

# A New Industrial Age

OVERVIEW	INSTRUCTIONAL RESOURCES	
<p><b>ESSENTIAL QUESTION</b></p> <p>What impact did scientific discoveries and manufacturing processes have on the nature of work, the American labor movement, and American businesses?</p> <p> <b>Focus on the Essential Question Podcast</b></p>	<p> <b>Telescoping the Times</b></p> <ul style="list-style-type: none"> <li>• Chapter Summary, pp. 11–12</li> </ul> <p> <b>Planning for Block Schedules</b></p>	<p> <b>Interactive Online Edition</b></p> <p> <b>ExamView® Assessment Suite</b> (English/Spanish)</p> <p> <b>mySmartPlanner</b></p> <p> <b>Power Presentations</b></p> <p> <b>Video:</b> Great Minds in Business: Andrew Carnegie</p> <p> <b>hmhsocialstudies.com</b></p>
<p><b>SECTION 1</b></p> <p><b>The Expansion of Industry</b></p> <p><b>MAIN IDEA</b> At the end of the 19th century, natural resources, creative ideas, and growing markets fueled an industrial boom.</p>	<p> <b>In-Depth Resources:</b> Unit 2</p> <ul style="list-style-type: none"> <li>• Guided Reading, p. 20</li> <li>• Building Vocabulary, p. 23</li> <li>• Skillbuilder Practice, p. 24</li> <li>• Reteaching Activity, p. 25</li> <li>• Primary Sources, p. 30</li> </ul> <p> <b>Lesson Plans</b>, pp. 51–52</p> <p> <b>Guided Reading Workbook</b>, Section 1</p>	<p> <b>Geography Transparencies</b></p> <ul style="list-style-type: none"> <li>• GT14 Mining and Industry in the United States</li> </ul> <p> <b>Critical Thinking Transparencies</b></p> <ul style="list-style-type: none"> <li>• CT14 Industrial Growth</li> </ul> <p> <b>Humanities Transparencies</b></p> <ul style="list-style-type: none"> <li>• HT14 The Gun Foundry</li> </ul>
<p><b>SECTION 2</b></p> <p><b>The Age of Railroads</b></p> <p><b>MAIN IDEA</b> The growth and consolidation of railroads benefited the nation but also led to corruption and required government regulation.</p>	<p> <b>In-Depth Resources:</b> Unit 2</p> <ul style="list-style-type: none"> <li>• Guided Reading, p. 21</li> <li>• Reteaching Activity, p. 26</li> <li>• Literature, from <i>The Bride Comes to Yellow Sky</i>, pp. 34–36</li> </ul> <p> <b>Lesson Plans</b>, pp. 53–54</p> <p> <b>Guided Reading Workbook</b>, Section 2</p>	
<p><b>SECTION 3</b></p> <p><b>Big Business and Labor</b></p> <p><b>MAIN IDEA</b> The expansion of industry resulted in the growth of big business and prompted laborers to form unions to better their lives.</p>	<p> <b>In-Depth Resources:</b> Unit 2</p> <ul style="list-style-type: none"> <li>• Guided Reading, p. 22</li> <li>• Skillbuilder Practice, p. 24</li> <li>• Reteaching Activity, p. 27</li> <li>• Geography Application, pp. 28–29</li> <li>• Primary Sources, pp. 31–33</li> <li>• American Lives, pp. 37–38</li> </ul> <p> <b>Lesson Plans</b>, pp. 55–56</p> <p> <b>Guided Reading Workbook</b>, Section 3</p>	<p> <b>Critical Thinking Transparencies</b></p> <ul style="list-style-type: none"> <li>• CT48 Horizontal Consolidation and Vertical Integration</li> </ul> <p> <b>Humanities Transparencies</b></p> <ul style="list-style-type: none"> <li>• HT35 The Bosses of the Senate</li> </ul> <p> <b>Video:</b> Great Minds in Business: Andrew Carnegie</p>

## ASSESSMENT

**SE** Chapter Assessment, pp. 250–251



### Formal Assessment

- Chapter Tests, Forms A, B, and C, pp. 121–132



**ExamView® Assessment Suite** (English/Spanish)



**Integrated Assessment**



**Strategies for Test Preparation**

[hmhsocialstudies.com](http://hmhsocialstudies.com) **TEST PRACTICE**

**SE** Section 1 Assessment, p. 233

**TE** Self-Assessment, p. 233



### Formal Assessment

- Section Quiz, p. 118



**Test Practice Transparencies**, TT52

**SE** Section 2 Assessment, p. 240

**TE** Self-Assessment, p. 240



### Formal Assessment

- Section Quiz, p. 119



**Test Practice Transparencies**, TT53

**SE** Section 3 Assessment, p. 249

**TE** Self-Assessment, p. 249



### Formal Assessment

- Section Quiz, p. 120



**Test Practice Transparencies**, TT54

## Chart Key:

**SE** Student Edition



Block Scheduling



MP3 Audio

**TE** Teacher's Edition



Online-only Resource



HISTORY®

Printable Resource



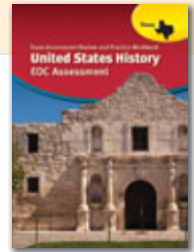
Presentation Resource

All Program Resources available @ [hmhsocialstudies.com](http://hmhsocialstudies.com)

## Supporting Resources

### Texas Assessment Review and Practice

- End-of-Course Assessment tips and sample tests to prepare students
- Teacher materials with instructional guidelines, digital flash cards, and ExamView® test banks



### Social Studies Trade Library Collections

- U.S. History Civil War to Present Trade Collection

### Fast Track to a 5

- AP test preparation for U.S. History provides students with test-taking strategies, review, and practice exams.



For more information or to purchase these resources, go to [hmhsocialstudies.com](http://hmhsocialstudies.com)

## Differentiated Instruction

### ENGLISH LEARNERS

**Spanish/English Guided Reading Workbook**  
Sections 1–3

**Access for Students Acquiring English/ESL:**  
Spanish Translations,  
pp. 86–91

**Modified Lesson Plans for English Learners**

**Chapter Summaries**  
(English/Spanish)

### STRUGGLING READERS

**Guided Reading Workbook**  
Sections 1–3

**Telescoping the Times**  
• Chapter Summary,  
pp. 11–12

**Chapter Summaries**  
(English/Spanish)

### GIFTED AND TALENTED STUDENTS

**In-Depth Resources: Unit 2**  
• Primary Sources,  
pp. 30–33

• American Lives: Andrew Carnegie, p. 37; Mary Harris “Mother” Jones, p. 38

## Enrichment Activities

**SE** Student Edition, pp. 228–249

- Interact with History, p. 229
- Citizenship Spotlight, pp. 234–235

# CHAPTER 6: PACING GUIDE

## BLOCK SCHEDULE LESSON PLAN OPTIONS (90-MINUTE PERIOD)

### DAY 1

#### CHAPTER 14 OPENER pp. 228–229

##### History from Visuals, p. 228

**Class Time** 10 minutes

*Options for Pacing and Variety*

- **Time Saver** Ask students to read the time line on pages 228–229, and then discuss the questions in the TE.

**Class Time** 10 minutes

##### Interact With History, p. 229

**Class Time** 20 minutes

*Options for Pacing and Variety*

- **Role-Playing** Ask students to think about the issues raised in the questions. Ask them what their primary concerns would be if they were assigned the story and who they would interview to obtain varying opinions.

**Class Time** 15 minutes

#### SECTION 1 pp. 230–235

**Class Time** 30 minutes

*Options for Pacing and Variety*

- **Peer Teaching** Have students work together on the section assessment. Collect their answers.

**Class Time** 20 minutes

- **Time Saver** Follow the activity on TE page 232, using a chronological chart to organize information about inventions and their dates of origin.

**Class Time** 10 minutes

- **Internet** Ask students to read the feature on pp. 234–235, Citizenship Spotlight: Qualities of

### DAY 1 continued

Effective Leadership. Discuss the questions, using the Internet to research question 2.

**Class Time** 25 minutes

#### SECTION 2 pp. 236–240

**Class Time** 30 minutes

*Options for Pacing and Variety*

- **Role-Playing** Stage a debate about company towns, using the activity on page TE 238. Divide students into several groups, with each group supporting a different position.

**Class Time** 30 minutes

- **Peer Evaluation** Have students complete the Section Assessment for homework, and then switch papers in class and correct them before collecting them.

**Class Time** 10 minutes

### DAY 2

#### SECTION 3 pp. 241–249

**Class Time** 45 minutes

*Options for Pacing and Variety*

- **Time Saver** After reading the rags-to-riches story of Andrew Carnegie, ask students to give examples of why Social Darwinism was a popular theory in relation to the American dream.

**Class Time** 10 minutes

- **Role-Playing** Have students choose a union to join, using the activity on TE p. 245, Differentiating Instruction: Summarizing.

**Class Time** 20 minutes

- **Peer Teaching** Have students work in groups to complete the Section Assessment. Students should write their own answers and turn them in at the end of the group session.

**Class Time** 20 minutes

#### CHAPTER 6 ASSESSMENT pp. 250–251

**Class Time** 40 minutes

*Options for Pacing and Variety*

- **Peer Teaching** Have students work in small groups to complete the Critical Thinking questions. Discuss the answers as a class.

**Class Time** 20 minutes

- **Time Saver** Ask students to complete the Texas Test Practice questions. Go over the answers and discuss the view expressed in Critical Thinking question 2 on p. 250. Ask students to reflect back on their reading and thinking on Social Darwinism. **Class Time** 15 minutes

### TEACHER-TESTED ACTIVITY LATE 19TH-CENTURY LETTER

**Class Time** 20 minutes, plus homework assignment

**Task** Writing a letter from the perspective of a teenager from the North or South

**Purpose** To understand living conditions in the Industrial Age (1876–1900)

### Thomas J. Flynn, Turner High School, Kansas City, Kansas

#### Supplies Needed

- Textbook
- Paper
- Pen

**Activity** Give students, as homework, an assignment to research jobs and working conditions during the Industrial Age. Then, in class, have each student write a letter from the point of view of a teenager from either the North or the South during the Industrial Age. Students should describe their jobs and the town they live in. Tell them to write about available products, prices, and what they would be able to afford. They also should describe the sights, sounds, and smells that are familiar to them.



## INTERNET-BASED RESEARCH

The Internet allows students to examine a wide range of opinions—historical and contemporary—on issues from America’s past.

### ACTIVITY OUTLINE

**Objective** Students will use online resources to consider and evaluate various opinions about 19th-century “robber baron” industrialists. This project will give them practice in evaluating information from a wide variety of sources, including newspaper articles, opinion pieces, and political cartoons.

**Task** Students follow the steps below as they view and evaluate materials recommended at [hmhsocialstudies.com](http://hmhsocialstudies.com). Conclude by having a class vote and discussion about whether robber barons were, on balance, good or bad for the United States.

**Class Time** 2 class periods

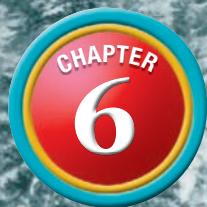
### DIRECTIONS

1. Have students begin by looking at a cartoon of the stereotypical robber baron, William H. Vanderbilt. Have them note the characteristics that the cartoon attributes to the robber baron. If you wish, have students review additional political cartoons on this topic, and compare their portrayals with the first cartoon.
2. Tell students that the goal of this project is to reach a conclusion about whether the robber barons were actually philanthropic or unscrupulous. Have students consider the negative characteristics of the robber barons by using the primary source material from contemporary critics Henry Demarest Lloyd, Ida Tarbell, and others. Again, encourage students to take notes to prepare for the final vote and discussion.
3. Then have students read the opinions of later commentators who viewed the robber barons in a more positive light.
  - Have students summarize the positive achievements of the robber barons in one paragraph and the negative aspects in another. Then have students choose one “hero” and one “villain” from the robber barons discussed in the chapter.
4. **Optional Activity** Ask students to consider whether there are robber barons today, and if so, who they would be? Students can use a multimedia presentation program to present a comparison of a modern-day figure and a 19th-century robber baron.
  - Organize a class vote on the following question: Were robber barons basically good for the country or basically bad? Ask students to be prepared to defend their views in class discussion, if time allows.



Introduce the **Essential Question**

- List the developments that helped industries to grow in the late 1880s.
- Explain how big corporations became a powerful force in the American economy.
- Consider why workers organized unions and staged labor strikes.



# A NEW INDUSTRIAL AGE

**Essential Question** myNotebook

What impact did scientific discoveries and manufacturing processes have on the nature of work, the American labor movement, and American businesses?



**Texas Essential Knowledge and Skills (TEKS)**

3B, 3C, 15B, 24A, 24B, 26A, 27A, 29B, 29F

**SECTION 1: The Expansion of Industry**

**Main Idea** At the end of the 19th century, natural resources, creative ideas, and growing markets fueled an industrial boom.

**SECTION 2: The Age of the Railroads**

**Main Idea** The growth and consolidation of railroads benefited the nation but also led to corruption and required government regulation.

**SECTION 3: Big Business and Labor**

**Main Idea** The expansion of industry resulted in the growth of big business and prompted laborers to form unions to better their lives.

