CHAPTER

Regions of Texas

Why It Matters

The regions of Texas have different natural resources. These differences are one reason why Texas has many economic activities. The large and varied population of Texas depends upon the diversity of its regions.

The Impact Today

Geographic factors continue to influence where Texans live today. For example:

- The majority of Texans live in the eastern regions where there is abundant rainfall and large cities with job opportunities.
- The boundary area with Mexico is one of the fastest growing parts of Texas.
- Cities such as Austin, San Antonio, Dallas, and Houston are located along important transportation routes.

c. 65 million B.C.

★ Earthauakes and volcanoes formed Coastal Plains



★ Big Bend and Edwards Plateau created from limestone



Texas

United States

c. 140 million B.C.

c. 65 million B.C.

c. 54 million B.C.

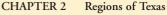
c. 54 million B.C.

Norld



c. 65 million B.C.

Great Plains formed
 First horses appeared





A field of bluebonnets dots the Texas landscape.

−c. 2 million B.c.

★ Ice Age advance affected Texas climates

c. 2 million B.C.

c. 1.5 million B.C.

c. 9,500 B.C.

- c. 1.5 million B.C.

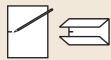
Grand Canyon forms



Categorizing Information Study Foldable

Make and use this foldable to organize what you learn about the four natural regions of Texas.

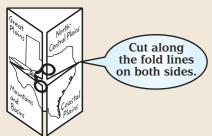
Step 1 Mark the midpoint of a side edge of one sheet of paper. Then fold the outside edges in to touch the midpoint.



Step 2 Fold in half from side to side.



Step 3 Open and cut along the inside fold lines to form four tabs. Label your foldable as shown.



Reading and Writing As you read the chapter, write information under each tab of your foldable about the geographic features, population, economy, natural resources, and people of each region of Texas. Use what you learn to compare and contrast the regions.

c. 9,500 B.C.

★ Ancient people reached Texas

TEXAS HISTORY Online

Chapter Overview

Visit the texans.glencoe.com

Web site and click on

Chapter 2—Chapter

Overviews to preview chapter information.



section 1

The Coastal Plains

Major Urban

Centers

Guide to Reading

Main Idea

The Coastal Plains region contains five diverse geographic sections, all affected by their nearness to the Gulf of Mexico.

Key Terms

petrochemical alluvial soil

Preview of Events

c. 65 million B.C.

Coastal Plains region takes shape

Reading Strategy

Geographic | Principal

Section

Organizing Information Complete a table like the one shown here as you read.

Landforms

Read to Learn

- about the Coastal Plains sections.
- about differences in each geographic subsection within a natural region.
- about the movement of resources.

Section Theme

Economic Factors The Coastal Plains include the state's major cities where manufacturing, trade, and education are centered.

$\diamond c. 35$ million years B.C.

Mammoths and giant armadillos roam plains and woodlands



George S. Perry



Texas can be divided into four natural regions. They are the Coastal Plains, the North Central Plains, the Great Plains, and the Mountains and Basins. George S. Perry, a Rockdale writer, traveled the entire state in 1942 and collected humorous tales from the different regions. He found that Texas seemed too big for a single description. "Yes, it's that big—too big, actually, to visualize in one hunk. It's better to think of it, for the moment, as a group of federated realms."

The Most Populated Region

The largest natural region in Texas is the Coastal Plains. This region extends from the eastern and southern United States through Texas and continues south far into Mexico. As its name implies, this region lies along



the coast—the area where the land meets the water. The Coastal Plains vary from being completely flat to having rolling hills. The height above sea level is generally low—from a few feet to about 1,000 feet (305 m).

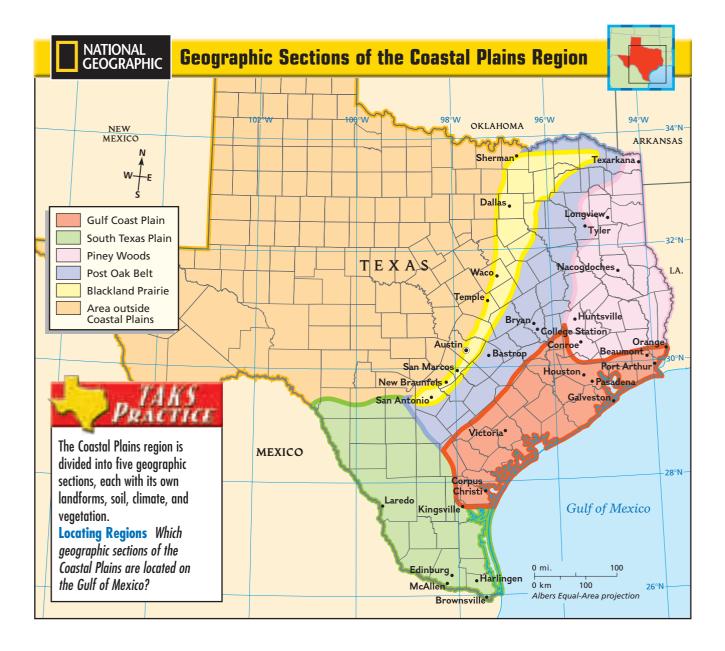
The Coastal Plains are home to more Texans than any other natural region. About two out of three Texans live and work here. The nearby Gulf of Mexico provides the region with a mild climate. Winds blowing across the Gulf pick up moisture and drop it on the land. A plentiful water supply, coupled with its flat land, make the Coastal Plains ideal for farming and ranching. It is easier to build cities on this level surface, too. Major cities in the Coastal Plains include Dallas, Austin, Pasadena, San Antonio,

Houston, Corpus Christi, Galveston, Victoria, Brownsville, and Laredo. These cities are centers of manufacturing, trade, and services such as banking, tourism, trade, and education.

The Coastal Plains have many rich natural resources. The pine forests of East Texas produce large amounts of lumber and other wood products. Other parts of the Coastal Plains have rich soil for growing cotton, rice, vegetables, and grains. Grasses in the drier areas feed most of the cattle raised in Texas.

Great oil fields are also found in this region. The first large oil discovery, the **Spindletop Field**, was discovered near Beaumont in 1901. The greatest oil field ever discovered in Texas, the **East Texas Oil Field**, was found near Henderson in 1930.





Later discoveries close to Kilgore and Longview proved to be part of the same field. Historically, this field made Texas the leading producer of oil in the United States. Processing oil and oil products is a major industry in the region, especially along the coast. Related industries, such as shipping and warehousing, have also developed.

The level land of the plain allows free movement of goods and people. The state's seaports are connected by roads, railroads, and pipelines to the rest of the state and the nation. Goods from the other natural regions in Texas funnel into the seaports such as Houston, Galveston, and Corpus Christi for shipment to the rest of the world. Likewise, goods arriving from other nations enter Texas for further distribution. The **Gulf Intracoastal Waterway**, a

protected shipping channel, extends along the coast from Brownsville to Apalachee Bay, Florida. This important waterway links Texas to the southeastern United States and the world.

Three of the natural regions of Texas are divided into geographic subsections that have different types of vegetation. The Coastal Plains region has five different geographic subsections. These are the Piney Woods, the Gulf Coast Plain, the Post Oak Belt, the Blackland Prairie, and the South Texas Plain. All five sections lie on the plain near the Gulf of Mexico. There are many differences in the vegetation, wildlife, and other natural resources of each section.

Reading Check Explaining What features of the Coastal Plains make it a popular region?



