

CHAPTER
19

A New Industrial Economy

1870–1910

SECTION 1 Farming Leads to Growth in Industry

SECTION 2 New Industries Emerge

SECTION 3 The New Industrial Workers

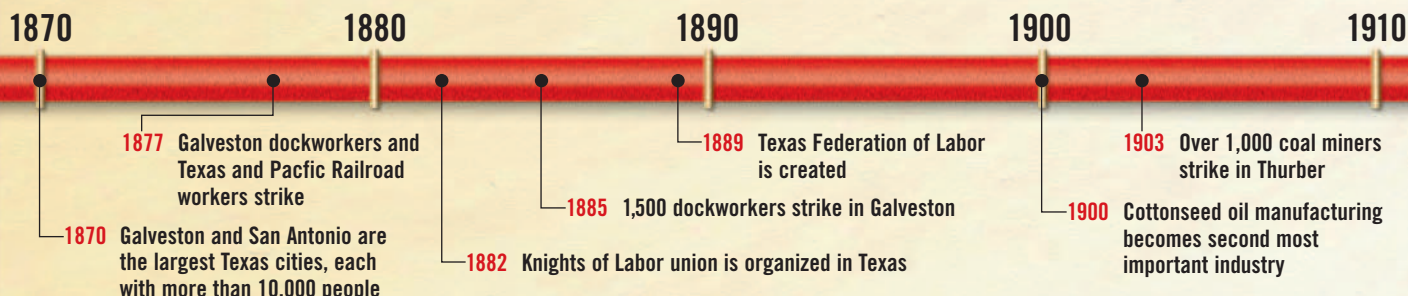
 VIEW THE **Texas on Tape**
CHAPTER 19 VIDEO LESSON.

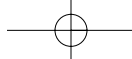


You can make money if you can find a need.

Thurber, 1910

Texas businessperson Hank Avery





SKILL BUILDER

Reading Social Studies

Before You Read

Think of some industries located in your town or city. What kinds of products do they manufacture or process? Why do you think these particular industries developed in the part of Texas where you live? Perhaps your town or city is located near a port or industrial center. How do industries affect life in your town or city? They may provide jobs for local residents or pollute the air and water.

Think about

- the kinds of industries located in Texas towns and cities
- the benefits that these industries provide to surrounding communities and the state
- the problems that these industries cause for local communities



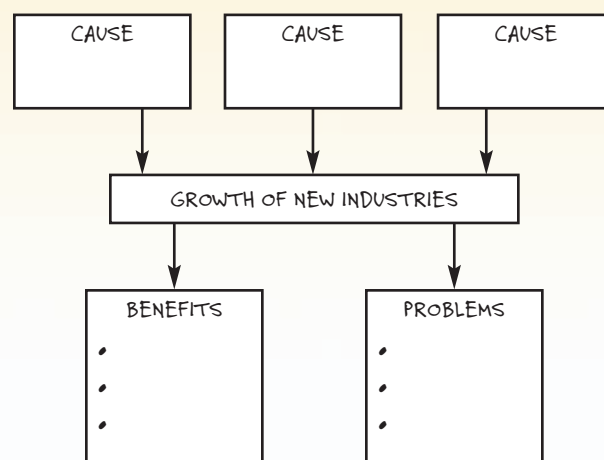
Elgin cottonseed mill

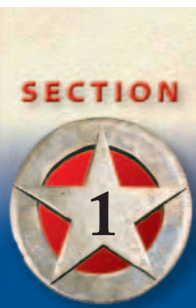
As You Read

Until the Civil War most Texans relied on farming and ranching to earn a living. After the war a combination of factors led to the development of industry in the state. Completing this graphic organizer for Chapter 19 will help you to understand some of the conditions that led to the growth of industry in Texas as well as the impact that industrialization has had on the state.

- Copy the cause-and-effect diagram in your Texas Notebook.
- As you read, list three causes that led to the growth of industry in Texas.
- Then list some of the benefits and problems that resulted from industrialization.

Organizing Information





Farming Leads to Growth in Industry

Why It Matters Now

Many of the industries and cities that developed in the late 1800s still influence life in Texas today.

TERMS & NAMES

by-product,
Chisholm Trail,
Fort Worth

OBJECTIVES

1. Describe the effects of railroads on the growth of industry in Texas.
2. Examine the effects of technology on the growth of industry in Texas.
3. Analyze the development of major industrial centers in Texas.

MAIN IDEA

Railroads and commercial farming led to growth in Texas industry. This, in turn, led to the development of major urban industrial centers in the state.

WHAT Would You Do?

Write your response to *Interact with History* in your *Texas Notebook*.



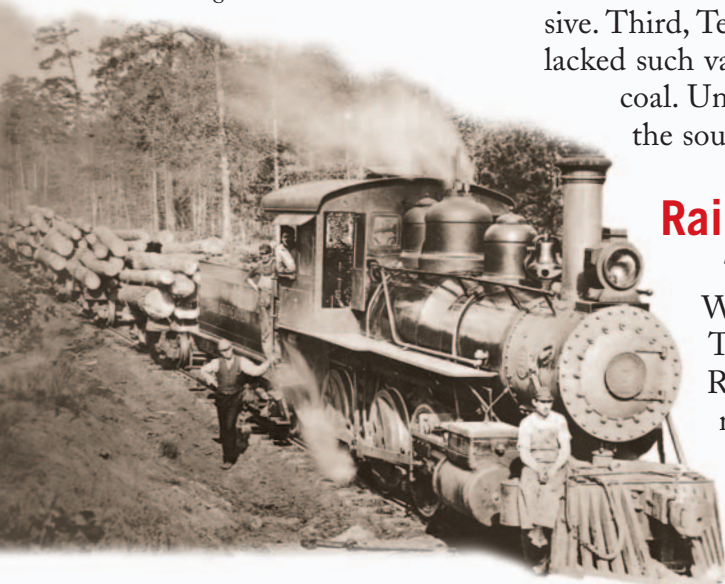
INTERACT WITH HISTORY

Think about the beginning of baseball. Over time, this simple game has led to the creation of dozens of industries. Some industries manufacture baseballs, and some manufacture baseball cards. Others construct stadiums, and still others help produce broadcasts of professional games. The introduction of railroads and cotton farming to Texas also had widespread effects. What industries do you think have grown from these two businesses?