## HISTORY from VISUALS

### Interpreting the Photograph

Ask students to examine the photograph and suggest words they would use to describe the work of constructing railroads. Ask them why building tracks through the mountains might be so difficult. (*dangerous, exciting, back-breaking, monotonous; workers have to blast and dig their way through the mountains before they can lay track.*)

**Extension** Have students write a list of questions they might ask the people in this photograph and then pair up with another student to try to answer each other's inquiries.

### Time Line Discussion

Explain to students that the time line covers key dates in America's rise to an industrial power in the late 1800s.

- Ask students what year Alexander Graham Bell invented the telephone. (1876)
- Ask students which event made communication and trade among different parts of the country easier. (1869—*Transcontinental Railroad completed*)
- Ask students which events show that labor unions were gaining members. (1875—*British unions win right to strike; Great Strike of 1877; 1886—Haymarket riot; 1894—Pullman strike*)

Laborers blasted tunnels and constructed bridges to send the railroad through the rugged Sierra Nevada mountains.

**USA WORLD**

**1869** Central Pacific and Union Pacific complete the transcontinental railroad.

**1870** Franco-Prussian War breaks out.

**1875** British labor unions win right to strike.

**1876** Alexander Graham Bell invents the telephone.

**1877** Munn v. Illinois establishes government regulation of railroads.

**1877** Mother Jones supports the Great Strike of 1877.

**1879** Thomas A. Edison invents a workable light bulb.

**1882** United States restricts Chinese immigration.

**1883** Germany becomes the first nation to provide national health insurance.

**1884** Grover Cleveland is elected president.

## THEMES IN CHAPTER 6

### SCIENCE AND TECHNOLOGY

The rapid expansion of the railroads and the development of new inventions and improved technologies ushered in a new age for Americans. Where people lived, how they worked, what they ate, and how they spent their leisure time were changed forever.

See *Teacher's Edition* notes, p. 238.

### ECONOMIC OPPORTUNITY

Newcomers to this country and settlers who crowded the frontier pursued the American dream to create a good life for themselves and their families. For some, however—men, women, and children who toiled long hours for low pay—the dream remained out of reach.

See *Teacher's Edition* notes, p. 243.

### WOMEN AND POLITICAL POWER

Industrialization enabled women to enter the labor force in great numbers. They played a significant role in the labor movement and worked tirelessly to improve working conditions for themselves and their children. They wanted recognition for their contributions, however, and “Equal pay for equal work” became their rallying cry.

See *Teacher's Edition* notes, p. 248.



INTERACT  
WITH HISTORY


  
**H**  
**HISTORY**
Great Minds  
in Business:  
Andrew Carnegie

  
**INTERACT**  
**WITH HISTORY**

The year is 1863 and railroad construction is booming. In six years, the U.S. will be linked by rail from coast to coast. Central Pacific Railroad employs mainly Chinese immigrants to blast tunnels, lay track, and drive spikes, all for low wages. You are a journalist assigned to describe this monumental construction project for your readers. As you read the chapter and explore the issues below, use the annotation tools in your eBook to record your thoughts.

**Explore the Issues**

- What dangers do the railroad workers encounter?
- How will businesses and the general public benefit from the transcontinental railroad?
- How might railroad construction affect the environment?

**Objectives**

- To help students understand the consequences, both good and bad, of railroad expansion
- To help students recognize the different ways in which growth and progress impact the United States

**Explore the Issues**

1. Have students consider the possible dangers of work that involves digging and blasting through rock and working in snowy, mountainous terrain.
2. Ask students to consider how a transcontinental railroad might facilitate trade and communication.
3. Ask students to consider how the environment is affected by the building of a railroad and all that follows it, such as the creation and growth of towns near the railroad.

**TEKS 3B** analyze economic issues such as industrialization, the growth of railroads, the growth of labor unions, farm issues, the cattle industry boom, the rise of entrepreneurship, free enterprise, and the pros and cons of big business **3C** analyze social issues affecting women, minorities, children, immigrants, urbanization, the Social Gospel, and philanthropy of industrialists **15B** describe the changing relationship between the federal government and private business, including the costs and benefits of laissez-faire, anti-trust acts, the Interstate Commerce Act, and the Pure Food and Drug Act **24A** describe qualities of effective leadership **24B** evaluate the contributions of significant political and social leaders in the United States such as Andrew Carnegie, Thurgood Marshall, Billy Graham, Barry Goldwater, Sandra Day O'Connor, and Hillary Clinton **26A** explain actions taken by people to expand economic opportunities and political rights, including those for racial, ethnic, and religious minorities as well as women, in American society **27A** explain the effects of scientific discoveries and technological innovations such as electric power, telephone and satellite communications, petroleum-based products, steel production, and computers on the economic development of the United States **29B** analyze information by sequencing . . . **29F** identify bias in written, oral, and visual material



**1886** Haymarket riot turns public sentiment against unions.

**1890** Congress passes the Sherman Antitrust Act.

**1894** President Cleveland sends federal troops to Illinois to end the Pullman strike.

**1896** William McKinley is elected president.

**1900** William McKinley is reelected.

**1890****1900**

**1890** Colonization of sub-Saharan Africa peaks.

**1893** Women in New Zealand gain voting rights.

**1896** First modern Olympic Games are held in Athens, Greece.

A New Industrial Age **229****RECOMMENDED RESOURCES****BOOKS FOR THE TEACHER**

Chernow, Ron. *Titan: The Life of John D. Rockefeller, Sr.* New York: Random House, 1998.

Dubofsky, Melvin, and Foster Rhea Dulles. *Labor in America: A History*, 8th ed. Wheeling, IL: Harlan Davidson, 2010.

Foner, Philip Sheldon. *Women and the American Labor Movement.* New York: Free Press, 1979.

Josephson, Matthew. *The Robber Barons.* San Diego: Harcourt, 1962.

**BOOKS FOR THE STUDENT**

Alger, Horatio, Jr. *Struggling Upward.* New York: Crown, 1945.

Carnegie, Andrew. *Autobiography of Andrew Carnegie.* Boston: Northeastern, 1986.

**VIDEOS**

*American History: The Game of Monopoly.* MasterVision, 800-876-0091.


*Andrew Carnegie: The Original Man of Steel.* Video (VHS) or Laserdisc available from Aims Multimedia 800-367-2467.

**SOFTWARE**

*Industrial Revolution in America.* CD-ROM. Educational Software Institute, 800-955-5570.

**INTEGRATED TECHNOLOGY**

For teacher support, visit . . .

 [hmsocialstudies.com](http://hmsocialstudies.com)



## OBJECTIVES

- 1 Explain how the abundance of natural resources, new recovery and refining methods, and new uses for them led to intensive industrialization.
- 2 Identify inventions that changed the way people lived and worked.

**TEKS 3B** analyze economic issues such as industrialization, the growth of railroads, the growth of labor unions, farm issues, the cattle industry boom, the rise of entrepreneurship, free enterprise, and the pros and cons of big business **24A** describe qualities of effective leadership **24B** evaluate the contributions of significant political and social leaders in the United States such as Andrew Carnegie, Thurgood Marshall, Billy Graham, Barry Goldwater, Sandra Day O'Connor, and Hillary Clinton **27A** explain the effects of scientific discoveries and technological innovations such as electric power, telephone and satellite communications, petroleum-based products, steel production, and computers on the economic development of the United States

## Focus & Motivate


Have students discuss how the discovery of new sources of energy and technological innovations can change society.

## Instruct

### Instruct: Objective 1

#### Natural Resources Fuel Industrialization


- What led to the nation's oil boom?
- What was the Bessemer process and how did it fuel steel production?
- What were some of the new uses in the United States for steel?

 In-Depth Resources: Unit 2  
• Guided Reading, p. 20

 Critical Thinking Transparencies CT14  
• Industrial Growth



## SECTION 1

 **TEKS 3B, 24A, 24B, 27A**

# The Expansion of Industry

### MAIN IDEA

At the end of the 19th century, natural resources, creative ideas, and growing markets fueled an industrial boom.

### WHY IT MATTERS NOW

Technological developments of the late 19th century paved the way for the continued growth of American industry.

### Terms & Names

- Edwin L. Drake
- Bessemer process
- Thomas Alva Edison
- Christopher Sholes
- Alexander Graham Bell

## One American's Story

 [hmhsocialstudies.com](http://hmhsocialstudies.com)  
**TAKING NOTES**

Use the graphic organizer online to take notes on the causes of the industrial boom and their impact on industrialization.

One day, Pattillo Higgins noticed bubbles in the springs around Spindletop, a hill near Beaumont in southeastern Texas. This and other signs convinced him that oil was underground. If Higgins found oil, it could serve as a fuel source around which a vibrant industrial city would develop.

Higgins, who had been a mechanic and a lumber merchant, couldn't convince geologists or investors that oil was present, but he didn't give up. A magazine ad seeking investors got one response—from Captain Anthony F. Lucas, an experienced prospector who also believed that there was oil at Spindletop. When other investors were slow to send money, Higgins kept his faith, not only in Spindletop, but in Lucas.



 Pattillo Higgins

### A PERSONAL VOICE PATTILLO HIGGINS

“Captain Lucas, . . . these experts come and tell you this or that can't happen because it has never happened before. You believe there is oil here, . . . and I think you are right. I know there is oil here in greater quantities than man has ever found before.”

—quoted in *Spindletop*


In 1900, the two men found investors, and they began to drill that autumn. After months of difficult, frustrating work, on the morning of January 10, 1901, oil gushed from their well. The Texas oil boom had begun.


## 1 Natural Resources Fuel Industrialization


After the Civil War, the United States was still largely an agricultural nation. By the 1920s—a mere 60 years later—it had become the leading industrial power in the world. This immense industrial boom was due to several factors, including: a wealth of natural resources, government support for business, and a growing urban population that provided both cheap labor and markets for new products.


230 CHAPTER 6


## PROGRAM RESOURCES

 In-Depth Resources: Unit 2  
• Guided Reading, p. 20  
• Building Vocabulary, p. 23  
• Reteaching Activity, p. 25  
• Primary Sources: Birth of the Telephone, p. 30

 Guided Reading Workbook  
• Section 1


 Spanish/English Guided Reading Workbook  
• Section 1

 Access for Students Acquiring English/ESL  
• Guided Reading (Spanish), p. 86




 Formal Assessment  
• Section Quiz, p. 118

## INTEGRATED TECHNOLOGY

-  Geography Transp. GT14  
• Mining and Industry
-  Critical Thinking Transp. CT14  
• Industrial Growth
-  Humanities Transp. HT14

 [hmhsocialstudies.com](http://hmhsocialstudies.com)

## TEST-TAKING RESOURCES

-  Strategies for Test Preparation
-  Test Practice Transparencies TT52
-  Online Test Practice

**BLACK GOLD** Oil became a key commodity in the late 1800s, valued as a fuel source and an industrial lubricant. Though Native Americans had made fuel and medicine from crude oil, early settlers had little use for it. Then, in the 1840s, Americans began using kerosene to light lamps after the Canadian geologist Abraham Gesner discovered how to distill the fuel from oil or coal.

It wasn't until 1859, however, when **Edwin L. Drake** successfully used a steam engine to drill for oil near Titusville, Pennsylvania, that removing oil from beneath the earth's surface became practical. This breakthrough started an oil boom that spread to Kentucky, Ohio, Illinois, Indiana, and, eventually, Texas. Petroleum-refining industries arose in Cleveland and Pittsburgh as entrepreneurs rushed to transform the oil into kerosene. Gasoline, a byproduct of the refining process, originally was thrown away. But after the automobile became popular, gasoline became the most important form of oil.

**BESSEMER STEEL PROCESS** Oil was not the only natural resource that was plentiful in the United States. There were also abundant deposits of coal and iron. In 1887, prospectors discovered iron ore deposits more than 100 miles long and up to 3 miles wide in the Mesabi Range of Minnesota. At the same time, coal production skyrocketed—from 33 million tons in 1870 to more than 250 million tons in 1900.

Iron is a dense metal, but it is soft and tends to break and rust. It also usually contains other elements, such as carbon. Removing the carbon from iron produces a lighter, more flexible, and rust-resistant metal—steel. The raw materials needed to make steel were readily available; all that was needed was a cheap and efficient manufacturing process. The **Bessemer process**, developed independently by the British manufacturer Henry Bessemer and American ironmaker William Kelly around 1850, soon became widely used. This technique involved injecting air into molten iron to remove the carbon and other impurities. By 1880, American manufacturers were using the new method to produce more than 90 percent of the nation's steel. In this age of rapid change and innovation, even

#### Vocabulary

**entrepreneur:** a person who organizes, operates, and assumes the risk for a business venture

#### Skillbuilder Answers

1. Pennsylvania  
2. An abundance of coal and iron ore, plus access to a major river, contributed to Pittsburgh's high levels of steel production.

### Natural Resources and the Birth of a Steel Town, 1886–1906



#### GEOGRAPHY SKILLBUILDER

- Region** Which state had the most steel-producing areas?
- Human-Environment Interaction** What connection can you draw between natural resources (including water) and steel production in Pittsburgh?

### More About . . .

#### Iron vs. Steel

The combination of iron with various alloys gives steel its special characteristics. Carbon steel, which accounts for 90 percent of the world's steel production, contains no more than 2 percent carbon. If more carbon is added, the result is cast iron—familiar materials for skillets. Low-alloy steel (made from up to 8 percent of metals such as nickel or chromium) is exceptionally strong; it is used for machine parts, structural parts of buildings, bridges, and aircraft landing gear. High-alloy steel usually contains more than 8 percent alloying elements, and is used when appearance and resistance to oxidation are important.