The Piney Woods

The Piney Woods area gets its name from the pine trees that cover much of the land. (See the map on page 50.) Four national forests can be found in this part of Texas—Angelina, Sabine, Sam Houston, and Davy Crockett. The southeastern part of the Piney Woods is made up of the Big Thicket National Preserve, an area with dense growths of pines, other trees, and shrubs. Much of the Big Thicket, however, is swamp.

Economic growth in the Piney Woods region occurred thanks to the presence of two vital natural resources—wood and oil. Lumbering is a particularly important economic activity in this part of Texas, and lumber-related businesses are the most important industries here. Much population growth occurred in the 1930s as a result of an enormous oil field discovered in Gregg, Rusk, and Smith Counties.

Farming is an important economic activity. The long growing season in the Piney Woods allows a variety of fruits and vegetables to be grown. Also located here are several major garden industries, such as growing roses and bedding plants. The Piney Woods area has been settled for hundreds of years. Native Americans, Spaniards, African Americans, and Anglo Americans all were attracted to this rich area. Texarkana, a manufacturing and medical center, straddles the Texas-Arkansas boundary. Longview is an industrial, recreational, and convention center. Nacogdoches (NA•kuh•DOH•chuhz) is the home of Stephen F. Austin State University, while Huntsville is the home of Sam Houston State University and the headquarters of the Texas Department of Criminal Justice (the state prison system). Conroe has many residents who commute to Houston and its suburbs. Many of the northern suburbs of Houston are in the Piney Woods.

The Gulf Coast Plain

Heavy stands of grasses grow in many parts of the Gulf Coast Plain. This grass provides excellent feed for cattle. Cattle raising is the most important agricultural activity in this part of Texas. There are more cattle per square mile here than in any other geographic region in the state.



The Gulf Coast Plain benefits from a long growing season that allows farmers to grow many kinds of crops, including rice, cotton, and grain sorghum (for livestock feed). Rice is an important crop in this geographic region. (Texas rice is sold to more than 100 countries around the world.) Wharton County produces more rice than any other county.

Some parts of the Gulf Coast Plain are heavily industrialized. Many of the industries turn oil or natural gas into products such as gasoline, plastics, fertilizer, antifreeze, and synthetic rubber. Petrochemical industries—businesses related to oil and gas products—stretch in a line from Corpus Christi through Houston and Beaumont, ending near Port Arthur and Orange on the Louisiana border. Some petroleum fields are found off the Texas coast in the Gulf of Mexico.

Two large cities—Houston and Corpus Christi—were built in the Gulf Coast Plain. Houston, in Harris County, is Texas's largest city. It is home to nearly 2 million people.

Houston supports a wide variety of businesses and services. The **Johnson Space Center**, which

trains America's astronauts, has spurred the development of many scientific industries. Houston's largest economic role, however, is as the center of the state's petrochemical industry.

Houston is the secondbusiest seaport in the United States and is a



site and click on

Chapter 2—Student

Web Activity to learn
more about the Johnson

Space Center in Houston.



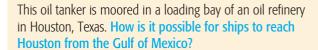


major center for international shipping. Ships from around the world arrive from the Gulf of Mexico through an artificial waterway called the **Houston Ship Channel.** Many foreign banks and financial institutions have offices in Houston. The city has one of the finest medical research complexes in the United States. Suburban Houston has attracted a large computer manufacturing industry.

A large petrochemical industry also thrives in Corpus Christi, another major port on the Gulf of Mexico. An important center for fishing and shrimping, Corpus Christi is a home port city for the United States Navy. Tourists come to the city in large numbers, and many of them visit the Texas State Aquarium and the World War II aircraft carrier *Lexington*.

Other cities in the Gulf Coast Plain include Beaumont, an important site for petroleum refining. Located southeast of Houston, Galveston is a popular spot for tourism, fishing, and shipping. Victoria, southwest of Houston, is a hub for agricultural and petrochemical production.

Reading Check Identifying List four important economic activities in the Gulf Coastal Plain.



Exploring Geography

The Post Oak Belt

As its name suggests, the Post Oak Belt contains many oak trees. Intermixed with these are other hardwood trees, such as hickories. Running through the Bastrop area is an extensive, isolated band of pine trees. Because this pine covered terrain does not connect to the Piney Woods, this area is sometimes called the Lost Pines.

Many crops grow well in the Post Oak Belt, including corn, grains, cotton, peanuts, pecans, hay, watermelons, peaches, and Christmas trees. Livestock graze and fatten in the area, too.

Although this section contains no large cities, education and light industry have thrived. The Bryan and College Station area—with a combined population of approximately 150,000 people—is the home of Texas A&M University. It is also an important center for medicine, agriculture, and service industries. Tyler, the largest city in the Post Oak Belt, produces thousands of rosebushes and calls itself the "Rose Capital of the World."



The Blackland Prairie

This region includes more of the state's larger cities and towns than does any other geographic section. It has excellent transportation systems and a large work force. Much of Texas's manufacturing takes place here.

Nowhere in this section is the growing season less than seven and one-half months, and early settlers found the soil fertile. As a result, this area is one of the most important agricultural regions in the state. Cotton, once dominant, remains an important crop here.

Dallas, the largest city in the Blackland Prairie, is the second largest city in Texas. An important transportation, commercial, and financial center, it serves as headquarters for more national insurance companies than any other city in the United States. Service groups such as the Boy Scouts of America also have their headquarters in the Dallas metropolitan area. Also located in Dallas is The Women's Museum. The mission of this organization is to educate, enrich, and inspire all visitors by celebrating the history of women.

Dallas is an important merchandising center. Store owners from all over the country travel here to preview items before deciding what to buy for their stores. Dallas is also a center for Texas's high technology industry. This industry produces electronic products designed to make life more pleasant and efficient.

Dallas owes much of its growth to its centralized location. National highways and rail lines meet in Dallas. The Dallas–Fort Worth International Airport—one of the busiest airports in the nation—provides an important central pathway to other national and international airports.

The third largest city in Texas, San Antonio, lies at the edge of the Blackland Prairie and the Balcones Escarpment. San Antonio is the major metropolitan area in the southern part of Texas and plays a particularly important role as a distribution center. The federal government has located important military installations in San Antonio.

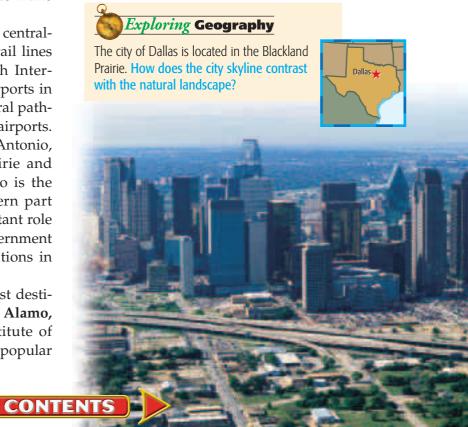
San Antonio is the number one tourist destination in Texas, attracting visitors to the **Alamo**, Fiesta Texas, River Walk, and the Institute of Texan Cultures. The city has a large and popular

convention center. One of the most Hispanic of Texas's largest cities, San Antonio is a hub of Mexican American culture. Its special Tejano flavor is a major factor in attracting tourists to the city and surrounding area.