Industry Develops Slowly in Texas

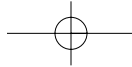
Modern manufacturing came slowly to Texas for a number of reasons. First, Texas was a frontier state, far from the large cities and markets of the rest of the United States. Second, transportation was slow and expensive. Third, Texas differed from industrial centers in the North because it lacked such valuable raw materials as plentiful iron ore and high-quality coal. Until the twentieth century, industries usually grew only near the sources of raw materials.

Train hauling lumber



Railroads Lead to Industry

The building of railroads in Texas began before the Civil War. After the war, railroads quickly spread throughout Texas, solving many of its transportation problems. Railroads allowed raw materials in Texas to be sent to markets in the northern United States and to ports where they could be shipped to Europe. Fast, inexpensive, and reliable transportation helped sellers get their products to buyers. The railroads were a major factor in the industrialization of Texas.



The invention of the refrigerated railroad car allowed Texas beef to be shipped far away without spoiling. This advance greatly expanded the market. Furthermore, wood used for railroad crossties, coach cars, depot buildings, and engine fuel led to growth in the lumber industry. When locomotives started using less wood fuel and more coal in the late 1800s, the coal industry experienced dramatic growth in Texas.

Cotton Processing Industries Arise

After the railroad arrived, Texas cotton farming jumped into the business market. The move to a cotton economy opened the door for many new Texas industries. Clothing manufacturing grew dramatically. In time, large textile mills were built in Houston as well as in Waco and New Braunfels.

In addition, inventions such as the cotton-compress machine reduced the size of cotton bales by about half, which lowered the cost of shipping. As a result, cotton producers could afford to ship their product farther away. Cotton **by-products**, such as cottonseed oil, also led to industrial growth. By 1900 cottonseed oil manufacturing had become the second largest Texas industry after lumber.

Other Industries Grow

Over time, Texas farm families began buying more items that they had once produced for themselves. One such product was bread. The demand for store-bought bread helped flour and grist milling become two of the state's top-ranking industries. After touring a Denton flour mill, one Texan expressed her amazement at its complex processes.

TEXAS VOICES

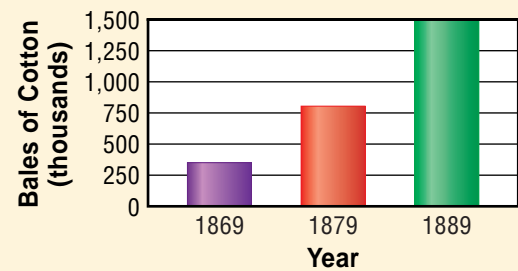
[The manager] is very obliging, and seemed to take real pleasure in showing us how flour is made. I had no idea that it went through so many processes to come out so pure and white, but suppose it is like life—the more grinding, sifting, fanning and rolling will only bring out the perfect individual.

“Eleanor,” in a letter to a Louisiana newspaper, 1887

In addition to the demand for flour, the demand for beef increased. This led to further growth of the Texas cattle industry and, in turn, of the meatpacking industry. Gulf Coast towns such as Victoria, Rockport, and Fulton were especially affected. Cattle drives helped the meatpacking industry further expand to the north and west. Fort Worth made the best of its location near major railroads and large cattle ranches in North Central Texas. It quickly became Texas's number one meatpacking center.

At the end of the Civil War, before there were refrigerated cattle cars, Texas cattle ranchers realized that the by-products of the cattle industry were even more profitable than beef. These by-products included

COTTON PRODUCTION IN TEXAS, 1869–1889



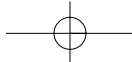
▲ Cotton production in Texas increased dramatically toward the end of the nineteenth century. ● By approximately how many bales did cotton production increase toward the end of the 19th century from 1869 to 1889?

by-product *something produced in addition to the main product*



To Economics

When cotton is ginned, the seeds are removed from the lint but not thrown away. The cottonseeds are then broken down into four parts: the linters, hulls, oil, and meal. Cottonseed oil is used to make shortening, mayonnaise, salad oil, cooking oil, margarine, cosmetics, and other products. Because Texas produces so much cottonseed oil, it emerged as an early leader in the manufacture of these household items. ● **Why do you think manufacturing cottonseed oil was important to Texas?**



- ▶ The cattle industry contributed to the growth of Fort Worth and earned it the nickname “Cow Town.”

● Why was the cattle industry so concentrated in Fort Worth?



1877 railroad advertisement



cowhides, bones, and tallow (melted animal fat). Soon cattle owners built processing factories near ranches on the Gulf Coast. These factories processed thousands of animals each month until the thinning of the herds brought the industry dangerously close to ruin.

Texas Market Centers Develop

The development of modern transportation and industry gave rise to several large market centers. In 1870 only two Texas cities—Galveston and San Antonio—had populations of more than 10,000 people. But by 1900, 11 cities could make that claim. Except for Galveston, the largest cities were located mainly in the agricultural prairies of Central and South Texas. San Antonio, Houston, Dallas, Galveston, and Fort Worth became the state’s largest cities by 1900.