Humanities Transparencies HT14  
· *The Gun Foundry*

### HISTORY from VISUALS

#### Interpreting the Maps

Remind students that the map of Pittsburgh is projected out from the United States map. Ask students why there were more steel mills in 1906 than in 1886. (*Demand for the steel probably increased, making it profitable to open a steel mill.*)

**Extension** Have students choose a city other than Pittsburgh and identify the nearest coal and iron deposits and waterways.

Geography Transparencies GT14  
· Mining and Industry in the United States, 1850–1900

### ACTIVITY COOPERATIVE LEARNING

#### Tracking the Growth of Steel **ELPS** 3E, 4F

**Class Time** 45 minutes

**Task** Organizing information about the production and uses of steel into a class museum display

**Purpose** To recognize the importance of steel and the interrelatedness of science, technology, and daily life

**Directions** Working in small groups, students will research a topic related to the production or uses of steel, such as the Bessemer process. Each group will provide

illustrations and text for their topic, and one group will design, coordinate, and produce a class museum display. The museum display might include:

- a basic description of the topic, with all terms clearly defined and explained
- diagrams of any processes involved
- photographs of the process and the workers involved in it
- sketch map showing major U.S. centers for this work

Integrated Assessment  
· Rubric 4

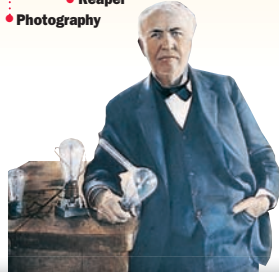
### BLOCK SCHEDULING



HISTORY from VISUALS

Interpreting a Time Line

Ask students the following questions. How much time elapsed between the telegraph and the telephone? (39 years) How much time elapsed between the internal-combustion engine and the airplane? (43 years) In which decade were the most new inventions created? (the 1870s)



HISTORICAL SPOTLIGHT

ILLUMINATING THE LIGHT BULB

Shortly after moving into a long wooden shed at Menlo Park, Thomas Alva Edison and his associates set to work to develop the perfect incandescent bulb. Arc lamps already lit some city streets and shops, using an electric current passing between two sticks of carbon, but they were glaring and inefficient.

Edison hoped to create a long-lasting lamp with a soft glow, and began searching for a filament that would burn slowly and stay lit. Edison tried wires, sticks, blades of grass, and even hairs from his assistants' beards. Finally, a piece of carbonized bamboo from Japan did the trick. Edison's company used bamboo filaments until 1911, when it began using tungsten filaments, which are still used today.

HISTORICAL SPOTLIGHT

ILLUMINATING THE Light Bulb

Share with students Thomas Edison's definition of genius: "One percent inspiration and 99 percent perspiration." Ask them to discuss how his search for the perfect lamp filament illustrates this definition.

Instruct: Objective 2

Inventions Promote Change

- How did the harnessing of electricity transform American business?
- How did new inventions and products affect people at home and at work?

**In-Depth Resources:** Unit 2  
 · Guided Reading, p. 20  
 · Primary Sources: Birth of the Telephone, p. 30

the successful Bessemer process was bettered by the 1860s. It was eventually replaced by the open-hearth process, enabling manufacturers to produce quality steel from scrap metal as well as from raw materials. **A**

**NEW USES FOR STEEL** The railroads, with thousands of miles of track, became the biggest customers for steel, but inventors soon found additional uses for it. Joseph Glidden's barbed wire and McCormick's and Deere's farm machines helped transform the plains into the food producer of the nation.

Steel changed the face of the nation as well, as it made innovative construction possible. One of the most remarkable structures was the Brooklyn Bridge. Completed in 1883, it spanned 1,595 feet of the East River in New York City. Its steel cables were supported by towers higher than any man-made and weight-bearing structure except the pyramids of Egypt. Like those ancient marvels, the completed bridge was called a wonder of the world.

Around this time, setting the stage for a new era of expansion upward as well as outward, William Le Baron Jenney designed the first skyscraper with a steel frame—the Home Insurance Building in Chicago. Before Jenney had his pioneering idea, the weight of large buildings was supported entirely by their walls or by iron frames, which limited the buildings' height. With a steel frame to support the weight, however, architects could build as high as they wanted. As structures soared into the air, not even the sky seemed to limit what Americans could achieve.

Inventions Promote Change 2

By capitalizing on natural resources and their own ingenuity, inventors changed more than the landscape. Their inventions affected the very way people lived and worked.

**THE POWER OF ELECTRICITY** In 1876, **Thomas Alva Edison** became a pioneer on the new industrial frontier when he established the world's first research laboratory in Menlo Park, New Jersey. There Edison perfected the incandescent light bulb—patented in 1880—and later invented an entire system for producing and distributing electrical power. Another inventor, George Westinghouse, along with Edison, added innovations that made electricity safer and less expensive.

The harnessing of electricity completely changed the nature of business in America. By 1890, electric power ran numerous machines, from fans to printing presses. This inexpensive, convenient source of energy soon became available in homes and spurred the invention of time-saving appliances. Electric streetcars made urban travel cheap and efficient and also promoted the outward spread of cities.

More important, electricity allowed manufacturers to locate their plants

MAIN IDEA

**Summarizing**  
**A** What natural resources were most important for industrialization?  
**A. Answer** oil, coal, iron ore, water

**Vocabulary**  
**incandescent:** giving off visible light as a result of being heated

DIFFERENTIATING INSTRUCTION

LESS PROFICIENT READERS

Using a Chronological Chart **ELPS** 4D

Draw a chart on the board like the one at the right, using only the dates. Encourage students to find dates in the text between pages 232–233 and fill in the inventions and their inventors.

Date	Inventor	Invention
1867	Christopher Sholes	Typewriter
1876	Alexander Graham Bell and Thomas Watson	Telephone
1880	Thomas Alva Edison	Incandescent light bulb

**MAIN IDEA**

**Analyzing Effects**

**B** How did electricity change American life?

**B. Answer** It changed the nature of business, made possible the invention of new appliances, and helped cities and industries grow.

wherever they wanted—not just near sources of power, such as rivers. This enabled industry to grow as never before. Huge operations, such as the Armour and Swift meatpacking plants, and the efficient processes that they used became the models for new consumer industries. **B**

**INVENTIONS CHANGE LIFESTYLES** Edison's light bulb was only one of several revolutionary inventions. **Christopher Sholes** invented the typewriter in 1867 and changed the world of work. Next to the light bulb, however, perhaps the most dramatic invention was the telephone, unveiled by **Alexander Graham Bell** and Thomas Watson in 1876. It opened the way for a worldwide communications network.

The typewriter and the telephone particularly affected office work and created new jobs for women. Although women made up less than 5 percent of all office workers in 1870, by 1910 they accounted for nearly 40 percent of the clerical work force. New inventions also had a tremendous impact on factory work, as well as on jobs that traditionally had been done at home. For example, women had previously sewn clothing by hand for their families. With industrialization, clothing could be mass-produced in factories, creating a need for garment workers, many of whom were women.

Industrialization freed some factory workers from backbreaking labor and helped improve workers' standard of living. By 1890, the average workweek had been reduced by about ten hours. However, many laborers felt that the mechanization of so many tasks reduced human workers' worth. As consumers, though, workers regained some of their lost power in the marketplace. The country's expanding urban population provided a vast potential market for the new inventions and products of the late 1800s.



▲ The typewriter shown here dates from around 1890.

**More About . . .**

**Alexander Graham Bell**

Bell was influenced greatly by his father, Alexander Melville Bell, who taught deaf-mutes how to speak. Alexander Graham and his two brothers helped their father demonstrate his method for teaching people to speak. After moving to the United States, Alexander Graham Bell opened a school in Boston for teachers of the deaf. Helen Keller was his prodigy. Bell was only 29 when he developed the first working telephone.

- 📖 In-Depth Resources: Unit 2
- Primary Sources: Birth of the Telephone, p. 30

**Assess & Reteach**

**SECTION 1 ASSESSMENT**

Have students create questions on the material in the section, separate into teams, and then test each other in a game-show format.

- 📖 Formal Assessment
- Section Quiz, p. 118

**SELF-ASSESSMENT**

Have students mark the questions on the Section 1 Assessment that they could not answer. Ask them to find the answers in the text.

**RETEACH**

Use the video *Gusher!* to review the main ideas of this section.

- 📖 In-Depth Resources: Unit 2
- Reteaching Activity, p. 25



**ASSESSMENT**

**1. TERMS & NAMES** For each term or name, write a sentence explaining its significance.

- Edwin L. Drake
- Thomas Alva Edison
- Alexander Graham Bell
- Bessemer process
- Christopher Sholes

**MAIN IDEA**

**2. USING YOUR NOTES**

In a chart like the one below, list resources, ideas, and markets that affected the industrial boom of the 19th century. In the second column, note how each item contributed to industrialization.

Resources, Ideas, Markets	Impact

**CRITICAL THINKING**

**3. MAKING INFERENCES**

Do you think that consumers gained power as industry expanded in the late 19th century? Why or why not?

**4. HYPOTHESIZING**

If the U.S. had been poor in natural resources, how would industrialization have been affected?

**5. ANALYZING EFFECTS**

How did scientific discoveries and technological innovations affect the economic development of the United States? **Think About:**

- the discoveries and inventions of the period
- the impact of inventions on people's daily lives
- the effect of inventions on the workplace

**Answers ASSESSMENT**



**1. TERMS & NAMES**

- Edwin L. Drake, p. 231
- Bessemer process, p. 231
- Thomas Alva Edison, p. 232
- Christopher Sholes, p. 233
- Alexander Graham Bell, p. 233

**2. USING YOUR NOTES**

**oil drill:** oil boom, wealth; **Bessemer process:** bridge construction, more railroads; **steel:** frame buildings; **electrical power:** artificial light widely available; **telephone:** faster communications

**3. MAKING INFERENCES**

**Yes:** Availability of products; more leisure time **No:** low wages; less skill and craft

**4. HYPOTHESIZING**

Less wealth; less industry; slower growth;

**5. ANALYZING EFFECTS**

**Electric Power:** changed business and home environments; **Telephone Communications:** faster communication, service, and growth; **Steel Production:** used for buildings, machines, factories, bridges, railroads; **Petroleum:** used for kerosene, gasoline, and industrial lubricant



CITIZENSHIP  
SPOTLIGHT

## Objectives

- To describe qualities of effective leadership
- To evaluate the contributions of political and social leaders

## Focus &amp; Motivate

**Analyzing Character Traits** Ask students to consider the different traits that make someone a good leader. Consider such things as communication style, work ethic, behavior, and personality.

## More About . . .

## Sonia Sotomayor

Sonia Sotomayor was born to Puerto Rican immigrants in the Bronx in New York in 1954. She attended Princeton University and Yale Law School before becoming an assistant district attorney and then moving into private practice. Her years as a lawyer helped to prepare her for her work as a judge. She was first appointed a federal judge by President George H.W. Bush in 1992. Five years later, President Bill Clinton nominated her to the U.S. Court of Appeals for the Second Circuit. In 2009, she was nominated to the U.S. Supreme Court by President Barack Obama. She became the first Hispanic judge and only the third woman to serve as a Supreme Court justice.

## CITIZENSHIP SPOTLIGHT

## Qualities of Effective Leadership

Leadership matters. In many instances, a team or organization is only as good as its leader. By influencing people to work toward common goals, effective leaders are able to accomplish important tasks and effect change in the world. There is no list of characteristics that a good leader must possess. In fact, good leadership can depend on the situation; different leaders might behave in different ways depending on their position, their goals, their personalities and those of their followers. However, there are some qualities that can help an individual be an effective leader.



## A DESIRE TO LEAD

Perhaps the most important quality is the desire to lead. In order to lead effectively, an individual must be committed to his or her cause and feel confident enough to advance that cause. Billy Graham (shown at left) is a good example of an individual with a desire to lead. He believes his purpose in life is to help people find a personal relationship with God. Since beginning his ministry in 1950, Graham has worked tirelessly to accomplish that mission and share his faith with others. He has written 31 books and conducted events in 185 countries. He has even served as a spiritual adviser to presidents, including Dwight D. Eisenhower and Richard Nixon. Part of what enabled Graham to reach so many people with his message was that he was committed to his cause.

## JUDGMENT AND DECISIVENESS

Another important characteristic is the ability to act decisively and with good judgment. In the face of complex issues with many factors, a strong leader needs to determine an appropriate course of action to pursue. By demonstrating these leadership qualities, Sonia Sotomayor earned a place as a U.S. Supreme Court justice. She is the only current member of the Court with experience as a trial judge. In that position, she was required to hand down decisions on a variety of complex legal and constitutional issues, and she earned a reputation as an able judge as a result of her thoughtful opinions. She continues to employ her skills of judgment and decisiveness from the Supreme Court bench.