Austin, the capital of Texas, lies mostly within the Blackland Prairie. Travis County, which includes Austin, has experienced rapid growth and today has more than 800,000 people. In addition to being the center of state government, the city is also home to the University of Texas at Austin. Many high technology firms have moved to Austin, and it has become an important computer research center. Austin is often referred to as the live music capital of the world because of its large number of bands and dance halls.

Smaller cities also dot this geographic section. Sherman is the home of one of the state's best-known private colleges—Austin College. Waco, with key industries including agribusiness, general manufacturing, and health, is home to Baylor University, the state's largest Baptist university. San Marcos residents take pride in Southwest Texas State University, which houses the largest geography department in the nation.

Reading Check Analyzing How did Dallas's location contribute to its rapid growth?



The South Texas Plain

The South Texas Plain tends to be much drier than the Gulf Coast Plain. Natural vegetation in much of this area includes plants that require little water such as prickly pear cactus, mesquite, blackbrush, and other small shrubs.

Many people in the South Texas Plain earn their living in agriculture and farming-related industries. Because of its southern location, the growing season here is more than 10 months. In the "Winter Garden" area in Dimmit and Zavala Counties, farming depends on water from wells and small streams. Cotton, vegetables, peanuts, and beef cattle are important agricultural products.

The southernmost part of this geographic section is called the Lower Rio Grande Valley. Rich alluvial soils have been deposited here by the Rio Grande over many years. These rich soils and Rio Grande water support an important citrus fruit industry. Texas is one of the nation's four largest producers of oranges, grapefruit, and lemons. Freezes strike the Lower Rio Grande Valley every few years, however, killing many trees.

Cities in the South Texas Plain include Laredo, which is located on the Rio Grande and is a gateway to Mexico. Laredo has varied manufacturing and meat-packing businesses and is also an important rail center. It is the chief entry point for Mexican and American trucks carrying products entering under the **North**





Many ranches in Texas have become corporations or multinational companies. What skills would be needed today to run a Texas ranch successfully?

American Free Trade Agreement (NAFTA). Kingsville, home of Texas A&M–Kingsville University and headquarters for the famous King Ranch, is a center for oil, gas, and ranching and farming. Brownsville, located at the southern tip of Texas, is a focus for farming and tourism and is another gateway to Mexico. Other large communities in the South Texas Plain are McAllen, Edinburg, and Harlingen.

Reading Check Explaining Why do many people in the South Texas Plain work in farming-related industries?

SECTION

ASSESSMENT

Checking for Understanding

- 1. Using Key Terms Define petrochemical and alluvial soil and write a sentence using each word.
- **2. Reviewing Facts** What is the largest natural region in Texas?

Reviewing Themes

3. Economic Factors What discovery made Texas the leading producer of oil in the United States?

Organizing to Learn

Identifying Create a chart like the one shown here. List what each city in the Piney Woods is known for.

City	Known for
Texarkana	
Longview	
Nacogdoches	
Huntsville	

Critical Thinking

5. Making Comparisons How are the Piney Woods and the Post Oak Belt similar?

TAKS PRACTICE

Determining Supporting Details

Dallas is an important marketing and transportation center. Write three supporting details that help prove this fact.



exas LITERATURE

Randolph Barnes Marcy



R.B. Marcy spent much of his career on the frontier. After completing the U.S. Military

Academy, he served a distinguished career in the U.S. Army. He fought in the Mexican War and later was assigned to duty in the western wilderness. His expertise led to his writing a guidebook for emigrants heading west. The Prairie Traveler: A Handbook for Overland Expeditions, published in 1859, became a bestseller.

Reading to Discover

As you read, imagine how you would feel if you were to chart and map an unknown area. What hopes and fears might you experience?

Reader's Dictionary

interspersed: distributed among other things

glade: an open space in a

forest

summit: highest point or part quarry: pit from which stone

is taken

meanders: twists and turns **excursion:** short journey

Explorations of the Big Wichita, etc.

In 1854, Captain R.B. Marcy explored and mapped the Big Wichita and Brazos Rivers. This excerpt from Marcy's report reveals an explorer's eye view of the uncharted Little Wichita River.

ur march this morning led us along a gradual slope of beautiful and picturesque country, interspersed with mesquite

glades and prairie lawns, for about eight miles . . . when we found ourselves . . . upon the **summit** level of three streams, the "Brazos," "Trinity," and the "Little Witchita" . . . Were it not for the scarcity of timber . . . this would undoubtedly prove a desirable farming locality.

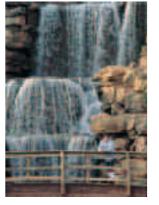
In previous communications to the War Department, I have spoken of the great deficiency of building timber where I have traveled west of the "Cross Timbers." It may be added here, that the same facts are observed in this section; and although mesquite is found sufficient for fuel, yet there is a great scarcity of timber, suitable for building purposes. There are, however, many quarries of stone, which might answer as a substitute . . .

After noon, we continued on for about eight miles over mesquite glades, when we arrived in a broad lowland valley, through which

> **meanders** a stream about twenty feet wide and two feet deep. This proved to be the main trunk of the Little Witchita. Its banks are about ten feet high . . . and skirted with elm and cottonwood.

We remained in camp on the 20th, making preparations to leave . . . while Major

Neighbors and myself proposed to make an **excursion** towards Red River.



ANALYZING LITERATURE

Evaluate and Connect Why was it important for Texas to be explored and mapped?

Interdisciplinary Activity

Writing Create a travel brochure to promote the land Marcy describes.



SECTION 2 The North **Central Plains**

Main Idea

The North Central Plains region includes the Cross Timbers, the Grand Prairie, and the Rolling Plains. Ranching and farming are important activities.

Key Terms

butte agribusiness

Preview of Events

Guide to Reading

Reading Strategy

Organizing Information As you read this section, complete a chart like the one shown here.

Geographic Section	Climate	Vegetation	Minerals

Read to Learn

- about the North Central Plains.
- about principal landforms and urban centers in each section.
- about the economy in each section.

Section Theme

Continuity and Change The North Central Plains region is mainly rural and agricultural with a relatively small population base.

c. 140 million B.C.-c. 65 million B.C.

North Central Plains take shape



Mesquite tree



The North Central Plains are traditionally known as "where the West begins." Settlers moving into this area adapted to the new drier environment. Perry summed up the practice of early settlers who dug mesquite tree roots for firewood and climbed up to the springs of water running out of canyon walls—"The Texan will tell you that in West Texas you have to dig for wood and climb for water."

A Ranching and Farming Region

The North Central Plains actually start in Canada and extend across the midsection of the United States before ending in Texas. The Balcones Escarpment and the Caprock Escarpment separate the region from the rest of Texas.



The North Central Plains are higher in elevation than are the Coastal Plains. In many places, rivers making their way to the Gulf of Mexico have carved the North Central Plains into hills and vallevs.

Relatively far from the Gulf of Mexico with its moderating winds, the North Central Plains have a continental climate that is colder in winter and hotter in summer than the lands near the Gulf. This region also receives less rainfall than the East. Much of the land is covered with grasses and brush instead of trees. Many of the large cattle ranches of the state are located here. In addition, because the region still receives good rainfall, flatter parts are used for farming row crops.

The small population of the North Central Plains reflects the mainly rural, agricultural nature of the area. The largest city, Fort Worth, began as a marketing center for cattle raised in the region. Today Fort Worth is a manufacturing center for airplanes, computers, and clothing. Other cities in the region include Abilene and San Angelo, which are marketing centers for ranch products such as wool and mohair.

