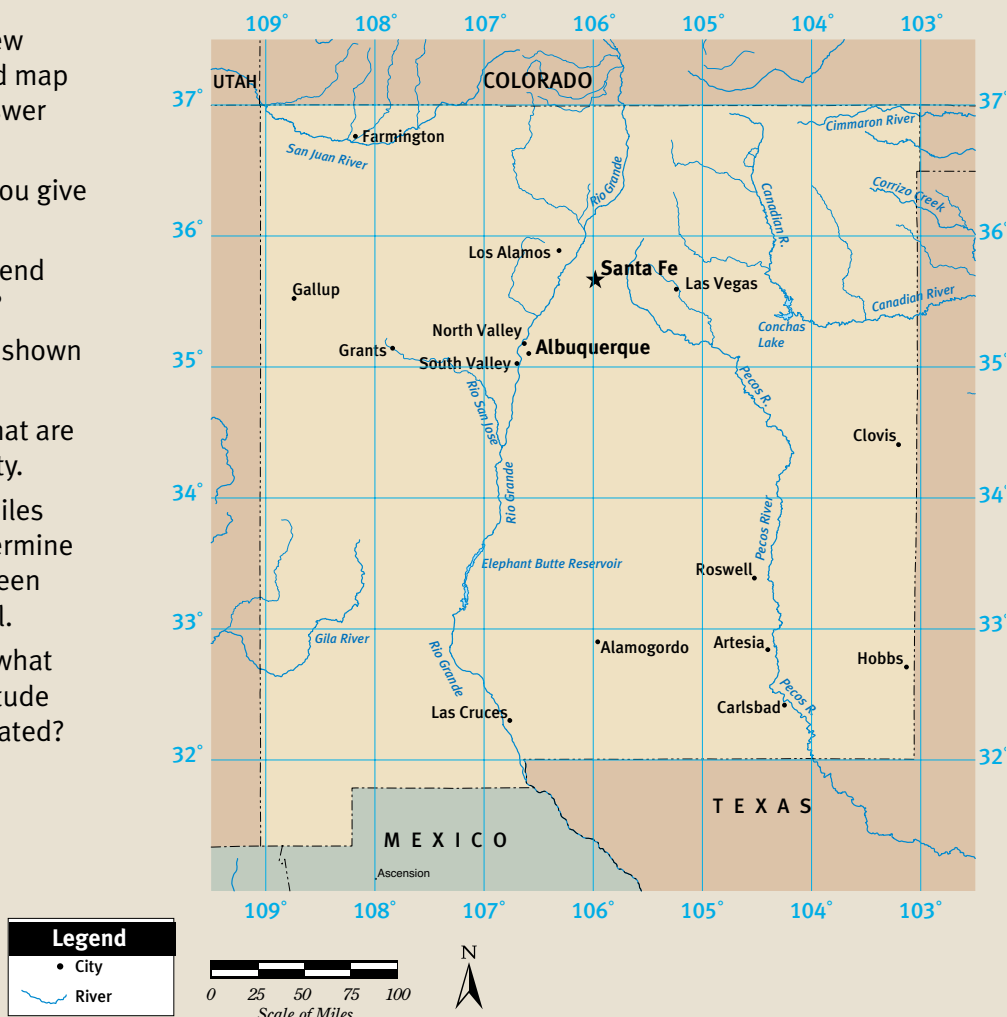
- A title that indicates what kind of information the map will show
- A compass, which helps determine the orientation of a map by showing North
- A scale of miles to estimate distances
- A legend, or key, with symbols to help identify parts on a map

Some maps also include grids showing lines of latitude and longitude. The intersection of those lines helps determine the absolute location of a place.

Your Turn

Study the map of New Mexico. Use the grid and map features to help you answer the questions.

1. What title would you give the map?
2. What does the legend show for the map?
3. Name three rivers shown on the map.
4. Name two cities that are near the capital city.
5. Use the scale of miles and a ruler to determine the distance between Clovis and Roswell.
6. At approximately what latitude and longitude is Alamogordo located? Gallup? Santa Fe?

Legend
- • City
- River

Scale of Miles
0 25 50 75 100

N

Key Idea Review

Lesson 1

1. Why do historians study primary and secondary resources?
2. How is studying history from multiple perspectives beneficial?
3. What kinds of questions can you ask yourself when doing historical research?

Lesson 2

4. What is geography?
5. Explain each of the five themes of geography.
6. Describe each of the regions of the United States.
7. What kinds of tools are available to geographers and how are the tools helpful?

Lesson 3

8. What features does New Mexico have in common with other states in the Southwest region?
9. List and briefly describe the four natural provinces of New Mexico.
10. Explain the different life zones in New Mexico.
11. What problems are caused by New Mexico being an arid state with limited water resources?

Comprehension Strategy

Learn to Preview

Good readers preview the text before they read. Previewing helps you become familiar with a book before you read it. This helps you to better understand what you read. It might even make you more interested in what you are about to read.

You learned to preview a textbook and all of its parts. Use what you learned to preview Chapter 2. As you preview, think about the main ideas of the chapter. Write three predictions of what you think you will learn in Chapter 2. Share your predictions with a partner. Explain how you came up with your predictions. After reading the chapter, revisit your predictions to see if you were right!