## RECOMMENDED RESOURCES

## BOOKS

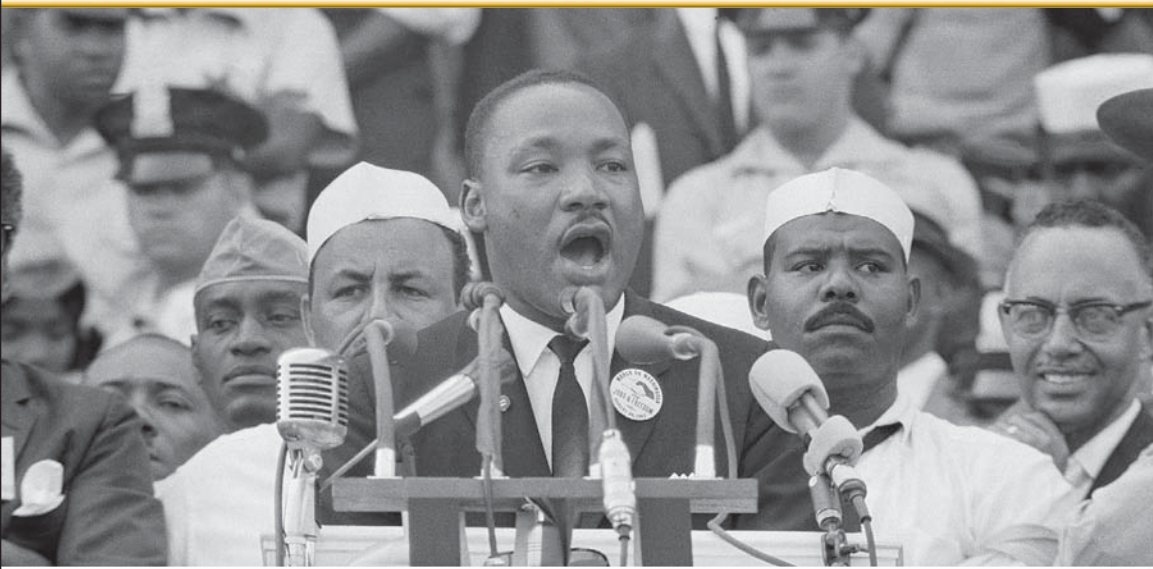
Carnegie, Andrew. *Autobiography of Andrew Carnegie*. New York: BiblioBazaar, 2007. Entrepreneur and philanthropist Andrew Carnegie tells of his personal journey to financial success.

Graham, Billy. *Just As I Am: The Autobiography of Billy Graham*. New

York: HarperOne, 2011. Billy Graham describes his career, successes, and challenges in his own words.

Pastan, Amy. *DK Biography: Martin Luther King*. New York: DK Publishing, 2004. A photographic biography of Dr. King's life with related content about the history surrounding the civil rights movement to put his work in proper context.

Sotomayor, Sonia. *My Beloved World*. Toronto: Alfred A. Knopf, 2013. Sonia Sotomayor tells the story of her life and path towards becoming a Supreme Court Justice.



### STRONG SOCIAL SKILLS

An effective leader must be able to work well with others. A leader must be able to listen to the opinions of others and to use tact and diplomacy when interacting with team members to ensure achievement of common goals. Good leaders are able to use their strong social skills to communicate about their mission and to inspire others to follow them. One of the best examples of a leader who used language to inspire a movement is Martin Luther King, Jr. A Baptist minister from Atlanta, King delivered his most famous speech, known as the “I Have a Dream” speech, at the March on Washington on August 28, 1963, in front of a crowd of more than 200,000 people. In his speech, King drew from patriotic and religious texts of the past to review African Americans’ long struggle for freedom. His rhetoric drew in his listeners and reached beyond them to communicate a moral basis for the civil rights movement to a vast national audience. The speech inspired African Americans to continue to work for change within their communities. Through this speech and his other writings, King became a powerful voice of the African American civil rights movement. His leadership helped the movement make significant progress toward achieving its goal of equality.

### PERSEVERANCE

Even the best leaders will face challenges. When challenges arise, the most important thing is how a leader deals with them. Perseverance involves persistence in the face of obstacles. It requires tenacity and commitment to a belief or purpose. Great leaders do not give up in the face of difficulty; instead, they find a way to keep going. Andrew Carnegie’s path to financial success required perseverance. Born in Scotland to parents who hit tough economic times, Carnegie immigrated to the United States with his family at the age of 12. He began working in a factory, but through talent and persistence he advanced quickly to other, more rewarding jobs. Carnegie began investing his earnings in the iron, oil, railroad, and telegraph industries. He was soon able to use the money from his investments to found his own company, the Carnegie Steel Company. He used the business experience that he had gained to build his company up until it dominated the steel industry in the United States. Carnegie’s success can be attributed in part to



his perseverance, as he worked hard to overcome the challenges of his humble beginnings.

### THINKING CRITICALLY

- 1. Making Generalizations** What are some qualities of effective leadership? What other qualities do you think might also be helpful for leaders to possess? Explain.
- 2. Researching a Leader** Choose one of the leaders discussed in this textbook. Do research to identify the qualities that made this leader effective. Did he or she excel in some areas but not in others? Write an essay explaining what your selected leader accomplished and which qualities helped him or her do so.

[hmhsocialstudies.com](http://hmhsocialstudies.com) RESEARCH WEB LINKS

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## Instruct

1. What important leadership quality does Billy Graham embody?
2. In what way is Sonia Sotomayer a good leader?
3. What is one political and social contribution Martin Luther King, Jr. made?
4. In what way did Andrew Carnegie show perseverance?

### MAKING PERSONAL CONNECTIONS

Have students consider ways that they have shown effective leadership skills. When have they worked with others and served as a leader? What qualities helped them to be successful?

## More About . . .

### Effective Leadership

Throughout the history of our country, leaders have worked to create political, social, and economic change and move our country forward. Some political leaders have worked to create new laws, abolish unfair laws, or spur others into action as they work as representatives, lobbyists, or activists. Some social leaders have worked to help the community grow economically or improve living conditions for those in need. By examining the contributions of specific leaders, we can identify the steps they took and the qualities that make each an effective leader.

### THINKING CRITICALLY: ANSWERS

#### 1. MAKING GENERALIZATIONS

**Qualities:** the desire to lead, confidence, ability to act decisively, good judgement, strong social skills, good communication skills, ability to work well with others, good listening skills, perseverance;  
**Other qualities:** Responses will vary but may include risk-taking, courage, thoughtfulness, and hard work.

#### 2. RESEARCHING A LEADER

##### Rubric

The essay should . . .

- demonstrate in-depth research on the selected leader
- fully demonstrate analysis and evaluation of the information
- clearly present selected information in a logical fashion, presenting supporting details that show qualities of effective leadership



## OBJECTIVES

- 1 Identify the role of the railroads in unifying the country.
- 2 List positive and negative effects of railroads on the nation's economy.
- 3 Summarize reasons for, and outcomes of, the demand for railroad reform.

**TEKS 3B** analyze economic issues such as industrialization, the growth of railroads, the growth of labor unions, farm issues, the cattle industry boom, the rise of entrepreneurship, free enterprise, and the pros and cons of big business **15B** describe the changing relationship between the federal government and private business, including the costs and benefits of laissez-faire, anti-trust acts, the Interstate Commerce Act, and the Pure Food and Drug Act

## Focus & Motivate


What name might students give the present age? (“*The Age of the Car*” or “*The Age of the Computer*”) In formulating their answers, have them consider the technology that exerts the most influence on all aspects of American life. Do they think the railroads played a similar role in American life in the late 19th century? Why or why not?

## Instruct




### Instruct: Objective 1



#### Railroads Span Time and Space

- How did the government facilitate the expansion of the railroads?
- What were the positive and negative aspects of railroad expansion?
- How did railroad time work?


 In-Depth Resources: Unit 2  
• Guided Reading, p. 21  
• Literature: from *The Bride Comes to Yellow Sky*, pp. 34–36

## PROGRAM RESOURCES




-  In-Depth Resources: Unit 2  
• Guided Reading, p. 21  
• Reteaching Activity, p. 26  
• Literature: from *The Bride Comes to Yellow Sky*, pp. 34–36
-  Guided Reading Workbook  
• Section 2
-  Spanish/English Guided Reading Workbook  
• Section 2

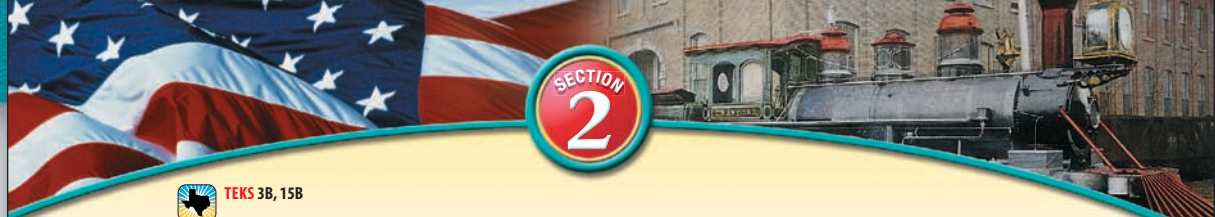
-  Access for Students Acquiring English/ESL  
• Guided Reading (Spanish), p. 87
-  Formal Assessment  
• Section Quiz, p. 119

## INTEGRATED TECHNOLOGY

 [hmhsocialstudies.com](http://hmhsocialstudies.com)

## TEST-TAKING RESOURCES

-  Strategies for Test Preparation
-  Test Practice Transparencies TT53
-  Online Test Practice



## SECTION 2



# The Age of the Railroads

### MAIN IDEA

The growth and consolidation of railroads benefited the nation but also led to corruption and required government regulation.

### WHY IT MATTERS NOW

Railroads made possible the expansion of industry across the United States.

### Terms & Names

- transcontinental railroad
- George M. Pullman
- Crédit Mobilier
- *Munn v. Illinois*
- Interstate Commerce Act

## One American's Story

### hmhsocialstudies.com TAKING NOTES

Use the graphic organizer online to take notes on the effects of the rapid growth of the railroads.

In October 1884, the economist Richard Ely visited the town of Pullman, Illinois, to write about it for *Harper's* magazine. At first, Ely was impressed with the atmosphere of order, planning, and well-being in the town George M. Pullman had designed for the employees of his railroad-car factory. But after talking at length with a dissatisfied company officer, Ely concluded the town had a fatal flaw: it too greatly restricted its residents. Pullman employees were compelled to obey rules in which they had no say. Ely concluded that “the idea of Pullman is un-American.”

### A PERSONAL VOICE RICHARD T. ELY

“It is benevolent, well-wishing feudalism [a medieval social system], which desires the happiness of the people, but in such way as shall please the authorities. . . . If free American institutions are to be preserved, we want no race of men reared as underlings.”

—“Pullman: A Social Study”



▲ The town of Pullman was carefully laid out and strictly controlled.

As the railroads grew, they came to influence many facets of American life, including, as in the town of Pullman, the personal lives of the country's citizens. They caused the standard time and time zones to be set and influenced the growth of towns and communities. However, the unchecked power of railroad companies led to widespread abuses that spurred citizens to demand federal regulation of the industry.

## 1 Railroads Span Time and Space

Rails made local transit reliable and westward expansion possible for business as well as for people. Realizing how important railroads were for settling the West and developing the country, the government made huge land grants and loans to the railroad companies.

**A NATIONAL NETWORK** By 1856, the railroads extended west to the Mississippi River, and three years later, they crossed the Missouri. Just over a decade later, crowds across the United States cheered as the Central Pacific and Union Pacific Railroads met at Promontory, Utah, on May 10, 1869. A golden spike marked the spanning of the nation by the first **transcontinental railroad**. Other transcontinental lines followed, and regional lines multiplied as well. At the start of the Civil War, the nation had had about 30,000 miles of track. By 1890, that figure was nearly six times greater.

**ROMANCE AND REALITY** The railroads brought the dreams of available land, adventure, and a fresh start within the grasp of many Americans. This romance was made possible, however, only by the harsh lives of railroad workers.

The Central Pacific Railroad employed thousands of Chinese immigrants. The Union Pacific hired Irish immigrants and desperate, out-of-work Civil War veterans to lay track across treacherous terrain while enduring attacks by Native Americans. Accidents and diseases disabled and killed thousands of men each year. In 1888, when the first railroad statistics were published, the casualties totaled more than 2,000 employees killed and 20,000 injured.

**RAILROAD TIME** In spite of these difficult working conditions, the railroad laborers helped to transform the diverse regions of the country into a united nation. Though linked in space, each community still operated on its own time, with noon when the sun was directly overhead. Noon in Boston, for example, was almost 12 minutes later than noon in New York. Travelers riding from Maine to California might reset their watches 20 times.

In 1869, to remedy this problem, Professor C. F. Dowd proposed that the earth's surface be divided into 24 time zones, one for each hour of the day. Under his plan, the United States would contain four zones: the Eastern, Central, Mountain, and Pacific time zones. The railroad companies endorsed Dowd's plan enthusiastically, and many towns followed suit.

Finally, on November 18, 1883, railroad crews and towns across the country synchronized their watches. In 1884, an international conference set worldwide time zones that incorporated railroad time. The U.S. Congress, however, didn't officially adopt railroad time as the standard for the nation until 1918. As strong a unifying force as the railroads were, however, they also opened the way for abuses that led to social and economic unrest. **A**

**MAIN IDEA****Analyzing Effects**

**A** What were the effects of railroad expansion?

**A. Answer**

The growth of industries that could ship to new markets; hazardous jobs for railroad workers; an increase of immigration and migration to the West.