The North Central Plains may be divided into three geographic subsections. They are the Cross Timbers, the Grand Prairie, and the Rolling Plains.

Reading Check Examining Why are many large cattle ranches located in the North Central Plains?

The Cross Timbers

Common trees in the wooded areas include post oaks, blackjack oaks, hickories, pecans, and elms. Today the Cross Timbers area is mostly

agricultural. Peanuts, fruit, and vegetables are the main crops grown here. Most peanut farmers in the region grow Spanish peanuts, which can better tolerate dry spells than other varieties. Dairying and raising livestock are other important agricultural activities.

The Cross Timbers area contains several important cities. Arlington, located in the East Cross Timbers, is a leader in manufacturing, recreation, and tourism. Students are attracted to the city of Denton, also in the East Cross Timbers, because the University of North Texas and Texas Woman's University are located here. Brownwood, located in the West Cross Timbers, is an important center of regional trade and distribution.



The Grand Prairie

Limestone lies under the soil of the Grand Prairie, causing rain to soak through quickly. Because the soil fails to hold moisture for very long, trees are scarce throughout much of this area. Grasses and shrubs cover much of the terrain here, while trees are usually found along the banks of the numerous streams.

Agriculture is the most important economic activity in the Grand Prairie. Cattle are numerous and crops grown here include wheat, peanuts, corn, grain sorghum, and cotton.

Most towns in the Grand Prairie are rather small, but this section does have one of the state's largest cities, Fort Worth. Fort Worth and Dallas are the main cities of a 20-county area known as the **Metroplex**. The Metroplex is a major manufacturing and trade center. Whereas Dallas is a trade center that serves people who live mainly in the cities, Fort Worth likes to refer to itself as "the place where the West begins." Grain elevators, feed mills, and many other businesses serve the agricultural needs of rural people living farther west. Fort Worth is also an important financial hub. In addition, large-scale aircraft manufacturing brings in employees from across the state.

Two smaller communities located in the southern part of the Grand Prairie are Killeen and Copperas Cove. Both are located close to **Fort Hood,** one of the nation's largest military

installations. They draw economic support from the army personnel and others who are employed at Fort Hood.

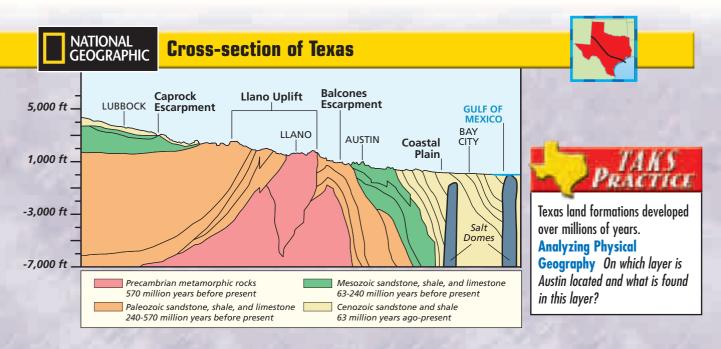
Reading Check Analyzing Why do you suppose Fort Worth describes itself as "the place where the West begins"?

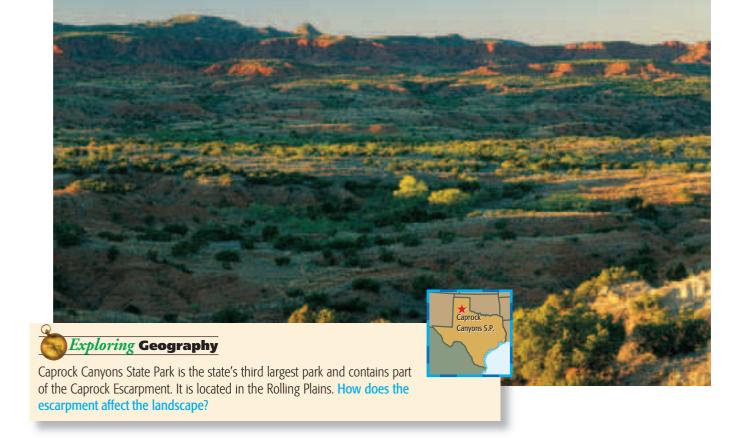
The Rolling Plains

Lying west of the Cross Timbers, the Rolling Plains is the largest geographic section within the North Central Plains region. It is sometimes called the Lower Plains because of the higher Great Plains to the west. The Rolling Plains stretch for about 300 miles (483 km) from the northernmost to the southernmost point. At its widest point, this geographic section is just under 200 miles (322 km) across.

In most of the Rolling Plains, the landscape is slightly rolling. In some places, however, there are distinct hills, mesas, and **buttes**, or small flat-topped hills.

Large cattle ranches sprawl over many parts of the Rolling Plains. Sheep and goats graze in the drier western parts of this section. They can survive on the sparse vegetation better than cattle can. In the wetter area to the east, field crops of various kinds are grown. These include cotton, grain sorghum, and wheat. Specialty crops, including pecans and peaches, are also grown. Texas is one of the nation's leading producers of these two crops.





Only a few settlements dot the Rolling Plains. One of the larger communities is Wichita Falls, a city in the northeastern part of the section. Armed forces personnel work at the large United States Air Force base, and students move here to attend Midwestern State University. Distribution and marketing are important activities in Wichita Falls. Because Wichita Falls is located near the Texas–Oklahoma border, the city serves the people of both states.

Abilene, in the south-central part of the Rolling Plains, is an important oil services and

marketing center. It is home to three church-related institutions of higher learning: Abilene Christian University, Hardin–Simmons University, and McMurry University. San Angelo, in the extreme southwestern part of the region, is a major center for agribusiness (large-scale commercial farming) and the home of Angelo State University. It is also the largest wool-producing market in the United States.

Reading Check Explaining Why is the Rolling Plains area less populated than other parts of Texas?

SECTION Z ASSESSMENT

Checking for Understanding

- 1. Using Key Terms How is a butte similar to a hill and a plateau?
- 2. Reviewing Facts According to the text, in what country do the North Central Plains begin?

Reviewing Themes

Continuity and Change How has Fort Worth changed its commercial activities over time? Identify some specific products.

Organizing to Learn

4. Identifying Use the information in this section to create a chart like the one shown. List the major crops grown in each region in the chart.

Area	Crops
Cross Timbers	
Grand Prairie	
Rolling Plains	

Critical Thinking

5. Analyzing Information How does the amount and frequency of rainfall affect agriculture in the Rolling Plains area?



Drawing Inferences Peaches and pecans are specialty crops grown on the Rolling Plains. What can you infer about the economic activities of this area?



Social Studies TANS Skillbuilder

Reading an Economic Map

Why Learn This Skill?

Maps are designed to help people learn information about geographic areas. An economic map is a type of thematic, or special purpose, map. This economic map shows how people earn their living, but many economic maps show the distribution of products in a particular area. The Texas Economic Resources Map on this page illustrates what and where farm products are produced in Texas. It also shows where principal natural gas and oil production occurs. The map key explains what each symbol stands for. These symbols are placed on the map wherever the products are raised or produced in the state.

NATIONAL GEOGRAPHIC **Texas Economic Resources** OKLAHOMA ARK. NEW MEXICO **MEXICO** Cattle Cotton Sheep 200 √ Rice Natural 200 Wheat Albers Equal-Area Petroleum

Learning the Skill

To read an economic map, follow these steps:

- Read the title of the map to identify the geographic area and the kind of information shown on the map.
- Read the map key to see what symbols (or sometimes colors) are used to represent this information.
- Use the symbols shown in the key to interpret the information on the map.