SECTION 1 ASSESSMENT

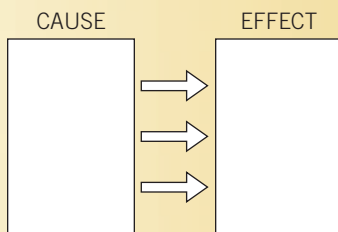
Terms & Names

Identify:

- by-product
- Chisholm Trail
- Fort Worth

Organizing Information

Use a cause-and-effect diagram like the one shown to identify causes and effects of industrialization in Texas.



What additional causes or effects can you think of? Add these to your diagram.

Critical Thinking

1. Describe three industries that directly resulted from the growth of railroads in Texas. Describe one industry that indirectly benefited because of the railroads.
2. How did new technologies promote the growth of industry in Texas? Give an example.
3. What were the five largest cities in Texas in 1900? What did they all have in common?

Interact with History

Review your response to *Interact with History* in your Texas Notebook. Which industries have grown from Texas cattle ranching?

ACTIVITY

Economics

Choose one of the five major market centers named in this section. Then research the major industries in that city. What new types of industry have developed there since 1900? Why? Share your results as a class.



Go to www.celebratingtexas.com to research the Activity topic.



Reading a Circle Graph

LEARNING *the Skill*

The three most common types of graphs are bar, line, and circle graphs. Graphs are used to organize information visually and to show relationships. A circle graph, sometimes called a pie graph, is used to compare information. The circle itself represents a whole set of something. Each colored or shaded wedge inside the circle stands for a specific part of the whole. Some circle graphs have wedges labeled with percentages. Circle graphs often are used to communicate complex information. Comparing the sizes of different wedges can be easier than comparing actual numbers.

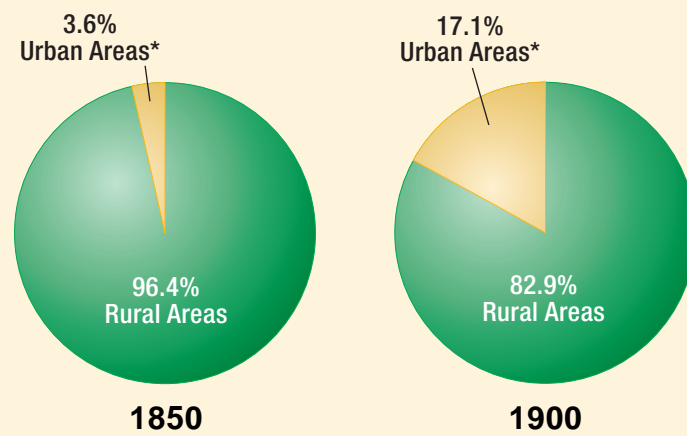
To read a circle graph, use the following steps:

- Read the title, labels, and any other text around the circle graph.
- Compare the sizes of the wedges inside the circle. Are percentages given for each wedge to indicate how much of the whole the wedge represents? Which wedge is the largest? Which wedge is the smallest?
- Draw conclusions from the information shown in the circle graph. How is this information helpful to you?

PRACTICING *the Skill*

Study the circle graphs below. Then answer the questions that follow.

WHERE TEXANS LIVED, 1850 & 1900



*Cities with populations of 2,500 or more

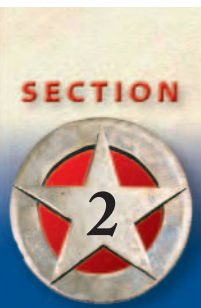
1. What information can you learn from these graphs?
2. Were more Texans living in urban areas in 1850 or in 1900?
3. What conclusions can you draw from these graphs?
4. By reading the graphs, can you tell how many people were living in Texas urban areas in 1850 and 1900? Why or why not?

APPLYING *the Skill*

During the late 1800s Texans began to move to urban areas to take industry jobs. The cotton-processing, meatpacking, coal, and lumber industries employed many state residents. Research the industries that employ the most Texans statewide today. Then, using a graphics program or drawing freehand, create a circle graph to show the percent of people throughout the state working in these industries. Exchange circle graphs with a partner. How are your graphs the same? How are they different? Which industry has the greatest number of people working in it? Which has the least? Are the top Texas industries today similar to those of the late nineteenth century?



Go to www.celebratingtexas.com to research this topic.



New Industries Emerge

Why It Matters Now

The development of new industries has led to the growth of cities and a wealth of career options in Texas.

TERMS & NAMES

Big Thicket National Preserve, John Henry Kirby, company town, **scrip**, **fossil fuel**, **strip mining**, **quarry**

OBJECTIVES

1. Analyze the impact of major industries on Texas.
2. Identify ways Texans have changed the environment and the results of those changes.
3. Describe how geography has contributed to the development of industry in Texas.

MAIN IDEA

The success of early industries soon led to the development of other types of manufacturing. As a result, Texas was transformed from a rural, farming state to one of thriving industry.

A REAL-LIFE STORY

Having seen the remarkable success of early industries, Texans began looking for other ways to process goods. The sawmill was an example of a machine used in industry. In a story recorded by his daughter, frontier settler Noah Smithwick described a sawmill he purchased in the mid-1800s.

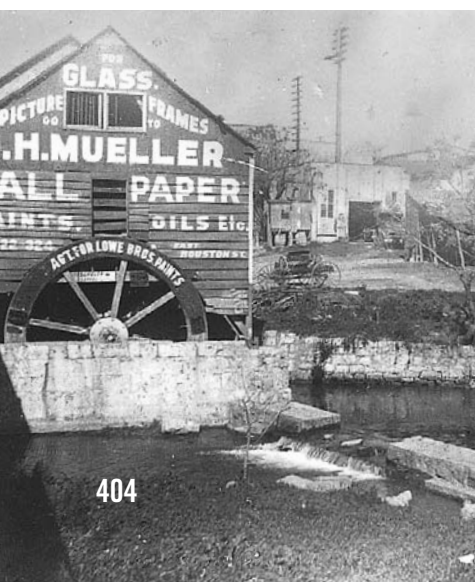
On the upper side . . . rose the huge overshot wheel, twenty-six feet in diameter, which furnished the power for the mill. The machinery was mostly of the rudest, clumsiest kind, manufactured . . . of such material as was obtainable from natural sources. Great, clumsy, rattling wooden cog wheels and drum and fly-wheels filled up the lower stories, the upper one containing a small corn cracker mill and an old up-and-down sash saw, which, after all, had this advantage over the circular saw, that it could handle large timber.