**Opportunities and Opportunists 2**

The growth of the railroads influenced the industries and businesses in which Americans worked. Iron, coal, steel, lumber, and glass industries grew rapidly as they tried to keep pace with the railroads' demand for materials and parts. The rapid spread of railroad lines also fostered the growth of towns, helped establish new markets, and offered rich opportunities for both visionaries and profiteers.

**HISTORICAL SPOTLIGHT****CHINESE IMMIGRANTS AND THE RAILROADS**

Although the railroads paid all their employees poorly, Asians usually earned less than whites. The average pay for whites working a ten-hour day was \$40 to \$60 a month plus free meals. Chinese immigrants hired by the Central Pacific performed similar tasks from dawn to dusk for about \$35 a month—and they had to supply their own food.

The immigrants' working conditions were miserable. In 1866, for example, the railroad hired them to dig a tunnel through a granite mountain. For five months of that year, the Chinese lived and worked in camps surrounded by banks of snow. The total snowfall reached over 40 feet. Hundreds of the men were buried in avalanches or later found frozen, still clutching their shovels or picks.



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**HISTORICAL SPOTLIGHT****Chinese Immigrants and the Railroads**


Have students discuss why they think that many Chinese immigrants were willing to engage in such harsh and dangerous work. *(They were in search of a better life in America but were unable to find good jobs, possibly due to prejudice.)*

**More About . . .****Railroad Time**

Railroad engineers were very flexible about their schedules. An engineer on the Old Colony Railroad in Massachusetts stopped to collect eggs from an elderly woman every day. Once she persuaded him to wait until her hen laid an egg to make a full dozen. The Delaware, Lackawanna, and Western Railroad (the D.L. & W.) was nicknamed the “Delay, Linger, and Wait”; the Newburgh, Dutchess, and Connecticut (the N.D. & C.) became the “Never Did and Couldn’t.”

**Instruct: Objective 2 Opportunities and Opportunists**

- How did the growth of railroad lines promote the growth of cities and trade?
- What was the Crédit Mobilier scandal?

 In-Depth Resources: Unit 2  
• Guided Reading, p. 21

**DIFFERENTIATING INSTRUCTION LESS PROFICIENT READERS****Using a Problem Solving Process** **ELPS** 1A, 4F

Ask students how individual communities might determine when it was noon. (*when the sun was directly overhead*) Then perform this experiment. Place a tall drinking glass on a large sheet of paper on the ground at exactly noon. Draw a line around the shadow of the glass every 10 minutes until you get a series of outlines. The series of shadow outlines shows that the earth is constantly moving to a different position under the sun.

Help students see how calculating local time by the sun could differ by several minutes in different parts of one state. Then have them consider the advantages and disadvantages of reckoning time using a local system versus using a standardized time system. (*Local time in sync with nature; standardized time zones are in sync with the rest of the world.*)



**ANOTHER PERSPECTIVE**

**On the Wrong Track**

Ask students why people might resist change. Have them write a paragraph objecting to a modern development, such as supersonic air travel, e-mail, or cellular phones.

**Tracing Themes**

**SCIENCE AND TECHNOLOGY**


**New Technology**

The new technology that contributed to the rapid growth had negative as well as positive effects on society. The impact on different groups of people, such as farmers, ranchers, Native Americans, settlers, and business owners, highlights the fact that new technology brings not only opportunity but opportunists.

**Instruct: Objective 3**

**The Grange and the Railroads**

- For what reasons were farmers angry at railroad companies?
- How did the Granger laws help farmers?
- What was the Interstate Commerce Act?

 In-Depth Resources: Unit 2  
· Guided Reading, p. 21

**ANOTHER PERSPECTIVE**

**ON THE WRONG TRACK**

While the railroads captured the imagination of most 19th-century Americans, there were those who didn't get on the bandwagon. The writer Herman Melville raged against the smoke-belching iron horse and the waves of change it set in motion as vehemently as his character Captain Ahab raged against the white whale and the sea in *Moby-Dick*. "Hark! here comes that old dragon again—that gigantic gadfly . . . snort! puff! scream! Great improvements of the age," Melville fumed. "Who wants to travel so fast? My grandfather did not, and he was no fool."

**Pullman cars brought luxury to the rails, as shown in this advertisement from around 1890.**



**NEW TOWNS AND MARKETS** By linking previously isolated cities, towns, and settlements, the railroads promoted trade and interdependence. As part of a nationwide network of suppliers and markets, individual towns began to specialize in particular products. Chicago soon became known for its stockyards and Minneapolis for its grain industries. These cities prospered by selling large quantities of their products to the entire country. New towns and communities also grew up along the railroad lines. Cities as diverse as Abilene, Kansas; Flagstaff, Arizona; Denver, Colorado; and Seattle, Washington, owed their prosperity, if not their very existence, to the railroads. **B**

**PULLMAN** The railroads helped cities not only grow up but branch out. In 1880, for example, **George M. Pullman** built a factory for manufacturing sleepers and other railroad cars on the Illinois prairie. The nearby town that Pullman built for his employees followed in part the models of earlier industrial experiments in Europe. Whereas New England textile manufacturers had traditionally provided housing for their workers, the town of Pullman provided for almost all of workers' basic needs. Pullman residents lived in clean, well-constructed brick houses and apartment buildings with at least one window in every room—a luxury for city dwellers. In addition, the town offered services and facilities such as doctors' offices, shops, and an athletic field.

As Richard Ely observed, however, the town of Pullman remained firmly under company control. Residents were not allowed to loiter on their front steps or to drink alcohol. Pullman hoped that his tightly controlled environment would ensure a stable work force. However, Pullman's refusal to lower rents after cutting his employees' pay led to a violent strike in 1894.

**CRÉDIT MOBILIER** Pullman created his company town out of the desire for control and profit. In some other railroad magnates, or powerful and influential industrialists, these desires turned into self-serving corruption. In one of the most infamous schemes, stockholders in the Union Pacific Railroad formed, in 1864, a construction company called **Crédit Mobilier** (krēd'it mō-bēl'yər). The stockholders gave this company a contract to lay track at two to three times the actual cost—and pocketed the profits. They donated shares of stock to about 20 representatives in Congress in 1867.

A congressional investigation of the company, spurred by reports in the *New York Sun*, eventually found that the officers of the Union Pacific had taken up to \$23 million in stocks, bonds, and cash. Testimony implicated such well-known and respected federal officials as Vice-President Schuyler Colfax and Congressman James Garfield, who later became president. Although these public figures kept their profits and received little more than a slap on the wrist, the reputation of the Republican Party was tarnished. **C**

**The Grange and the Railroads 3**

Farmers were especially disturbed by what they viewed as railroad corruption. The Grangers—members of the Grange, a farmers' organization founded in 1867—began demanding governmental control over the railroad industry.

**MAIN IDEA**

**Summarizing**

**B** How did the railroads affect cities?

**B. Answer** Railroads led to a growth of cities in the Northeast and the Midwest and led to the development of new cities in the West.

**MAIN IDEA**

**Summarizing**

**C** How did railroad owners use Crédit Mobilier to make huge, undeserved profits?

**C. Answer** By charging too much for railroad construction and paying off government officials.

**ACTIVITY COOPERATIVE LEARNING**


**Debating Company Towns** **ELPS** 3E, 3G

**Class Time** 45 minutes

**Task** Debating the pros and cons of a company town

**Purpose** To understand how individual points of view on a historical issue can differ widely

**Directions** Assign small groups of students a position on the issue. Groups will then research their position, considering why companies built the towns, why workers chose to live there, advantages and disadvantages to both the company and the workers, and alternatives for both parties. Groups should take turns debating one another.

 **Integrated Assessment**  
· Rubric 3

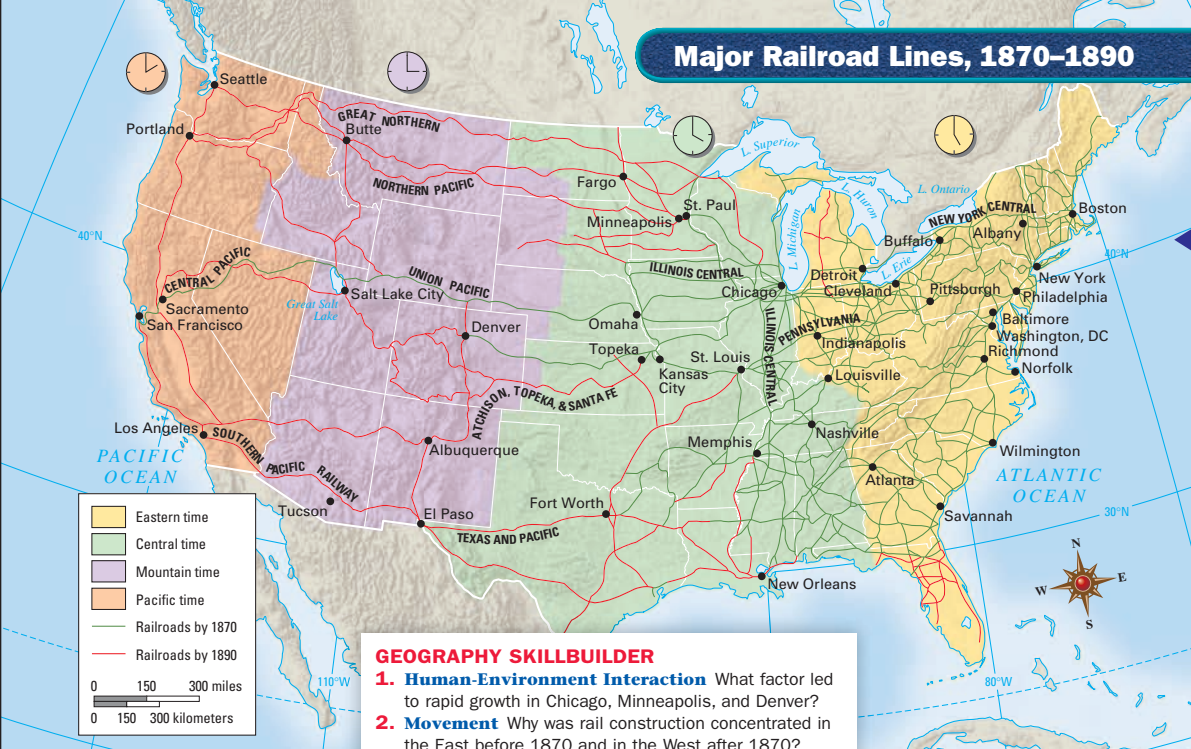
**B BLOCK SCHEDULING**

HISTORY from VISUALS

Interpreting the Map

Have students study the distribution of railroads throughout the country and the land forms associated with various regions. What connections can they draw? (*The greatest concentration of railroads is in the relatively flat Midwest.*)

**Extension** Have students trace possible railroad routes from Boston to Sacramento, from Cleveland to Los Angeles, or from Seattle to Omaha.



GEOGRAPHY SKILLBUILDER

- 1. Human-Environment Interaction** What factor led to rapid growth in Chicago, Minneapolis, and Denver?
- 2. Movement** Why was rail construction concentrated in the East before 1870 and in the West after 1870?

Skillbuilder Answers

1. Their location as railroad hubs.
2. In 1869, the transcontinental railroad was complete, which spurred the need for new, smaller rail lines across the West.

**D. Answer** The farmers took political action in one united front. They pressed legislators to pass laws to protect them.

Background

Price fixing occurs when companies within an industry all agree to charge the same price for a given service, rather than competing to offer the lowest price.

**RAILROAD ABUSES** Farmers were angry with railroad companies. They were upset by misuse of government land grants, which the railroads sold to other businesses rather than to settlers. The railroads also entered into formal agreements to fix prices, which helped keep farmers in their debt. In addition, they charged different customers different rates, often demanding more for short than for long hauls.

**GRANGER LAWS** In response to these abuses by the railroads, the Grangers took political action. They sponsored state and local political candidates, elected legislators, and successfully pressed for laws to protect their interests. In 1871 Illinois authorized a commission “to establish maximum freight and passenger rates and prohibit discrimination.” Grangers throughout the West, Midwest, and Southeast convinced state legislators to pass similar laws, called Granger laws.

The railroads fought back, challenging the constitutionality of the regulatory laws. In 1877, however, in the case of *Munn v. Illinois*, the Supreme Court upheld the Granger laws by a vote of seven to two. The states thus won the right to regulate the railroads for the benefit of farmers and consumers. The Grangers also helped establish an important principle—the federal government’s right to regulate private industry to serve the public interest. **D**

**INTERSTATE COMMERCE ACT** The Grangers’ triumph was short-lived, however. In 1886, the Supreme Court ruled that a state could not regulate railroad traffic moving across state boundaries. In response to public outrage, Congress passed the **Interstate Commerce Act** in 1887. Its objective was to make railroad rates fair for all customers by requiring rates to be “fair and reasonable.” To oversee the railroads, the act established a five-member Interstate Commerce Commission (ICC). Unfortunately, Congress did not give the ICC the power to enforce the provisions of the law. Due to poorly defined language in the act and resistance from the railroads, the ICC had difficulty regulating rates. Several court cases challenged the act, costing government resources as most went in favor of the railroads.