Practicing the Skill

Study the economic map on this page and then answer the following questions:

- Besides cattle, what other kinds of livestock are raised in Texas?
- ②Where are most sheep raised in Texas?
- What crop is grown only in the Coastal Plains region?
- 4 Are cattle raised in East Texas, West Texas, or both?
- **5** What farm products are raised in South Texas?
- 6 Which mineral resource—natural gas or oil—occurs most often in the state?

🤛 TAKS Practice

Creating a Thematic Map Sketch a map of your school. Create a map key based on common school-day activities. Place the map key symbols on your map.

Glencoe's **Skillbuilder Interactive Workbook,** Level 1, provides instruction and practice in key social studies skills.



The Great Plains

Main Idea

The Great Plains region includes the Edwards Plateau, the Llano Basin, and the High Plains.

Key Terms

drought erosion

Preview of Events

Guide to Reading

Reading Strategy

Organizing Information As you read this section, complete a chart like the one shown here.

Geographic Section	Economic Activities

Read to Learn

- about the principal landforms and urban centers in each section.
- about human/environment interactions within the sections.

Section Theme

Economic Factors Cities in the Great Plains region depend upon the natural resources of the areas they serve.

c. 140 million B.C.-c. 65 million B.C.

Great Plains take shape



Texas farmstead during 1938 drought



In 1942, memories of Great Plains dust storms of the 1930s were fresh in the minds of Texans. The Great Plains could be beautiful and productive because they possessed great natural resources. They could also be harsh. Perry tells of a farmer on the Panhandle who was asked how he liked the weather. He said he did not like it. He explained, "The rain was all wind, and the wind was all sand."

The Real "Old West"

The Great Plains begin in Canada and run along the east side of the Rocky Mountains through Texas and into Mexico. The Caprock Escarpment divides the Great Plains from the North Central Plains to the east.

The Great Plains are at a higher elevation than are lands to the east. They reach their highest point in the northwestern corner of the Panhandle. Generally level, the Great Plains—often called a "sea of



grass"—were once home to immense herds of buffalo and to nomadic Native Americans. Later, cattle raisers divided the land into giant ranches. Today much of the land is used to grow cotton and wheat.

Located far from the moist Gulf winds, the Great Plains region is a dry area. Long periods of less than normal precipitation, called droughts, are often problems. Only irrigation from underground water sources such as the Ogallala Aquifer and new techniques make farming possible. Because of its high elevation, the Great Plains often have cooler summers than other parts of Texas, and the winters are cold.

Many non-Texans picture Texas as it appears in movies about the Old West—as a land of sprawling ranches and isolated farms. Much of the Great Plains fulfill this image. Three geological subsections lie within the Great Plains region: the Edwards Plateau, the Llano Basin, and the High Plains.

The Edwards Plateau

The Edwards Plateau lies farthest south of the three sections of the Great Plains. It is bordered on the east by the Blackland Prairie and on the south by the South Texas Plain and the Rio Grande. The Edwards Plateau occupies a large area of Texas. Its maximum east-to-west extent is nearly 300 miles (482 km). Its north-to-south depth varies from 50 to 175 miles (80 to 282 km).

Elevation on the Edwards Plateau ranges between 750 and 2,700 feet (229 and 823 m) above sea level. Throughout much of its area, the landscape is level to gently rolling. The landscape changes along its eastern borders, however. The boundary between the Edwards Plateau and the much lower Blackland Prairie is the Balcones Escarpment. As the Edwards Plateau nears this escarpment, it becomes a hilly area of eroded limestone called the Hill Country.



The Edwards Plateau has only a thin layer of soil, making most of the area ill-suited for farming. Almost the entire region is covered with a growth of cedar, small oak, and mesquite. Weeds and tree foliage provide food for sheep. The economy of the area depends largely on cattle, goat, and sheep raising. Most of the Angora goats in the entire United States can be found within 100 miles (161 km) of the center of the Edwards Plateau. This section is among the nation's most important wool-producing areas. The long hair of Angora goats is sheared and sold worldwide as mohair.

Parts of the San Antonio and Austin urban areas spill west onto the fringes of the Edwards Plateau. Towns such as San Marcos and New Braunfels also sit on its eastern boundary. Relatively few cities and towns, however, lie entirely on the Edwards Plateau. Del Rio, the area's largest city, is on the Rio Grande. It was founded by Paula Losoya Taylor and her sister, Refugia Losoya, around 1860. It is a center for trade with Mexico and a popular point for tourists to cross into that country. Two other cities—Kerrville and Fredericksburg—lie in the eastern Hill Country. Kerrville is a tourist center, a retirement community, and the location of several exotic game ranches. Fredericksburg is famous for its peaches and its German heritage.

The Hill Country itself attracts many visitors to its dude ranches. The famous LBJ Ranch, the Texas home of former **President Lyndon Johnson**, is here as well. The Hill Country also supports the greatest concentration of white-tailed deer in the world. Deer hunting attracts nearly 200,000 hunters to the Edwards Plateau each year. In the most recent year with the complete figures reported, Texas had the third-largest number of paid hunting license holders in the country. Only Pennsylvania and Michigan issued more licenses.

Reading Check Describing What mineral lies under most of the Hill Country?

The Llano Basin

The Llano Basin is the smallest geographic section in Texas. It averages about 75 miles (121 km) east to west and about 60 miles (97 km)



north to south. Elevations here are as much as 1,000 feet (305 m) lower than in the Edwards Plateau. The land is lower here because of **erosion**. The land has been worn away by the flowing waters of the Llano (LAH•no), San Saba (san SAH•ba), Pedernales (pur•duh•NAL•his), and Colorado Rivers. The terrain consists of rolling plains broken up by hills.

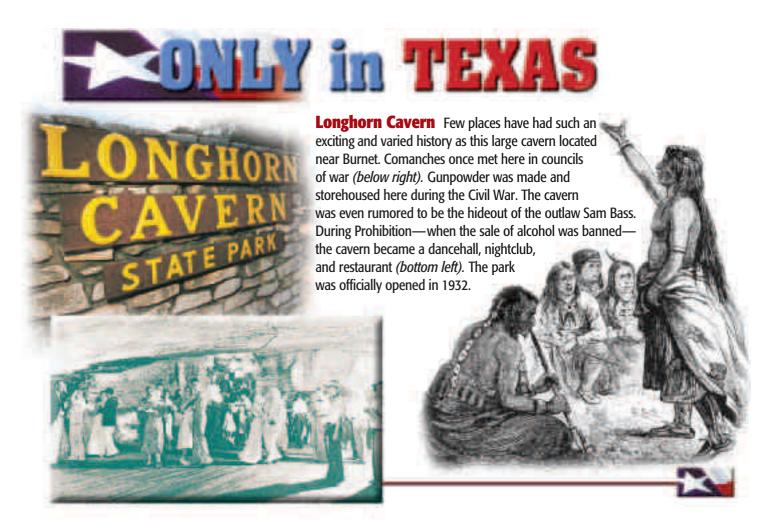
Part of the area is occupied by large lakes and reservoirs on the Colorado River. Lake Buchanan is the largest of these. The combination of lakes and hills has given this section the name Highland Lakes Country.