Noah Smithwick, *The Evolution of a State*

As you will read in this section, sawmills and other forms of manufacturing quickly progressed from these humble beginnings.

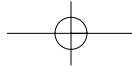


Mill on the San Antonio River with advertisements on its side



Lumber, Texas's First Great Industry

Before towns, roads, and industries came to eastern Texas, the area was a huge forest. The Big Thicket National Preserve, created in 1974 to protect more than 84,000 acres of forest, is only a small part of the area that was once forested. Settlers moved into the region in the early 1800s and began cutting down trees to build houses and fences and to grow crops. Because of the need for wood and the large supply of timber, sawmills soon sprang up around Texas forests.



The early mills consisted of a single saw blade held in a frame and were powered by water or animals. Soon people demanded more lumber and wood products such as barrels and turpentine, an oil used as a thinner. The number of sawmills increased. Producers turned to steam-powered machinery and circular saws, which allowed them to process wood much more quickly and cheaply.

After the Civil War, the railroad companies revolutionized the lumber industry. They needed great quantities of lumber to use for railroad ties, fuel, and other purposes. The railroads also connected the forests with the growing U.S. lumber markets. By the late 1800s lumber had become Texas's leading industry. The cities of Orange and Beaumont became important sawmill centers. The mills in Orange alone cut 700,000 feet of lumber each day!

The Rise of "Company Towns"

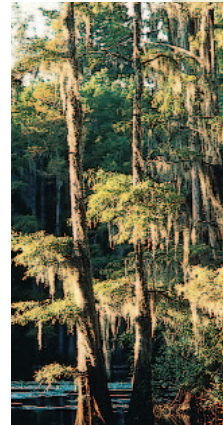
John Henry Kirby, known as the Prince of the Pines, started the Kirby Lumber Company in 1901. Before long, he had helped make lumber one of the leading industries in Texas. At one time, the Kirby Lumber Company controlled more than 300,000 acres of East Texas pine lands and operated 14 major sawmills.

Some lumber companies became so large that they established entire communities known as company towns. There, employees would live, work, shop, worship, and play together. The promise of a job and a social environment was quite tempting to many Texans who faced the isolation of farm life. Unfortunately, life in a company town came at a price. The lumber companies controlled almost every aspect of their employees' lives. The companies often paid low wages in scrip, which was worthless outside the company town.



HUMAN-ENVIRONMENT RELATIONSHIPS

In the early years the Texas lumber industry logged ancient forests of towering trees. Harvesting too many trees had a terrible impact on some valuable varieties of trees in Texas. Two such trees are the heart cypress and the longleaf pine, which produced beautiful, long-lasting wood. Lumber companies replaced these trees with faster-growing pines. As a result, both varieties almost disappeared in Texas.



Cypress trees

● **How does reforestation, or the replanting of trees, help both people and the environment?**

scrip money issued by a company that could be spent only at the company store



Logging in the 1800s



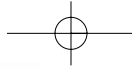
Modern logging



LOGGING INDUSTRY In the early years of the Texas logging industry, loggers cut trees and removed them by hand. Animals or early steam machines helped haul the logs out. Loggers worked in dangerous conditions for long hours and little pay. Today machinery can perform most logging tasks. A *feller buncher* attaches grabbing devices to the tree, cuts the tree at the base,

and lowers the tree to the ground. A *grapple skidder* has a long arm that attaches to the tree and hauls it out of the woods. A *processor* removes the branches, cuts off the top of the tree, and cuts the logs to the desired length. A *log loader* loads the trees onto trucks.

● **What do you think were the greatest dangers for loggers in the 1800s?**



- ▲ In about 1882 the Cannel Coal Company began operating coal mines along the Rio Grande in Webb County. The Rio Grande and Eagle Pass Railway was built to transport the coal. ● **In what ways do you think the coal mines and railroad changed the county?**

fossil fuel *a nonrenewable source of energy underground*

strip mining *a method of mining that strips away layers of earth and rock*

quarry *an open pit from which stone is obtained by digging, cutting, or blasting*

- ▼ The state capitol in Austin was completed in 1888 and is built from pink granite carved from Burnet County. ● **Locate Burnet County on the map on this page.**



Coal Production in Texas

Unlike the largely industrial states of Pennsylvania and Ohio, Texas lacked great quantities of iron ore and high-grade coal. Nature did, however, provide Texas with valuable **fossil fuels** such as oil and low-grade coal, which formed the basis for its mineral industry.