MAIN IDEA

Analyzing Issues

**D** How did the Grangers, who were largely poor farmers, do battle with the giant railroad companies?

Connections Across Time

1890 AND TODAY

Railroads

Railroads are not as popular today as they were in the late 19th century, and there have been extensive cutbacks in railroad service. Several reasons are behind this development. Railroads can’t accommodate the fast pace of modern life as airlines do and are not as flexible as interstate bus service. Poor track maintenance has led to slowdowns and accidents. The railroads now serve mainly as middlemen—piggy-back freight haulers that transport containers loaded directly from ships to connecting points where they are unloaded, connected to cabs, and trucked the rest of their journey by road.

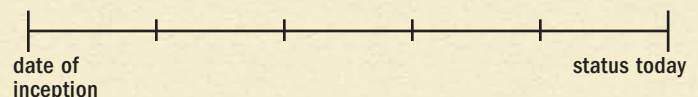
DIFFERENTIATING INSTRUCTION GIFTED AND TALENTED

Exploring the Railroad Lines

Have interested students choose one of the railroad lines depicted on the map on this page, and create a museum display exploring the history of the line. Students should trace the line from its origin through its heyday and decline, and examine its current status. Displays might include:

- copies of photographs of the railroad from various points in its history
- accounts from people who rode the line
- enlarged U.S. map showing the line’s route and noting any famous accidents or other interesting information

Students might also include a time line that covers the history of the line. Have them start with the basic time line frame below and add dates and captions as appropriate:





Analyzing Political Cartoons


SKILLBUILDER ANSWERS

1. A criticism. The colossus is supposed to be terrifying, controlling everything, a threat to freedom and fairness.
2. Controlling the tracks and the station implies that Vanderbilt has total control of the whole operation. He can make it do what he wants.

Assess & Reteach

SECTION 2 ASSESSMENT

Have students work in small groups to answer the questions. Have them indicate the portion of the text that best substantiates each answer.


 Formal Assessment  
· Section Quiz, p. 119

SELF-ASSESSMENT

Have students write a paragraph about the most surprising thing they learned in this section.

RETEACH

Have a small group of students volunteer to present a summary of the main ideas of the section to the class.

 In-Depth Resources: Unit 2  
· Reteaching Activity, p. 26

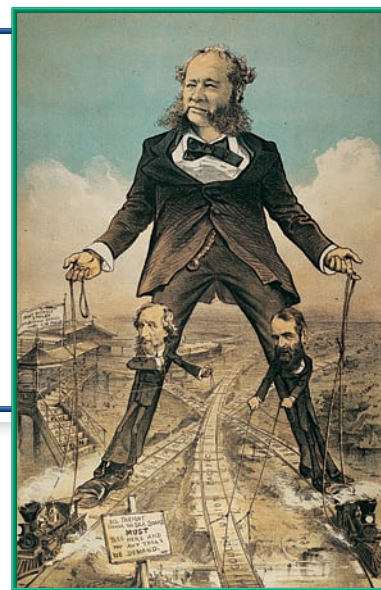
Analyzing Political Cartoons

“THE MODERN COLOSSUS OF (RAIL) ROADS”

Joseph Keppler drew this cartoon in 1879, featuring the railroad “giants” William Vanderbilt (top), Jay Gould (bottom right), and Cyrus W. Fields (bottom left). The three magnates formed a railroad trust out of their Union Pacific, New York Central, and Lake Shore & Dependence lines.

SKILLBUILDER Analyzing Political Cartoons

1. The title of this cartoon is a pun on the Colossus of Rhodes, a statue erected in 282 b.c. on an island near Greece. According to legend, the 100-foot-tall statue straddled Rhodes’s harbor entrance. Do you think the artist means the comparison as a compliment or a criticism? Why?
2. The reins held by the railroad magnates attach not only to the trains but also to the tracks and the railroad station. What does this convey about the magnates’ control of the railroads?



**Vocabulary consolidation:** the act of uniting or combining

Skillbuilder Answers

1. Criticism. The Colossus of Rhodes protected the harbor; the magnates controlled the railroads for their own gain.
2. Controlling the tracks and the station implies that Vanderbilt has total control of the whole operation.

The law had the most success in preventing the railroads from arranging special rates among themselves, which offered consumers some protection. Not until 1906, under President Theodore Roosevelt, did the ICC gain the power it needed to be effective. Still, the law was a historic milestone, marking the first time that the federal government had regulated an industry, and it served as a model for later attempts.

**PANIC AND CONSOLIDATION** Corporate abuses, mismanagement, overbuilding, and competition pushed many railroads to the brink of bankruptcy. Their financial problems played a major role in a nationwide economic collapse. The panic of 1893 was the worst depression up to that time: by the end of 1893, around 600 banks and 15,000 businesses had failed, and by 1895, 4 million people had lost their jobs. Large investment firms such as J. P. Morgan & Company reorganized the railroads. As the 20th century dawned, seven powerful companies held sway over two-thirds of the nation’s railroad tracks.

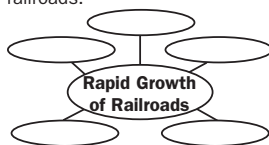


ASSESSMENT

1. **TERMS & NAMES** For each term or name, write a sentence explaining its significance.
  - transcontinental railroad
  - George M. Pullman
  - Crédit Mobilier
  - Munn v. Illinois
  - Interstate Commerce Act

MAIN IDEA

2. **USING YOUR NOTES**  
In a chart like the one below, fill in effects of the rapid growth of railroads.



How did the growth of railroads affect people’s everyday lives?  
How did it affect farmers?

CRITICAL THINKING

3. **MAKING INFERENCES**  
How did the Interstate Commerce Act mark a changing relationship between the federal government and private business? What were the costs and benefits of the act? Give examples to support your opinion.  
**Think About:**
  - the rights of railroad customers and workers
  - the scope of government regulations
4. **SYNTHESIZING**  
The federal government gave land and made loans to the railroad companies. Why was the government so eager to promote the growth of railroads?
5. **ANALYZING MOTIVES**  
Reread “Another Perspective” on railroads (page 238). Why do you think that some Americans disliked this new means of transportation?



ASSESSMENT Answers

1. **TERMS & NAMES**  
transcontinental railroad, p. 237  
George M. Pullman, p. 238  
Crédit Mobilier, p. 238  
Munn v. Illinois, p. 239  
Interstate Commerce Act, p. 239

2. **USING YOUR NOTES**  
Regulation of industry; growth of towns and cities; creation of nationwide market; corruption; consolidation of railroads.

3. **MAKING INFERENCES**  
The Interstate Commerce Act marked the first time the federal government placed a restriction to regulate a private industry, in this case, the railroads.

The ICC was established to oversee the law but not given power to enforce the regulations. One benefit was that railroads were prevented from arranging special rates among themselves. One cost was the money lost by the government through court cases challenging the law.

4. **SYNTHESIZING**  
Railroads increased U.S. settlement and built up U.S. commerce.

5. **ANALYZING MOTIVES**  
Pollution and social changes brought on by railroads impeded freedoms. Some feared change because of unknown consequences.

SECTION  
3

TEKS 3B, 3C, 15B, 24B, 26A

# Big Business and Labor

## MAIN IDEA

The expansion of industry resulted in the growth of big business and prompted laborers to form unions to better their lives.

## WHY IT MATTERS NOW

Many of the strategies used today in industry and in the labor movement, such as consolidation and the strike, have their origins in the late 19th century.

## Terms & Names

- Andrew Carnegie
- laissez-faire
- Social Darwinism
- vertical and horizontal integration
- John D. Rockefeller
- Sherman Antitrust Act
- Samuel Gompers
- American Federation of Labor (AFL)
- Eugene V. Debs
- Industrial Workers of the World (IWW)
- Mary Harris Jones

## One American's Story

### hmsocialstudies.com TAKING NOTES

Use the graphic organizer online to take notes on the achievements and setbacks of the labor movement between 1876 and 1911.

Born in Scotland to penniless parents, **Andrew Carnegie** came to this country in 1848, at age 12. Six years later, he worked his way up to become private secretary to the local superintendent of the Pennsylvania Railroad. One morning, Carnegie single-handedly relayed messages that unsnarled a tangle of freight and passenger trains. His boss, Thomas A. Scott, rewarded Carnegie by giving him a chance to buy stock. Carnegie's mother mortgaged the family home to make the purchase possible. Soon Carnegie received his first dividend.



▲ Nineteenth-century industrialist Andrew Carnegie gave money to build public libraries, hoping to help others write their own rags-to-riches stories.

### A PERSONAL VOICE ANDREW CARNEGIE

"One morning a white envelope was lying upon my desk, addressed in a big John Hancock hand, to 'Andrew Carnegie, Esquire.' . . . All it contained was a check for ten dollars upon the Gold Exchange Bank of New York. I shall remember that check as long as I live. . . . It gave me the first penny of revenue from capital—something that I had not worked for with the sweat of my brow. 'Eureka!' I cried. 'Here's the goose that lays the golden eggs.'"

—Autobiography of Andrew Carnegie

Andrew Carnegie was one of the first industrial moguls to make his own fortune. His rise from rags to riches, along with his passion for supporting charities, made him a model of the American success story.

## 1 A Favorable Climate

Many people in the late 1800s believed that a strong work ethic made one successful. The business world welcomed entrepreneurs—risk takers who use their money and talents to launch new ventures. During this time period, social philosophers argued that this new definition of success could be explained scientifically.

A New Industrial Age 241

## OBJECTIVES

- 1 Identify theories and practices that created a favorable climate for entrepreneurs and the development of big business.
- 2 Explain how economic development affected society.
- 3 Summarize the emergence and growth of unions.
- 4 Explain the violent reactions of industry and government to union strikes.

TEKS 3B analyze economic issues such as industrialization, the growth of railroads, the growth of labor unions, farm issues, the cattle industry boom, the rise of entrepreneurship, free enterprise, and the pros and cons of big business 3C analyze social issues affecting women, minorities, children, immigrants, urbanization, the Social Gospel, and philanthropy of industrialists 15B describe the changing relationship between the federal government and private business, including the costs and benefits of laissez-faire, anti-trust acts, the Interstate Commerce Act, and the Pure Food and Drug Act 24B evaluate the contributions of significant political and social leaders in the United States such as Andrew Carnegie, Thurgood Marshall, Billy Graham, Barry Goldwater, Sandra Day O'Connor, and Hillary Clinton 26A explain actions taken by people to expand economic opportunities and political rights, including those for racial, ethnic, and religious minorities as well as women, in American society

## Focus & Motivate

Ask students what personal qualities they think a person would need to become a billionaire in today's world.

## Instruct

### Instruct: Objective 1

#### A Favorable Climate

- What methods did entrepreneurs use to control their competition?
- What does the theory of Social Darwinism advocate?

📖 In-Depth Resources: Unit 2  
• Guided Reading, p. 22

## PROGRAM RESOURCES

- 📖 In-Depth Resources: Unit 2
  - Guided Reading, p. 22
  - Skillbuilder Practice: Creating Oral Presentations, p. 24
  - Reteaching Activity, p. 27
  - Primary Sources, pp. 31–33
  - American Lives: Andrew Carnegie, p. 37; Mary Harris "Mother" Jones, p. 38
- 📖 Guided Reading Workbook
  - Section 3

- 📖 Spanish/English Guided Reading Workbook
  - Section 3
- 📖 Access for Students Acquiring English/ESL
  - Guided Reading (Spanish), p. 88
  - Skillbuilder Practice, p. 89
  - Geography Application, pp. 90–91
- 📖 Formal Assessment
  - Section Quiz, p. 120

## INTEGRATED TECHNOLOGY

- 📺 Critical Thinking Transp. CT48
  - Horizontal Consolidation and Vertical Integration
- 📺 Humanities Transp. HT35
  - The Bosses of the Senate

📖 hmsocialstudies.com

## TEST-TAKING RESOURCES

- 📖 Strategies for Test Preparation
- 📺 Test Practice Transparencies TT54
- 📖 Online Test Practice



Tracing Themes

ECONOMIC OPPORTUNITY

Social Darwinism

In the late 19th century, the theory of Social Darwinism maintained that societies evolved by a natural process through which most fit members survived and demonstrated their fitness by accumulating property, wealth, and social status. The prevailing climate of optimism suggested that with perseverance, hard work, and intelligence, anyone might rise from humble beginnings to good fortune.

More About . . .

Andrew Carnegie

Carnegie began investing money when he worked for the Pennsylvania Railroad. At the age of 24, Carnegie took over the job of superintendent. In a famous essay, Carnegie spelled out his beliefs about money, the doctrine that came to be called the Gospel of Wealth. Carnegie said that riches brought the responsibility of helping others. According to Carnegie, “. . . a man who dies rich dies disgraced.”

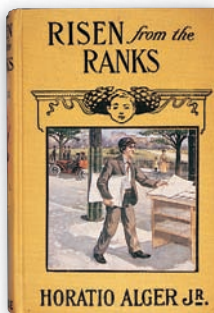
- In-Depth Resources: Unit 2
- American Lives: Andrew Carnegie, p. 37
- Primary Sources: “Wealth and Its Uses,” p. 31

Instruct: Objective 2

Fewer Control More/Government and Business

- What was the difference between vertical integration and horizontal integration?
- How did people view industrialists?
- Why did the nation’s business boom bypass the South?

Popular literature promoted the possibility of rags-to-riches success for anyone who was virtuous and hard-working.



**BELIEF IN FREE MARKETS** American entrepreneurs were working within free enterprise capitalism. Free enterprise is an economic system in which private businesses run most industries. Competition determines prices and wages.