The Llano Basin has few towns. The main towns are seats of county government. Llano is a center for tourism, hunting, and livestock production. **San Saba**, in the northern part of the section, is a small town known for pecangrowing and processing. **Brady** has some industry—mainly the cleaning of wool and mohair. Scenic **Mason** is a market and supply center for area ranches. It also supports a growing tourism and guidebook publishing industry.

The High Plains

The High Plains occupy most of the Texas Panhandle, from the Oklahoma border southward about 350 miles (563 km). Elevations in this region reach more than 4,000 feet (1,219 m) above sea level in the northwestern part of the Panhandle. Visitors to the High Plains are often struck by the flatness of the land.





When the first Spanish explorers crossed the High Plains, they were awed by what they saw. Pedro de Castañeda described the plains:

The country is spacious and level ... In traversing 250 leagues, the other mountain range was not seen, nor a hill nor a hillock which was three times as high as a man ... The country is like a bowl, so that when a man sits down, the horizon surrounds him all around at the distance of a musket shot ... [A]nd even if a man only lay down on his back he lost sight of the ground.

Two areas have characteristics that are quite different from the general flat aspect of the High Plains. These are the Canadian Breaks and Palo Duro Canyon. The Canadian Breaks is a rugged area that follows the course of the Canadian River across the Panhandle. Because it is not well suited

for farming, it is used mainly for grazing cattle. Palo Duro Canyon is a very rugged area that has been carved by the Red River. Palo Duro Canyon has long been home to wildlife and people alike. Native Americans used the canyon as a campsite and refuge from northers. Buffalo still grazed there when ranchers began moving to the area in 1876. Today, wild turkeys, deer, and many other kinds of wildlife share the Palo Duro Canyon State Park with visitors. The exciting musical drama "Texas" is performed every summer in the Pioneer Amphitheater in the canyon.

The High Plains section is divided into two major parts. The North Plains extends from the northern border of the Panhandle to about 50 miles (80 km) north of Lubbock. Wheat and grain sorghum (a major feed grain for cattle) are the most important crops. Cattle ranching and petroleum also contribute to this area's economy.

The South Plains occupies the southern part of the High Plains section. Cotton is the most important crop here. More cotton is raised in the



South Plains than in any other part of Texas. Lubbock has the world's largest cottonseed processing industry. Most of the crop is irrigated with water from the Ogallala Aquifer.

Several important urban centers can be found in the High Plains section. Amarillo, the largest city of the North Plains, is the most northern of Texas's major cities. It is a transportation and commercial center serving parts of Texas, New Mexico, Kansas, and Oklahoma. It also plays an important role in wheat distribution and as a major cattle market. Oil field equipment is manufactured here. Lubbock, the largest city in the South Plains, is the hub of a rich cottonproducing area. Lubbock serves as the commercial and cultural center for a large area of the Texas Panhandle and western Texas. Texas Tech University, one of the state's larger public universities, is located in Lubbock.

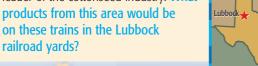
Midland and Odessa are located a few miles apart in the Permian Basin in the extreme southern part of the High Plains. The Permian Basin is an important petroleum-producing area. Life in Midland and Odessa centers around the oil industry. These cities also serve the needs of farmers and ranchers in the surrounding countryside. The University of Texas of the Permian Basin is located in Odessa.

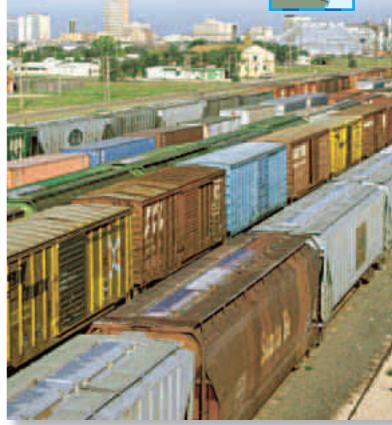
Reading Check Identifying Name one striking characteristic that visitors to the High Plains often notice.



Lubbock is the wholesale trade center for most of the Panhandle and eastern New Mexico. It is also the world

leader of the cottonseed industry. What products from this area would be on these trains in the Lubbock





SECTION ASSESSMENT

Checking for Understanding

- 1. Using Key Terms Sketch an illustration that shows you understand the meanings of the terms drought and erosion.
- 2. Reviewing Facts How is Amarillo's location important?

Reviewing Themes

3. Economic Factors How have people used Palo Duro Canyon both in the past and in the present?

Organizing to Learn

4. Complete a chart like the one shown here and list the major industries for each city in the Great Plains region.

City	Industries
Amarillo	
Lubbock	
Midland/Odessa	

Critical Thinking

5. Analyzing Information Based on the description of the High Plains given by Pedro de Castañeda, what two areas of the High Plains were not being described?



Drawing Conclusions What did Spanish explorers find to be so aweinspiring about the High Plains?



SECTION 4 The Mountains and Basins

Guide to Reading

Main Idea

The Mountains and Basins region is an area of majestic peaks and stark deserts.

Key Terms

basin

maquiladoras

Preview of Events

Reading Strategy

Organizing Information As you read this section, complete a chart like the one shown here.

Natural Vegetation	Minerals	Crops

Read to Learn

- · about landforms and urban centers.
- about climate and resources.
- about human/environment interactions.

Section Theme

Geography and History The Mountains and Basins region maintains close economic and cultural ties to Mexico.

c. 140 million B.C.-65 million B.C.

Mountains and Basins take shape



Yucca plants



Much of the Mountains and Basins region gets only seven inches of rainfall per year. The other natural regions already discussed in this chapter contain several smaller sections. The entire Mountains and Basins region, however, is usually considered to be a single geographic section. Perry describes this region in his book: "Here is where Texas travels farthest west and dies of thirst. A citizen of this section, when asked how much it rained here, replied simply, 'Mister, it don't."

The Dry Environment

The Mountains and Basins region is part of the Rocky Mountain system that begins in Canada and extends into Mexico. It is the westernmost natural region in Texas. It is also the highest and driest of the regions.



Water—or lack of it—is the single most important factor affecting life in this region. It is mostly a desert area, and so little rain falls here that trees will grow only along the few scattered streams. The region's natural vegetation includes desert plants such as cactus, yucca, and creosote bush. Harsh extremes of climate are softened by its great natural beauty. Canyons and mountain plateaus contrast with saucershaped depressions called basins.

Of the few people who live in the region, nearly two-thirds live in El Paso. Farming is done mainly along the Rio Grande and in a few areas where springs or wells irrigate the land. Cotton is the main crop, but many farmers have pecan trees as well. Pecos, in Reeves County, is an area famous for its cantaloupes.

Many people in the Mountains and Basins region live near the Rio Grande where industries provide work. Towns have grown here around the trade with Mexico. The region has strong economic and cultural ties to Mexico, partly because the area is so far from the rest of Texas. The landforms, climate, and culture that make this area quite different from any other region in Texas also make it a favorite with tourists from other parts of the state and nation.