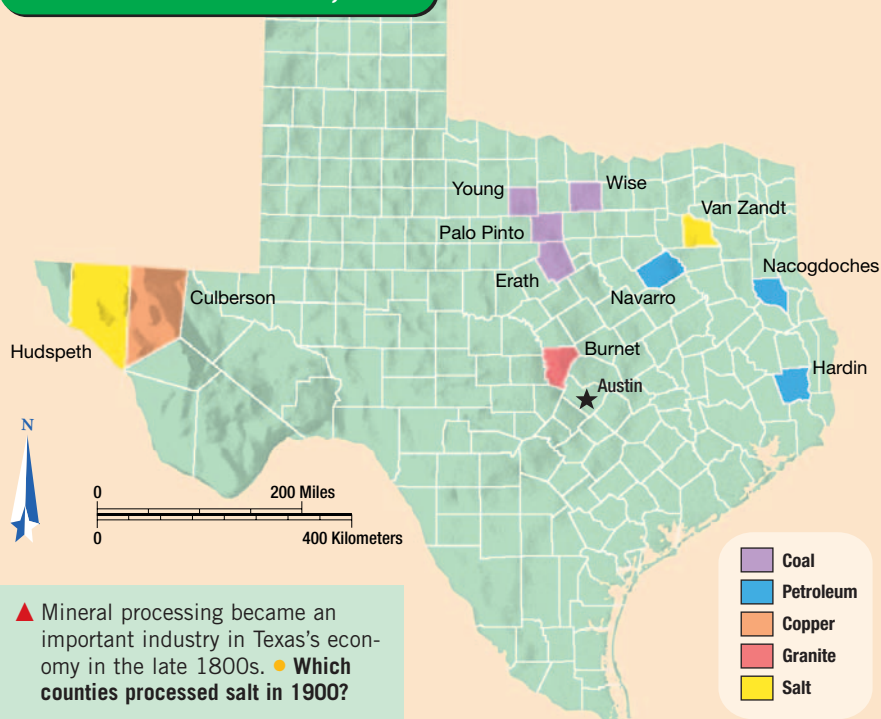
Because Texas coal was of poor quality, it had little market value until the 1870s. Then railroad companies began switching from burning wood fuel to using coal in their steam-powered locomotives. Besides being cheap and plentiful, coal allowed the trains to make fewer stops for refueling. Even the low-quality Texas coal worked well in the steam engines. When trains began using coal, the demand for the mineral surged. In the 1890s Texas railroads moved about 2 million tons of coal a year. The town of Thurber, west of Fort Worth, became the major coal town in Texas.

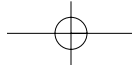
Coal production left a permanent mark on the Texas landscape. When companies discovered coal near the surface of the earth, they often used a technique known as **strip mining** to extract it. In strip mining, the layers of earth and rock over the coal are stripped away, revealing the rich veins of minerals. Today mining companies must replace the layers of dirt and rock. But in the early mining days, there was no such requirement. As a result, parts of Texas bear giant rocky scars where companies once removed earth to mine coal.

Other Mineral Industries

Coal was not the only Texas mineral to have an industry develop around it. **Quarries** in Burnet County turned out millions of pounds of

Texas Mineral Production, 1900





granite. Salt, copper, and limestone were also mined in the state. Grand Saline, in East Texas, became the center for salt mining in Texas. There, one company drilled 125 feet into a solid layer of salt without ever passing all the way through it. Deposits of copper were discovered in Culberson County. Two other natural resources, however, would eventually rise to the top of the mineral industry in Texas. After 1900, oil and natural gas would become the state's most valuable fossil fuels.

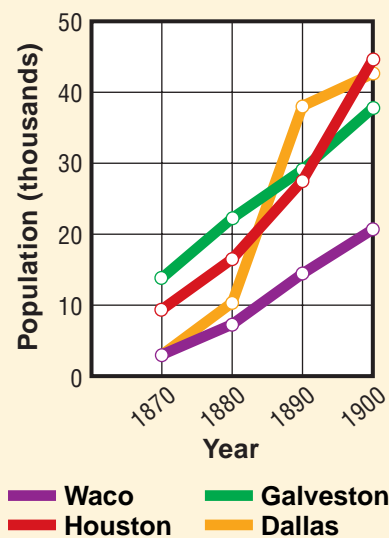
Growth of Industrial Towns

Industry and transportation played vital roles in the development of many Texas cities. Some Texas towns grew up around industries. Fort Worth and Waco, for example, owe their beginnings to the cattle industry, while Beaumont and Orange grew up as lumber towns. Other Texas cities became identified with the industries within their boundaries. Galveston and Houston both developed because of their important locations on the Gulf Coast. Houston once billed itself as the city “Where Seventeen Railroads Meet the Sea.”

Still other cities grew up around busy ports or railroad junctions, where two or more railroad lines met. Two railroad lines—the Houston and Texas Central in 1872 and the Texas & Pacific in 1873—extended their railroad lines into Dallas. As a result, Dallas became one of the first rail crossroads in Texas. Dallas's location and railroads allowed for the transport of many regional products, including buffalo hides and, later, leather.

Industrialization and the growth of major cities led to a new era in Texas. Thousands of workers left farms and small towns to work in manufacturing, bringing a new way of life to Texas.

POPULATION CHANGES IN SOME TEXAS CITIES, 1870–1900



▲ Thanks to new industries and improved transportation, some Texas cities experienced dramatic population growth after the Civil War. ● In which city did population increase the most between 1870 and 1900?

SECTION 2 ASSESSMENT

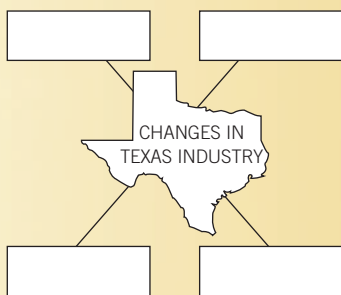
Terms & Names

Identify:

- Big Thicket National Preserve
- John Henry Kirby
- company town
- scrip
- fossil fuel
- strip mining
- quarry

Organizing Information

Use a cluster map like the one shown to illustrate how Texas industry changed between the mid-1800s and the early 1900s.



Which of these changes do you think was most important to the future of Texas? Why? Add this information to your organizer.

Critical Thinking

1. Name two Texas industries other than cotton that developed in the late 1800s and describe their impact on the state's economy.
2. Describe one way that Texas industries in the

late 1800s changed the environment.

3. What role has geography played in the development of Texas industry? Cite one example.

A Real-Life Story

Review *A Real-Life Story* on page 404. How did technology in the mid-1800s advance the lumber industry in Texas?