By the late 1800s most business leaders believed in **laissez-faire** (le-say-FER) capitalism. The term laissez-faire is French for “to let do.” Laissez-faire capitalism allows companies to conduct business without intervention by the government. Business leaders believed that government regulation would destroy individual self-reliance, reduce profits, and harm the economy.

**SOCIAL DARWINISM** Americans understood that there were inequalities in the free enterprise system. But many thinkers believed that inequalities were part of the social order. To explain why some people prospered and others did not, economists, social philosophers, and business leaders embraced the philosophy of **Social Darwinism**. This philosophy adapted the ideas of the British naturalist Charles Darwin and applied them to human society.

Darwin had studied plants and animals and concluded that members of a species compete for survival. Those best adapted to their environment thrive and pass their traits to the next generation. Less-suited members gradually die out. Darwin called this process natural selection.

The English philosopher Herbert Spencer used Darwin’s biological theories to explain the evolution of human society. Economists found in Social Darwinism a way to justify the doctrine of laissez-faire. Stronger people, businesses, and nations would prosper. Weaker ones would fail. According to Social Darwinists, the market should not be regulated because no one had the right to interfere with this process.

**MONOPOLIES AND TRUSTS** Although some business owners endorsed the “natural law” in theory, in practice most entrepreneurs did everything they could to control the competition that threatened the growth of their business empires. To gain dominance, some companies pursued mergers. A merger usually occurred when one corporation bought out the stock of another. A firm that bought out all its competitors could achieve a monopoly, or complete control over its industry’s production, wages, and prices.

Some corporations took a different approach to mergers: they joined with competing companies in trust agreements. Participants in a trust turned their stock over to a group of trustees—people who ran the separate companies as one large corporation. In return, the companies were entitled to dividends on profits earned by the trust. Trusts were not legal mergers, but that did not prevent them from forming. **A**



This 1900 cartoon, captioned “What a funny little government!” is a commentary on the power of the Standard Oil empire. John D. Rockefeller holds the White House in his hand.

Fewer Control More 2

As businesses grew ever larger in the late 1800s, many corporate leaders amassed staggering fortunes. Some viewed these individuals as “robber barons” who profited unfairly while others saw them as “captains of industry.”

**CARNEGIE AND STEEL** By 1865, Carnegie was so busy managing the money he had earned in dividends that he happily left his job at the Pennsylvania Railroad. He entered the steel business in 1873 after touring a British steel mill and witnessing the awesome spectacle of the Bessemer process in action. By 1899, the Carnegie Steel

MAIN IDEA

Summarizing

**A** What strategies enabled big businesses to eliminate competition?

**A. Answer** Big businesses formed partnerships to create monopolies. They merged small companies into large corporations. They aimed for total control of an industry, so that they could fix prices and wages to their advantage.

ACTIVITY SKILLBUILDER LESSON

Creating Oral Presentations

**Explaining the Skill** To create an oral presentation, first determine the topic to be presented. Then gather and organize the information. Think about the audience that will hear the presentation and determine what information will be most interesting to the audience. Organize that information in a clear and orderly way. Practice your speech before presenting it.

**Applying the Skill** Have pairs of students tape record an interview of a famous business person from history, such as Alger, Rockefeller, Morgan, or Carnegie. The team should decide what the person would say about how to make money. One student will be the business person and the other a reporter. Then make a tape of the interview. Present the oral presentations to the class.

- In-Depth Resources: Unit 2
- Skillbuilder Practice: Creating Oral Presentations, p. 24

Company manufactured more steel than all the factories in Great Britain.

Carnegie's success was due in part to management practices that he initiated and that soon became widespread. First, he continually searched for ways to make better products more cheaply. He incorporated new machinery and techniques, such as accounting systems that enabled him to track precise costs. Second, he attracted talented people by offering them stock in the company, and he encouraged competition among his assistants.

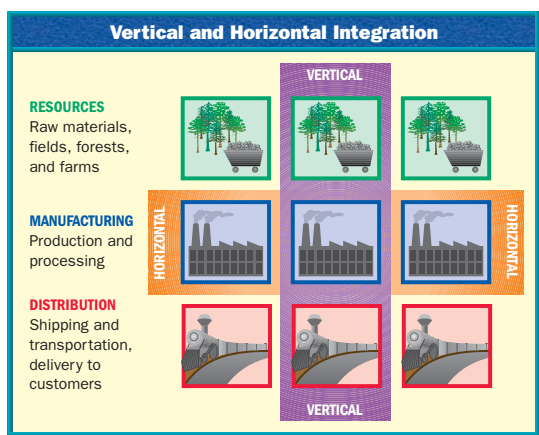
In addition to improving his own manufacturing operation, Carnegie attempted to control as much of the steel industry as he could. He did this mainly by **vertical integration**, a process in which he bought out his suppliers— coal fields and iron mines, ore freighters, and railroad lines—in order to control the raw materials and transportation systems. Carnegie also attempted to buy out competing steel producers. In this process, known as **horizontal integration**, companies producing similar products merge. Having gained control over his suppliers and having limited his competition, Carnegie controlled almost the entire steel industry. By the time he sold his business in 1901, Carnegie's companies produced by far the largest portion of the nation's steel. **B**

**ROCKEFELLER AND OIL** John D. Rockefeller entered the oil business in 1863 and proved himself to be a superb business leader. His company, Standard Oil, began as a refinery. Using vertical integration, Rockefeller acquired companies that supplied his business. He bought barrel factories, oil fields, oil-storage facilities, pipelines, and railroad cars. He also practiced horizontal integration by taking over competing companies.

In 1870 Rockefeller's company processed two or three percent of the country's crude oil. Within a decade, it controlled 90 percent of the refining business. Rockefeller reaped huge profits by paying his employees extremely low wages and driving his competitors out of business by selling his oil at a lower price than it cost to produce it. Then, when he controlled the market, he hiked prices far above original levels.

**A MIXED LEGACY** Alarmed at the tactics of industrialists, some Americans came to view them as robber barons. Critics argued that these tycoons profited unfairly by squeezing out competitors and using other tough tactics. However, admirers credited these entrepreneurs with using their business skills to make the American economy more productive and, in turn, stronger.

Industrialists were also philanthropists. Although Rockefeller kept most of his assets, he still gave away over \$500 million, establishing the Rockefeller Foundation, providing funds to found the University of Chicago, and creating a medical institute that helped find a cure for yellow fever. Andrew Carnegie donated about 90 percent of the wealth he accumulated during his lifetime; his fortune still supports the arts and learning today. "It will be a great mistake for the community to shoot the millionaires," he said, "for they are the bees that make the most honey, and contribute most to the hive even after they have gorged themselves full." **C**



**VIDEO**  
Great Minds in Business:  
Andrew Carnegie  
[hmhsocialstudies.com](http://hmhsocialstudies.com)

**HISTORY from VISUALS**

**Interpreting a Chart**

Make sure students understand that the vertical integration column depicts ownership of resources, manufacturing, and distribution, while the horizontal row depicts a merging of three manufacturers of similar products.

**Extension** Ask students to think about the business climate of today. Give some examples of horizontal or vertical integration. (*horizontal: airlines, communications companies; vertical: agribusiness*)

Critical Thinking Transparencies CT48  
· Horizontal Consolidation and Vertical Integration

**More About . . .**

**John D. Rockefeller**

Tell students that Rockefeller's mother started her son on his first business enterprise when he was just seven years old: raising turkeys. Later, he hoed potatoes for 37 cents a day. He lent his savings back to the farmer and quickly found that "it was a good thing to let money be my slave and not make myself a slave to money." Have students compare the attitudes of Rockefeller and his father toward their children.

In-Depth Resources: Unit 2  
· Primary Source: *The History of Standard Oil Company*, p. 32  
 Humanities Transparencies HT35  
· The Bosses of the Senate

**DIFFERENTIATING INSTRUCTION LESS PROFICIENT READERS**



**Clarifying** **ELPS** 1C, 4F

To help students understand vertical integration and horizontal integration, have them chart the steps of the steel-making process and who owns the means to accomplish these steps in a vertical integration and in a horizontal integration. Then ask students to think about the advantages of having vertical integration as opposed to horizontal integration. How does vertical integration affect competition? Charts might look like the one at the right.

Production Process	Horizontal Integration	Vertical Integration
Raw materials: Coal and iron mines	Owner X	Carnegie owns
Manufacturing the steel: steel mills	Owner Y	Carnegie owns
Transportation to and from mill: railroads	Owner Z	Carnegie owns



## Connections Across Time

1890 AND 1999

The Antitrust Case  
Against Microsoft

In November 1999, a federal judge declared that Microsoft, a leading computer technology company, had violated the Sherman Antitrust Act by gaining a monopoly hold over the computer industry and using its power to unfairly crush competition.


The judge sanctioned the U.S. government's proposal to break Microsoft in two—one company that would sell its Windows operating system and one that would sell everything else. Microsoft, which has claimed from the beginning that it has acted competitively but not unfairly, vowed to fight on in the courts.

In November 2001 the Department of Justice and Microsoft reached a settlement that would impose new restrictions on Microsoft while leaving the company intact. In June 2004 the U.S. appeals court approved the settlement.

## Instruct: Objective 3

Labor Unions Emerge /  
Union Movements Diverge

- What conditions did many factory workers face in the late 19th century?
- What did labor unions advocate?
- What different types of unions emerged during the nation's industrial boom?

 In-Depth Resources: Unit 2  
• Guided Reading, p. 22

## Government and Business 2

For a time, the government was content to allow the laissez-faire system to continue unregulated for fear of harming the economy. However, as corporations expanded, the government grew uneasy about the power of these giants. While industrialization was raising the standard of living for all Americans, income inequality was increasing as well.

**SHERMAN ANTITRUST ACT** In 1890 Congress passed the **Sherman Antitrust Act**. This act made it illegal to form a trust that interfered with free trade. It also prohibited monopolies and activities that hindered competition.

Prosecuting companies under the Sherman Act was not easy, however, because the act didn't clearly define terms such as *trust*. In addition, if firms such as Standard Oil felt pressure from the government, they simply reorganized into single corporations. The Supreme Court threw out seven of the eight cases the federal government brought against trusts. Eventually, the government stopped trying to enforce the Sherman act, and the consolidation of businesses continued.

**BUSINESS BOOM BYPASSES THE SOUTH** Industrial growth concentrated in the North, where natural and urban resources were plentiful. The South was still trying to recover from the Civil War, hindered by a lack of capital—money for investment. After the war, people were unwilling to invest in risky ventures. Northern businesses already owned 90 percent of the stock in the most profitable Southern enterprise, the railroads, thereby keeping the South in a stranglehold. The South remained mostly agricultural, with farmers at the mercy of railroad rates. Entrepreneurs suffered not only from excessive transportation costs, but also from high tariffs on raw materials and imported goods, and from a lack of skilled workers. The post-Reconstruction South seemed to have no way out of economic stagnation. However, growth in forestry and mining, and in the tobacco, furniture, and textile industries, offered hope. **D**

In this photograph, taken by Lewis Hine in 1912, a young sweatshop laborer in New York City carries piecework home.



244 CHAPTER 6

## MAIN IDEA

## Synthesizing

**D** How did economic factors limit industrialization in the South?

**D. Answer**  
The South had a devastated economy from the Civil War. It was at the mercy of Northern railroad companies for transporting goods to markets. It also paid added costs for raw materials due to high tariffs.

## Labor Unions Emerge 3

As business leaders merged and consolidated their forces, it seemed necessary for workers to do the same. Although Northern wages were generally higher than Southern wages, exploitation and unsafe working conditions drew workers together across regions in a nationwide labor movement. Laborers—skilled and unskilled, female and male, black and white—joined together in unions to try to improve their lot.

**LONG HOURS AND DANGER** One of the largest employers, the steel mills, often demanded a seven-day workweek. Seamstresses, like factory workers in most industries, worked 12 or more hours a day, six days a week. Employees were not entitled to vacation, sick leave, unemployment compensation, or reimbursement for injuries suffered on the job.

Yet injuries were common. In dirty, poorly ventilated factories, workers had to perform repetitive, mind-dulling tasks, sometimes with dangerous or faulty equipment. In 1882, an average of 675 laborers were killed in work-related accidents each week. In addition, wages were so low that most families could not survive unless everyone held a job. Between 1890 and 1910, for example, the number of women working for wages

## DIFFERENTIATING INSTRUCTION


## GIFTED AND TALENTED

## Researching Working Conditions

Have students research working conditions in the late 1800s, using books and Internet sites. Direct students to find at least three quotations from workers in different industries that describe some aspect of their workdays. Students should copy the quotes, not to exceed one or two paragraphs, and document their sources with the title, author, and date of the book or the full Web site address and its supporting organization.

Allow students to read their quotations to the class.

For particularly vivid quotes, interested students might consider using costumes or props to dramatize their reading. A number of students could develop a “Reader’s Theatre” production based on dramatic readings of their quotations.

 Integrated Assessment  
• Rubric 3

doubled, from 4 million to more than 8 million. Twenty percent of the boys and 10 percent of the girls under age 15—some as young as five years old—also held full-time jobs. With little time or energy left for school, child laborers forfeited their futures to help their families make ends meet.