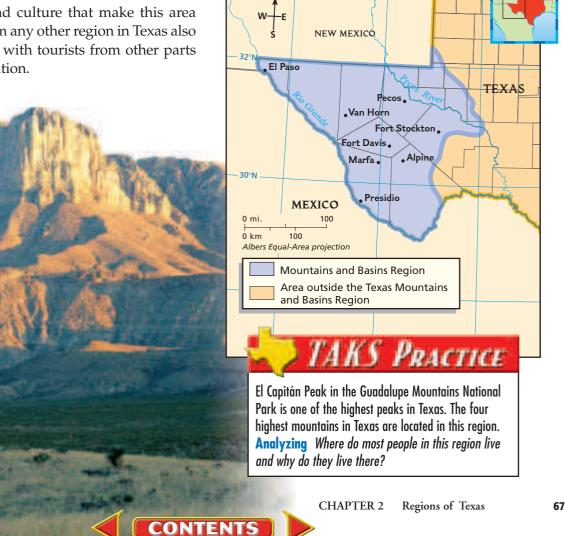
Mountain Ranges

All of Texas's true mountains are found in the Mountains and Basins region. The highest range, the Guadalupe Range, extends into New Mexico. The highest mountain in Texas, Guadalupe Peak at 8,749 feet (2,667 m), stands tall in this range. El Capitán, at 8,085 feet (2,464 m), is another Texas mountain in this range.

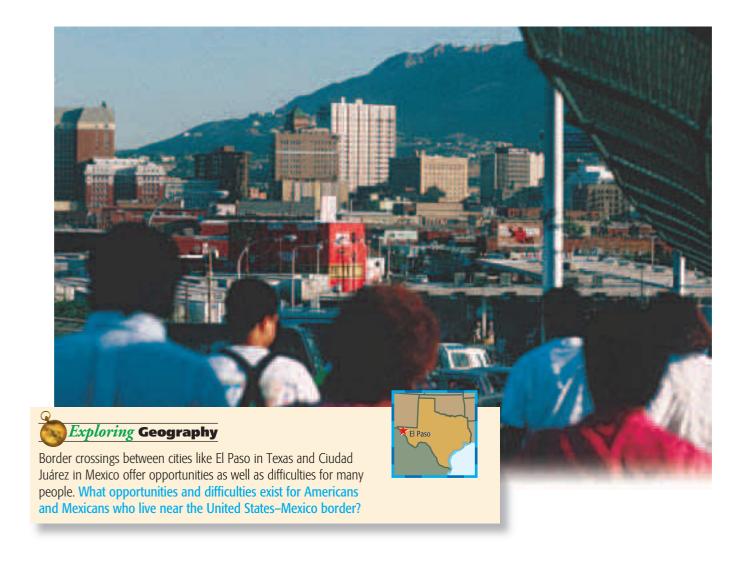
The Davis Mountains are located close to the center of the Mountains and Basins region. The highest peak here, Mount Livermore, stands at 8,378 feet (2,554 m). South of the Davis Mountains is a part of Texas called the Big Bend Country, which gets its name from a sharp bend in the Rio Grande. The Chisos Mountains make up the most important

104°W

Mountains and Basins Region



NATIONAL GEOGRAPHIC



mountain group in the Big Bend area. Steep canyons with spectacular scenery can be seen along the Rio Grande. The extreme southern part of this area consists of the Big Bend National Park, a popular area for tourists.

Much of the Mountains and Basins region is very dry. Cacti, yucca, and small desert shrubs are common in this region. Yet, a few mountain areas catch enough rainfall to support forests and meadowlands.

One important farming area lies in the extreme western part of this region. This area, the Upper Rio Grande Valley, is a narrow strip of irrigated land that runs east of El Paso for 75 miles (121 km) and north into New Mexico. Cotton is the most important crop grown here.

Petroleum and natural gas resources lie in the Mountains and Basins region. Other minerals include limestone, shale rock, and clay used in the production of cement. Copper, sulphur, salt, and talc also can be found here. Talc is used in the production of ceramics, paint, and artificial rubber.

Reading Check Identifying What are some of the desert plants of the Mountains and Basins region?

El Paso

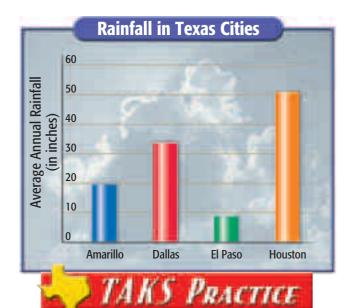
Most of the Mountains and Basins region is very sparsely settled. The region, however, does have one of the state's largest cities—El Paso. El Paso is located at the far western tip of Texas. It is situated where the boundaries of Texas, Mexico, and New Mexico join. El Paso is far from Texas's other large cities. Many of the city's commercial ties are with New Mexico, Arizona, California, and Mexico.



El Paso has a strong Hispanic tradition. A popular tourist spot, it is located just across the Rio Grande from the large Mexican city of **Ciudad Juárez.** The combined population of El Paso and Ciudad Juárez is larger than that of any other urban center on the United States–Mexico border.

El Paso is the commercial center of the Upper Rio Grande Valley. Increased manufacturing has followed the establishment of the North American Free Trade Agreement (NAFTA). Many *maquiladoras*, which are often called "twin factories," have been built in Juárez and El Paso. These factories in Mexico serve as sources of labor for piecework contracts with large corporations from the United States, Japan, Germany, and other industrialized nations. El Paso also has oil refining facilities, diverse factories and businesses, and important military installations. The University of Texas at El Paso is located here as well.

NAFTA took effect in 1994. The goal of this agreement is to stimulate economic growth between Canada, the United States, and Mexico. Because of Texas's relative location, El Paso and other border cities are greatly affected. Since 1994, increased trade has helped companies along the United States–Mexico border grow. As a result, many new jobs were created in all three NAFTA countries, but especially in Mexico. On the negative side, some U.S. and Canadian



Comparing The graph compares the average precipitation received by four Texas cities.

Why must many years of data be averaged to arrive at an accurate figure?

companies moved their factories to Mexico, where wages are lower. Consequently, many U.S. and Canadian workers lost their jobs. The economic futures of border cities are closely related, and the effect of NAFTA on Texas cities such as El Paso is already being seen.

Reading Check **Examining** What is the purpose of the *maquiladoras?*

SECTION 4 ASSESSMENT

Checking for Understanding

- **1. Using Key Terms** Define the terms basin and *maquiladoras* by using them in sentences.
- 2. Reviewing Facts Why does this region in Texas maintain ties with Mexico?

Reviewing Themes

3. Geography and History What is the single most important factor affecting life in the Mountains and Basins region?

Organizing to Learn

4. Identifying Key Characteristics Create a chart like the one shown here. Using the information in the section, identify the key characteristics of the Mountains and Basins region.

Largest city	
Highest mountain	
Main crop	
Major river	

Critical Thinking

- **5. Making Comparisons** How is El Paso different from many other large Texas cities?
- **6. Making Inferences** An "open" border is one that is fairly easily crossed. What are some advantages and disadvantages of open borders?





ASSESSMENT and ACTIVITIES

Chapter Summary

Regions of Texas

Main Idea

The Coastal Plains region is the most populated and includes:

- Piney Woods
- Blackland Prairie
- Gulf Coast Plain
- South Texas Plain
- Post Oak Belt

Main Idea

The North Central Plains region is largely rural and includes:

- Cross Timbers
- Rolling Plains
- Grand Prairie

Main Idea

The Great Plains region is dry and high and includes:

- Edwards Plateau
- High Plains
- Llano Basin

Main Idea

The Mountains and Basins region is part of the Rocky Mountain system.

Reviewing Key Terms

Match each term with the correct definition.