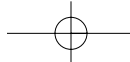
ACTIVITY

Geography

The Big Thicket is one of the most biologically diverse areas in North America. In groups, research the plant and animal life in the Big Thicket. Then create a group mural to illustrate your findings.



Go to www.celebratingtexas.com to research the Activity topic.



SECTION



The New Industrial Workers

Why It Matters Now

Industry growth led to a movement away from rural life and allowed urban areas to grow in Texas.

TERMS & NAMES

wage earner, **labor union**, Knights of Labor, **strike**, Jay Gould, Texas Federation of Labor

OBJECTIVES

1. Explain how the growth of cities led to the urbanization of Texas.
2. Explain how the growth of cities encouraged wage earning.
3. Examine the issues that led to the development of labor unions.

MAIN IDEA

Industrialization brought with it a new working class in Texas. Along with new opportunities came hardships for industry workers.

WHAT Would You Do?

Write your response to *Interact with History* in your *Texas Notebook*.



INTERACT WITH HISTORY

Imagine that you are traveling to San Antonio or another Texas city in the late 1800s to find a job. You have heard that working in industry will allow you to earn money faster and work fewer hours than farming does. How do you expect to be treated as a worker on the job? How long do you think your workday will last? What type of work might you do? How much do you think you will earn?

wage earner *a person who is regularly paid for his or her labor or services*

▼ Despite the industries' need for labor, less than 1 percent of Texans were manufacturing workers in 1870. ● **Why do you think the number of industrial workers remained low?**

Earning Money in Texas Industries

Industry growth in Texas created a new class of **wage earners**. Because the demand for manufactured goods was great, workers were needed to mine minerals and operate Texas sawmills, gristmills, and factories. Unlike farmers, these workers were paid by the day, week, or month instead of at the end of a growing season. This appealed to some Texans because income from farming was unpredictable.

Wage earners frequently worked in towns. Before the Civil War and the rise of industry, a wage earner might have assisted a barber, blacksmith, saddle maker, or grocer to earn money. Later, clerks in general stores and banks usually received wages. Such workers were paid fixed wages for their work. Laborers were paid in varying wages for their hourly, weekly, or monthly work.

Changes in Work and Lifestyles

As industries grew, so did towns. The opening of a mine, a meatpacking plant, or a leather-tanning factory created an immediate need for labor. Economic hardships related to farming added to the number of people



looking for work in towns. Young adults, in particular, became dissatisfied with rural life and traveled to towns in search of jobs and a new way of life. Despite this increased migration to urban areas, farmers continued to outnumber wage earners. In 1870 less than 1 percent of all Texans were manufacturing workers.

Manufacturing workers were typically male. In 1870 Texas industries employed twice as many children as they did women. The average Texas worker was paid about \$225 per year. That was about \$150 less than the average U.S. laborer earned per year. By 1900, however, almost three times as many women as children worked for Texas industries. The average wage increased by about \$200 per year, although it still remained lower than the U.S. average.

People who left farms to work in mills or factories in town were likely to notice quite a difference in work and lifestyle. The independence that went along with living in an urban area probably seemed exciting, despite workdays of up to 12 hours and 6-day workweeks. For many, even this was better than the sunup to sundown schedule farmers kept every day of the week. Also, the salary of one dollar or so a day was much more money than most farmers earned. Even with their relatively low salaries, industrial jobs offered workers a choice of where they would live and how they would spend their money and free time. Living in town had its advantages over farm life, too. For one thing, people had more access to newspapers. As a result, they were more aware of news in their communities, state, and nation.

Hardships for Industrial Workers

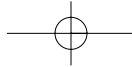
Not everything about industrial life was pleasant. Working in mines and factories often could be dangerous and harmful to workers' health. Industrial accidents could cause serious injury or even death. Dangerous working conditions made some workers sick. To make matters worse, workers injured on the job usually had to go without pay until they were back on their feet. In addition, workers often complained about not getting paid on time or having the costs of equipment taken out of their wages. Sometimes employees would become so desperate to receive their wages that they would have to file formal requests for action.



- ▲ In 1870 Texas industries employed twice as many children as women.
- Why do you think so many children were employed by Texas industries?

- ▼ Many industrial workers were employed by the railroads. The crew of this roundhouse helped turn the trains and repaired the locomotives.
- Why do you think railroad workers were among the earliest groups to go on strike?





Norris Wright Cuney

Norris Wright Cuney was among the most powerful leaders in Texas in the 1880s and 1890s. A leader of the Republican Party, he served on the Galveston city council. In 1883 Cuney organized a union of skilled African American dockworkers. These “screwmen” were experts at using screwjacks to pack cotton tightly into the hulls of ships. An Anglo union, the Screwmen’s Benevolent Association, went on strike to protest the presence of African American workers. Cuney’s union, the Screwmen’s Benevolent Association No. 2, succeeded in obtaining contracts with shippers. • **Why was it important for African Americans to obtain access to skilled jobs?**

labor union *association of workers formed to gain better wages and working conditions.*

strike *employees stopping work until demands are met*

▼ In this photo of Thurber coal miners, the man in front is showing his usual working position in the mine. • **Why do you think strikes were frequent in the mining industry?**



TEXAS VOICES

[We] would also ask that all money due us up to July 1 be paid by August 15 . . . we would beg to ask that you give this your earliest attention and return us with an answer within the next 48 hours. . . .

Texas & Pacific Railway employees’ petition, 1877

Eventually laborers’ who were unhappy with working conditions began a movement for change. However, changes would not come easily. As large corporations began to buy out local industries, workers no longer felt as close to their employers as they had in the past.

The Growth of Unions and Industrial Conflict

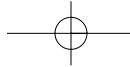
The larger a corporation grew, the more power it had over its employees. Many workers feared that corporations were becoming too powerful. Workers also needed an effective way to combat poor working conditions. The combination of these concerns led some workers to organize or join **labor unions**. Although small labor unions existed in Texas during the time of the Republic of Texas, major unions did not exist in the state until after the Civil War.

The nation’s largest labor union, the Knights of Labor, was the first to become powerful in Texas. It was organized in Philadelphia, Pennsylvania, in 1869 and appeared in Texas in 1882. The Knights of Labor invited African Americans, women, farmers, and others not generally welcomed by labor unions as new members. In fact, almost everyone except doctors, lawyers, bankers, and professional gamblers could join.

The Knights of Labor staged one of the first successful **strikes** in Texas when it went up against powerful railroad owner Jay Gould in 1885. The strike was called when Gould’s Texas & Pacific Railway cut workers’ wages. The Great Southwest Strike, as it was called, forced Gould to restore their wages and promise not to punish workers who took part in the strike. Victories such as this one caused membership in the Texas Knights of Labor to grow to more than 30,000 in 1885—about half the nonfarm workers in the state.

Gould’s struggle with the Knights was not over, however. He fired one employee who had supported the strike, setting off a second strike against Texas & Pacific in 1886. This time, the conflict became violent, and the state militia was sent in to restore order. The Knights of Labor ended this second strike in defeat and lost much of its public support. Acts of violence over labor issues, although sometimes started by employers, tended to make the public distrustful of unions.

The railroad workers were not the only Texas workers who went on strike during this period. Cowhands in the Tascosa area went on strike for better working conditions in 1883. Granite cutters went on strike to protest the use of convict labor in



building the state capitol. They were replaced by workers from Scotland. In the company town of Thurber, 1,200 coal miners went on strike in 1903. The workers finally gained better conditions and higher pay.

In 1889 a group of labor representatives met in Dallas to create a statewide organization to support and defend wage earners. This group founded the Texas Federation of Labor, which worked to establish an eight-hour day and improve other working conditions.

Minorities in Texas Industries

Most African Americans, like other Texans, lived on farms. As Texas industry grew, some people moved to urban areas such as Houston to earn wages. African American and Anglo American workers received about the same pay for the same work. However, African Americans generally had poorer job choices. Even though the Knights of Labor admitted African Americans—most often in separate chapters—other unions denied them membership.

Discrimination against urban Mexican Americans in jobs and housing led many Hispanic workers to form their own *mutualistas*, groups similar to unions. These organizations provided financial help, among other services, in times of need. Employers often used African American workers as strikebreakers, or workers who replaced strikers. Conflicts frequently arose between strikebreakers and other industry laborers.

Many Europeans immigrated to Texas for jobs. Czechs and Poles settled mainly in rural areas as farmers. Lebanese, English, Irish, and Italian immigrants typically settled in cities and towns as laborers and businesspeople. Jewish immigrants often migrated to larger towns and cities. Each group contributed to the economic development of Texas.



A Multicultural Town

The company town of Thurber was said to have been one of the most ethnically diverse towns in Central Texas. People of nearly 20 different cultures—including Italian, Polish, English, German, Austrian, Irish, and African American—lived in the Thurber community. By 1910, when coal mining was at its peak, 500 Italians and more than 100 Polish coal miners had traveled from their native countries and the United States to work in Thurber. • **What does Thurber's diverse community say about this period in history?**

SECTION 3 ASSESSMENT

Terms & Names

Identify:

- wage earner
- labor union
- Knights of Labor
- strike
- Jay Gould
- Texas Federation of Labor

Organizing Information

Use a chart like the one shown to list the advantages and disadvantages of being an industrial worker in the 1800s.

INDUSTRIAL WORK	
Advantages	Disadvantages

According to your chart, would you rather have been an industrial worker or a farmer? Why?

Critical Thinking

1. How did the growth of industry in Texas lead to the growth of urban centers?
2. In what ways did the growth of cities change how Texas workers earned their pay?
3. Why were labor unions organized? What were some of the workers' complaints?

Interact with History

Review your response to *Interact with History* in your Texas Notebook. How did your expectations compare with the realities faced by Texas industrial workers during the late 1800s?

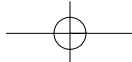
ACTIVITY

Citizenship

Research working conditions in Texas's factories in the late 1800s and early 1900s. As a class, role-play ways union officials might get factory owners to improve these conditions in Texas.



Go to www.celebratingtexas.com to research the Activity topic.

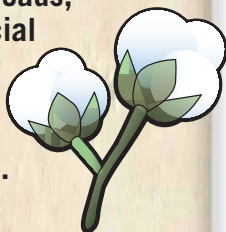


CHAPTER 19 ASSESSMENT

VISUAL Summary

Farming Leads to Growth

Industry, railroads, and commercial farming create a demand for new products.



New Industries Emerge

The growth of lumber, coal, and mineral industries leads to the creation of company towns and the growth of industrial cities.



The New Industrial Worker

Industry growth creates a new working class in Texas. The need to correct poor working conditions leads to the creation of labor unions.



TERMS & NAMES

Explain the significance of each of the following:

1. Chisholm Trail
2. Fort Worth
3. Big Thicket National Preserve
4. John Henry Kirby
5. company town
6. white-collar worker
7. blue-collar worker
8. Knights of Labor
9. Jay Gould
10. Texas Federation of Labor

REVIEW QUESTIONS

Farming Leads to Growth in Industry (pages 400–402)

1. What were the top two industries in Texas in 1900?
2. The processing of by-products can be extremely profitable. Why?
3. Describe one instance in which new technology negatively affected one industry and helped another.

New Industries Emerge (pages 404–407)

4. Industries formed around which abundant natural resources in Texas?
5. What are some advantages of buying locally produced lumber or minerals rather than purchasing products exported from other states to Texas?