- a. maquiladoras
- e. basin
- **b.** petrochemical
- f. drought
- c. butte
- g. alluvial soil
- d. erosion
- 1. Product made from petroleum or natural gas
- 2. Soil that has been deposited from river water
- 3. A flat-topped hill, smaller than a mesa
- **4.** Dry period in which less than the normal precipitation falls, often causing extensive damage to crops
- **5.** The wearing away of the earth's surface by the movement of water, wind, ice, and gravity
- **6.** A sunken area in a plateau found between mountain ranges
- **7.** Factories in Mexico that assemble parts made in the United States

Reviewing Key Facts

- **8.** Explain why the Coastal Plains region has a variety of agricultural activities.
- **9.** What is the most important agricultural crop grown in the Lower Rio Grande Valley?
- **10.** Explain why businesses are attracted to Houston, Dallas, and San Antonio.
- **11.** List the important economic activities in the Cross Timbers.
- **12.** What city is known as "the place where the West begins"?
- **13.** What section is among the nation's most important wool-producing areas?
- **14.** Name four urban centers—large cities—in the High Plains and their major industries.
- **15.** Describe the climate of the Mountains and Basins region.

Critical Thinking

- **16. Synthesizing Information** Why do you think five of the six most populous counties in Texas are located in the Coastal Plains?
- Making Comparisons Choose two urban areas found in Texas. Compare their locations, industries, and other features.
- **18. Making Conclusions** Do you think the people of Texas would benefit if the state were divided into several smaller states? Why or why not?





Geography and History

19. Create a chart like the one below. Place a check mark in the column in which the city is located.

City	Coastal Plains	North Central Plains	Great Plains	Mountains and Basins
Amarillo				
Austin				
Corpus Christi				
Dallas				
El Paso				
Fort Worth				
Houston				
San Antonio				

Cooperative Learning Activity

20. Creating Models After the class has been organized into four groups, have each group choose one of the four natural regions of Texas. Each group will make a physical model, or diorama, of a natural region. Use clay or a mixture of flour and water to indicate land features and rivers. Paint your diorama and exhibit it in your classroom.

Practicing Skills

Reading an Economic Map Study the economic map on page 60 and then answer the following questions.

- **21.** According to the title, what kinds of resources are shown on this map?
- **22.** How many different products are shown on this map?
- **23.** Where are petroleum-producing regions found?

Economics and History Activity

24. Local Economy What are the major industrial and agricultural products of your community? Write a paragraph explaining what effects these industrial and agricultural products have on your daily life. Save your work for your portfolio.

Citizenship and History Activity

25. Community Pride Choose a town in Texas. Imagine you have been hired by the Chamber of Commerce to attract businesses or tourists to the region. Design a poster that would persuade businesses that this region would be a good place to locate.



Self-Check Quiz

Visit the <u>texans.glencoe.com</u> Web site and click on **Chapter 2—Self-Check Quizzes** to prepare for the chapter test.





Portfolio/TAKS Writing Activity

26. Generalizing and Supporting Write a paragraph starting with this opening sentence: "The people living in Texas are fortunate because . . ." Use at least four facts in the chapter to support your conclusion. Consider geographic, economic, and social factors. After you have completed your paragraph, review it for possible spelling, capitalization, punctuation, or grammatical errors. Then exchange your paper with a student in your class to check again for possible errors. Make corrections and save the final draft for your writing portfolio.



Building Technology Skills

27. Creating a Database Choose a city in Texas from the chapter. Using the Internet, find the official government Web site for the city that you chose, if possible. From the Web site, make a database of interesting facts about the city. Hint: Many Texas cities with an official Web site have the following URL: www.ci.[name of city].tx.us.



Use your knowledge of Texas geography to answer the following question.

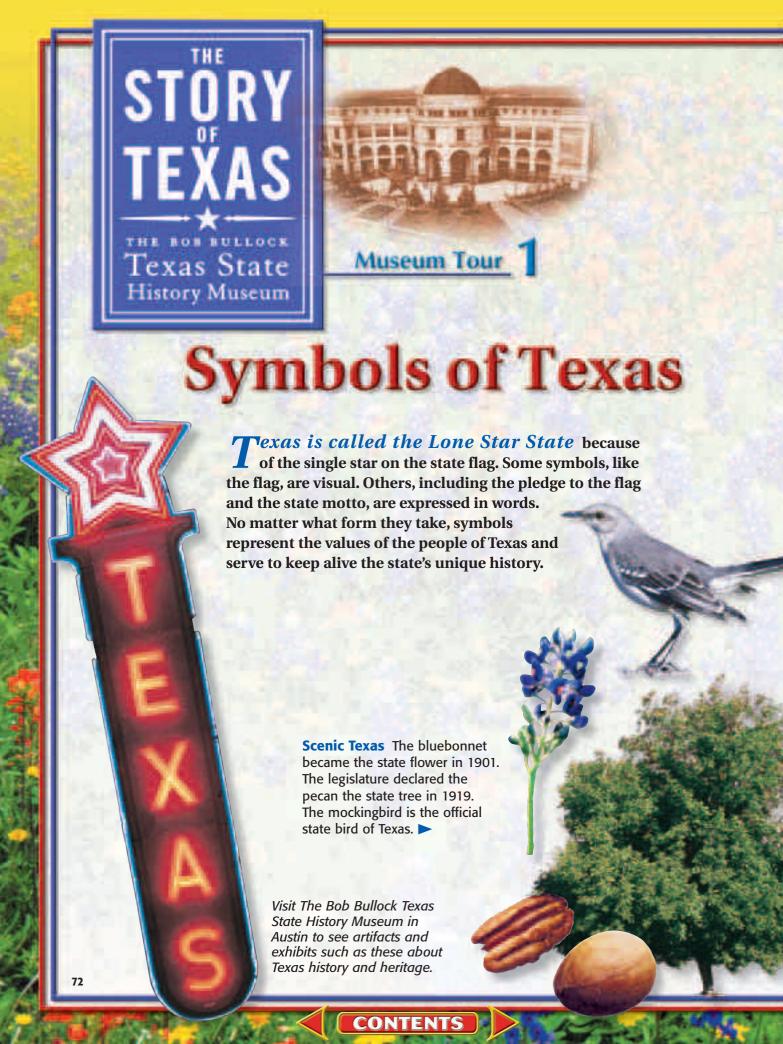
Which of the following statements is a true description of the Great Plains region of Texas?

- **F** Abilene is an important center in the Great Plains.
- **G** The Great Plains receives heavy precipitation.
- H The Great Plains region is well-suited to cattle ranches and farms.
- J The Llano Basin is the largest section of the Great Plains.

Test-Taking Tip:

Information of a general nature is often more likely to be true in a response than detailed information.





"Honor the Texas flag: I pledge allegiance to thee, Texas, one and indivisible."

▲ Pledge to the Texas Flag

The Six Flags of Texas

Spain The Spanish flag was ► the first to fly over Texas. During the 300 years of Spanish rule, Texas had several flags.



France France was the second nation to claim Texas. The flag of royalist France showed golden lilies on a field of white.

Mexico The Mexican flag was the official flag of Texas from 1821 until Texas independence in 1836.



■ Republic of Texas The Lone
Star flag, the state flag today, was
also the flag of the Republic of
Texas. It was approved in 1839.



When Texas joined the confederacy in 1861, the "Stars and Stripes" was replaced by the Confederate flag.



■ United States of America Texas is symbolized by the 28th star in the American Flag.



▲ Texas State Seal

By law, the Texas state seal is required to appear on official documents of the state.

▼ The State Motto

The motto of the state of Texas is "friendship."

The motto comes from the greeting "Tejas," with which the Native Americans of East Texas first met the early Spanish explorers.
The word tejas means friends.