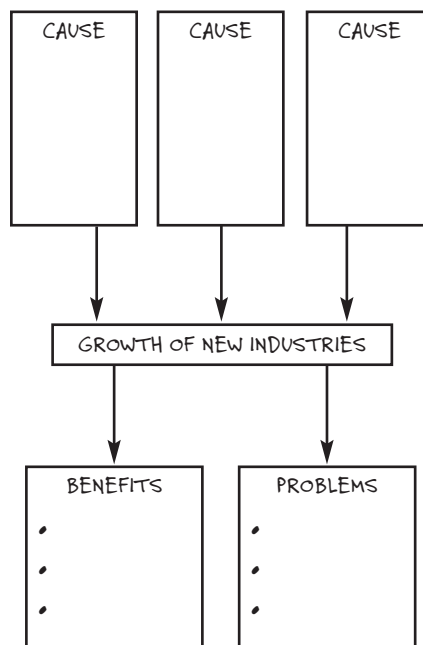
The New Industrial Workers (pages 408–411)

6. What were some of the disadvantages of being an industrial worker in Texas?
7. How did labor unions try to force employers to improve working conditions?

READING SOCIAL STUDIES

After You Read

Review your completed cause-and-effect diagram. With a partner, discuss whether the benefits outweighed the problems caused by the growth of industry in Texas. Then, using information from the chapter, summarize some of the actions that were taken to solve these problems.



CRITICAL THINKING

Drawing Conclusions

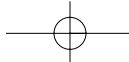
1. What effects do you think the growth of national and international markets had on the production of goods in Texas?

Identifying Cause and Effect

2. Describe how coal-burning trains affected the mineral industry in Texas.

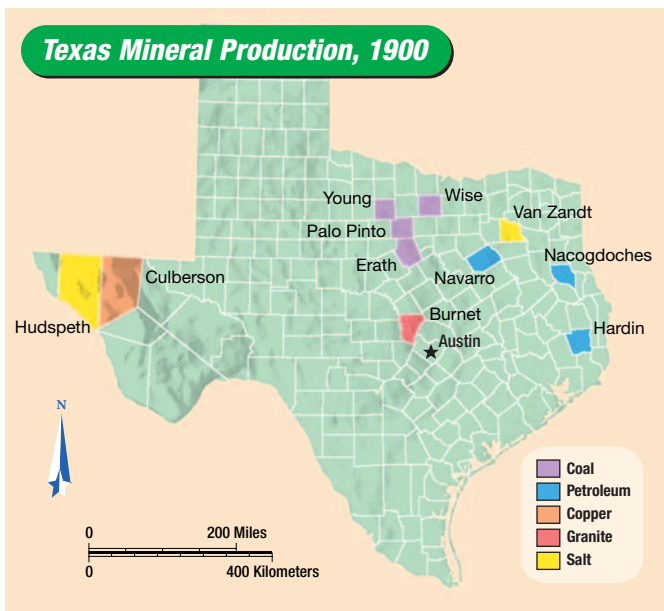
Contrasting Information

3. How was an African American's wage-earning experience different from an Anglo American's in the late 1800s?



MAP & GEOGRAPHY SKILLS

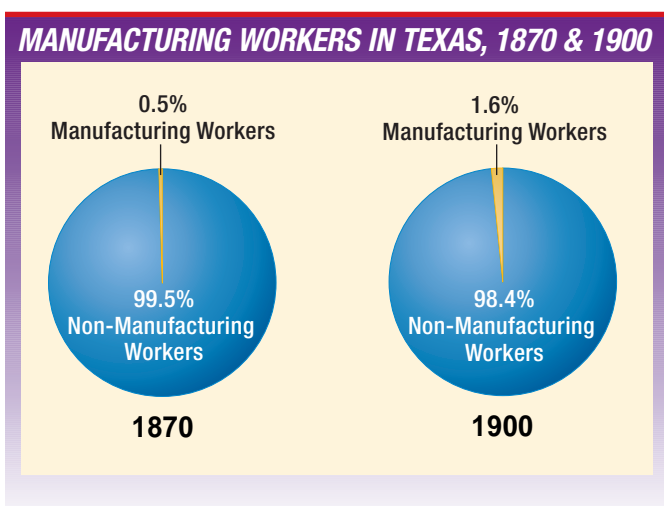
Applying Skills



1. In which region of Texas was coal mined in 1900?
2. Which minerals were processed in West Texas?

SOCIAL STUDIES SKILLBUILDER

Reading a Circle Graph



1. What percent of the Texas population was made up of industrial workers in 1900?
2. Did the percentage of industrial workers in Texas increase or decrease over time?
3. What conclusions can you draw from these graphs?



CHAPTER PROJECT

Researching Local Industry

Contact an area chamber of commerce or local business organization to find out about industries in your area that had formed by 1900. Then use information gathered from the Internet, newspapers, or local historical organizations to research one of the industries. Use word processing or presentation software to create an informative presentation about your chosen industry. Describe what the industry does; how, when, and by whom it was started; why it is located in your area; how it has affected the community; and other important information. Create at least one chart to include in your presentation. Present your report to the class and answer any questions your classmates may have about the industry.



SCIENCE, TECHNOLOGY & SOCIETY ACTIVITY

Pros and Cons of Technology

Select one Texas industry identified in this chapter. In your Texas Notebook, write a brief essay that answers the following questions: How might have current technology lessened the negative impact of your selected industry on the environment? What technological advances offer increased environmental protection to our state for the future?



Go to www.celebratingtexas.com to research this topic.



CITIZENSHIP ACTIVITY

Labor Unions and Public Opinion

Unions have been a source of controversy since their beginning. Survey five adults about their opinions and experience with unions. Then divide the class into two teams—pro-union and anti-union. Debate this statement: *Unions have had a more positive than negative effect on labor in Texas.* Which side presented the most persuasive argument?