In sweatshops, or workshops in tenements rather than in factories, workers had little choice but to put up with the conditions. Sweatshop employment, which was tedious and required few skills, was often the only avenue open to women and children. Jacob Riis described the conditions faced by “sweaters.”

**A PERSONAL VOICE** JACOB RIIS

“The bulk of the sweater’s work is done in the tenements, which the law that regulates factory labor does not reach. . . . In [them] the child works unchallenged from the day he is old enough to pull a thread. There is no such thing as a dinner hour; men and women eat while they work, and the ‘day’ is lengthened at both ends far into the night.”

—How the Other Half Lives

Not surprisingly, sweatshop jobs paid the lowest wages—often as little as 27 cents for a child’s 14-hour day. In 1899, women earned an average of \$267 a year, nearly half of men’s average pay of \$498. The very next year Andrew Carnegie made \$23 million—with no income tax.

**EARLY LABOR ORGANIZING** Skilled workers had formed small, local unions since the late 1700s. The first large-scale national organization of laborers, the National Labor Union (NLU), was formed in 1866 by ironworker William H. Sylvis. The refusal of some NLU local chapters to admit African Americans led to the creation of the Colored National Labor Union (CNLU). Nevertheless, NLU membership grew to 640,000. In 1868, the NLU persuaded Congress to legalize an eight-hour day for government workers. **E**

NLU organizers concentrated on linking existing local unions. In 1869, Uriah Stephens focused his attention on individual workers and organized the Noble Order of the Knights of Labor. Its motto was “An injury to one is the concern of all.” Membership in the Knights of Labor was officially open to all workers, regardless of race, gender, or degree of skill. Like the NLU, the Knights supported an eight-hour workday and advocated “equal pay for equal work” by men and women. They saw strikes, or refusals to work, as a last resort and instead advocated arbitration. At its height in 1886, the Knights of Labor had about 700,000 members. Although the Knights declined after the failure of a series of strikes, other unions continued to organize.

**E. Answer**  
Poor working conditions and low wages forced workers to organize into unions to demand fair treatment.

**MAIN IDEA**

**Analyzing Issues**

**E** How did industrial working conditions contribute to the growth of the labor movement?

**Vocabulary**

**arbitration:** a method of settling disputes in which both sides submit their differences to a mutually approved judge

**3 Union Movements Diverge**

As labor activism spread, it diversified. Two major types of unions made great gains under forceful leaders.

**CRAFT UNIONISM** One form of labor organization was craft unionism, which included skilled workers from one or more trades. Jewish immigrant **Samuel Gompers** led the Cigar Makers’ International Union to join other craft unions in 1886. The **American Federation of Labor (AFL)**,

**HISTORICAL SPOTLIGHT**

**AFRICAN AMERICANS AND THE LABOR MOVEMENT**

Angered by their exclusion from the NLU, African American laborers formed the Colored National Labor Union (CNLU) in 1869. Led by Isaac Meyers, a caulker from Baltimore, the CNLU emphasized cooperation between management and labor and the importance of political reform.

The CNLU disbanded in the early 1870s, but many African-American laborers found a home in the Knights of Labor, the first union to welcome blacks and whites alike. The Great Strike of 1877 brought whites and African Americans together, but the labor movement remained largely divided along racial lines.

Management often hired African Americans as strikebreakers, which intensified white unions’ resistance to accepting blacks. African Americans continued to organize on their own, but discrimination and their small numbers relative to white unions hurt black unions’ effectiveness.

**More About . . .**

**Women and Children at Work**

The number of women and children in the work force doubled between 1870 and 1890 to 4 million women workers and 1.5 million child workers (ages 10 to 15). The death rate for female workers was twice that of other workers. Women were the first to be laid off, and often endured abuse from male coworkers and bosses. Children often earned only pennies, but at best they received about half the pay of a male adult worker.

**HISTORICAL SPOTLIGHT**

**African Americans and the Labor Environment**

Discuss with students why the CNLU might have preferred to negotiate rather than strike. (Because its membership was small, strikes might not have been effective.)

**More About . . .**

**Samuel Gompers**

With the exception of 1895, Samuel Gompers (1850–1924) remained president of the AFL until his death. He became the first registered member of the Cigar Makers’ International Union at age 14, and continued to work in cigar shops for 20 years, even after he became active in union activities.

**DIFFERENTIATING INSTRUCTION LESS PROFICIENT READERS**

**Summarizing** **ELPS** 4D, 4G

On the board, draw the simple chart shown here. Tell students their task is to choose a union to join. As they read about unions on pages 244–246, ask them to take turns filling in the name and membership of each union. When they decide to join a union, they may add their own name to the chart. Ask students to explain why their chosen union will help them.

Union	Characteristics	Student Members
NLU		
CNLU		
Knights of Labor		
AFL		
ARU		
IWW		



## More About . . .

**The Knights of Labor**

The Noble Order of the Knights of Labor began as a secret society of tailors. It was vertically organized, including all workers in a given industry, regardless of skill or trade. Although it accepted African Americans, the organization supported the Chinese Exclusion Act of 1882 because its members feared competition from Chinese workers. When Terence Powderly took office in 1879, the Knights flourished, growing to 700,000. Powderly strove for better working conditions—an eight-hour day, the abolition of child labor, equal pay for equal work, and the graduated income tax.



▲ In New York City's Union Square in 1914, IWW members protest violence against striking coal miners in Colorado.

*“The strike is the weapon of the oppressed.”*

EUGENE V. DEBS

with Gompers as its president, focused on collective bargaining, or negotiation between representatives of labor and management, to reach written agreements on wages, hours, and working conditions. Unlike the Knights of Labor, the AFL used strikes as a major tactic. Successful strikes helped the AFL win higher wages and shorter workweeks. Between 1890 and 1915, the average weekly wages in unionized industries rose from \$17.50 to \$24, and the average workweek fell from almost 54.5 hours to just under 49 hours.

**INDUSTRIAL UNIONISM** Some labor leaders felt that unions should include all laborers—skilled and unskilled—in a specific industry. This concept captured the imagination of **Eugene V. Debs**, who attempted to form such an industrial union—the American Railway Union (ARU). Most of the new union's members were unskilled and semiskilled laborers, but skilled engineers and firemen joined too. In 1894, the new union won a strike for higher wages. Within two months, its membership climbed to 150,000, dwarfing the 90,000 enrolled in the four skilled railroad brotherhoods. Though the ARU, like the Knights of Labor, never recovered after the failure of a major strike, it added to the momentum of union organizing. **F**

**SOCIALISM AND THE IWW** In an attempt to solve the problems faced by workers, Eugene Debs and some other labor activists eventually turned to socialism, an economic and political system based on government control of business and property and equal distribution of wealth. Socialism, carried to its extreme form—communism, as advocated by the German philosopher Karl Marx—would result in the overthrow of the capitalist system. Most socialists in late-19th-century America drew back from this goal, however, and worked within the labor movement to achieve better conditions for workers. In 1905, a group of radical unionists and socialists in Chicago organized the **Industrial Workers of the World (IWW)**, or the Wobblies. Headed by William “Big Bill” Haywood, the Wobblies included miners, lumberers, and cannery and dock workers. Unlike the ARU, the IWW welcomed African Americans, but membership never topped 100,000. Its only major strike victory occurred in 1912. Yet the Wobblies, like other industrial unions, gave dignity and a sense of solidarity to unskilled workers.

**OTHER LABOR ACTIVISM IN THE WEST** In April 1903, about 1,000 Japanese and Mexican workers organized a successful strike in the sugar-beet fields of Ventura County, California. They formed the Sugar Beet and Farm Laborers' Union of Oxnard. In Wyoming, the State Federation of Labor supported a union of Chinese and Japanese miners who sought the same wages and treatment as other union miners. These small, independent unions increased both the overall strength of the labor movement and the tension between labor and management.

**F. Answer** A craft union included skilled workers from many industries. An industrial union included skilled and unskilled workers from a specific industry.

**MAIN IDEA****Contrasting**

**F** How did craft unions and industrial unions differ?

## More About . . .

**The Sugar Beet and Farm Laborers' Union of Oxnard**

When the Sugar Beet and Farm Laborers' Union of Oxnard applied to the AFL for a charter, Samuel Gompers informed the union secretary that Chinese and Japanese workers must be excluded from membership. The farm laborers rejected that condition.

📖 In-Depth Resources: Unit 2  
· Primary Sources: Labor Poster, p. 33

## DIFFERENTIATING INSTRUCTION

## GIFTED AND TALENTED

**Joe Hill and the Wobblies**

Interested students may wish to investigate the legacy of idealistic social activism left by the Wobblies. Although it had relatively few members, the IWW spoke out loudly for the underdogs of the labor movement—women, ethnic minorities, and unskilled laborers. Suggest that they begin by researching the life of Joe Hill, who was immortalized in a ballad popular with labor groups. Their research might take one of several forms:

- written character sketch conveying both factual detail and anecdotal information
- visual montage of sketches based on their findings about Hill's life and activities
- eulogy for Joe Hill commemorating his contributions and drawing on details of his life
- recording of the ballad about Joe Hill, with a voice-over introduction

## 4 Strikes Turn Violent

Industry and government responded forcefully to union activity, which they saw as a threat to the entire capitalist system.

**THE GREAT STRIKE OF 1877** In July 1877, workers for the Baltimore and Ohio Railroad (B&O) struck to protest their second wage cut in two months. The work stoppage spread to other lines. Most freight and even some passenger traffic, covering over 50,000 miles, was stopped for more than a week. After several state governors asked President Rutherford B. Hayes to intervene, saying that the strikers were impeding interstate commerce, federal troops ended the strike.

**THE HAYMARKET AFFAIR** Encouraged by the impact of the 1877 strike, labor leaders continued to press for change. On the evening of May 4, 1886, 3,000 people gathered at Chicago's Haymarket Square to protest police brutality—a striker had been killed and several had been wounded at the McCormick Harvester plant the day before. Rain began to fall at about 10 o'clock, and the crowd was dispersing when police arrived. Then someone tossed a bomb into the police line. Police fired on the workers; seven police officers and several workers died in the chaos that followed. No one ever learned who threw the bomb, but the three speakers at the demonstration and five other radicals were charged with inciting a riot. All eight were convicted; four were hanged and one committed suicide in prison. After Haymarket, the public began to turn against the labor movement. **G**

**THE HOMESTEAD STRIKE** Despite the violence and rising public anger, workers continued to strike. The writer Hamlin Garland described conditions at the Carnegie Steel Company's Homestead plant in Pennsylvania.

### A PERSONAL VOICE HAMLIN GARLAND

“Everywhere . . . groups of pale, lean men slouched in faded garments, grimy with the soot and grease of the mills. . . . A roar as of a hundred lions, a thunder as of cannons, . . . jarring clang of falling iron. . . .”

—quoted in *McClure's Magazine*

The steelworkers finally called a strike on June 29, 1892, after the company president, Henry Clay Frick, announced his plan to cut wages. Frick hired armed

### MAIN IDEA

#### Analyzing Causes

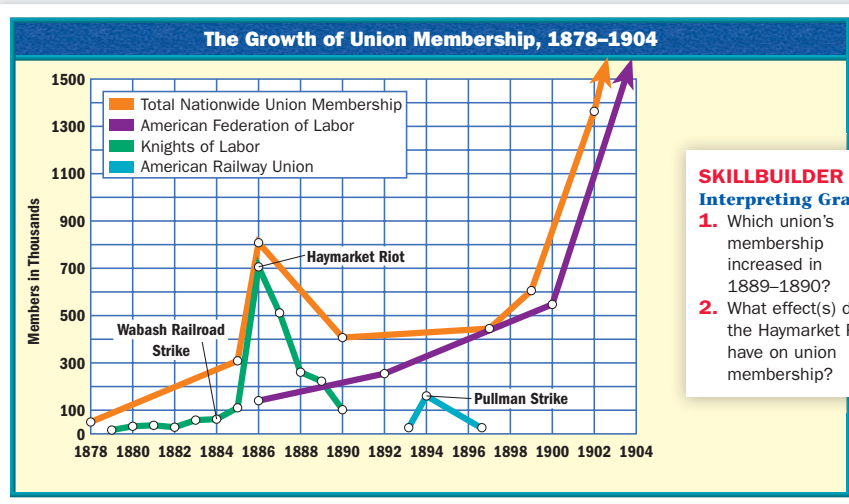
**G** How did the 1877 strike and Haymarket cause the public to resent the labor movement?

#### G. Answer

The public began to associate labor activists with violence and danger.

#### Skillbuilder Answers

1. The American Federation of Labor
2. Membership in the Knights of Labor declined sharply.



### SKILLBUILDER Interpreting Graphs

1. Which union's membership increased in 1889–1890?
2. What effect(s) did the Haymarket Riot have on union membership?

*A New Industrial Age* 247

## Instruct: Objective 4 Strikes Turn Violent

- What were the reasons for the various strikes during the late 19th century?
- What role did women play in the labor movement?
- How did management and the government react to union activity?

In-Depth Resources: Unit 2  
• Guided Reading, p. 22

### More About . . .

#### The Haymarket Affair

The three surviving men of the eight convicted of the Haymarket bombings were pardoned by the governor of Illinois, John Peter Altgeld. He justified the pardon because he believed that the accused had not received a fair trial. Altgeld was a staunch supporter of labor, and in 1894, he opposed President Grover Cleveland's decision to send federal troops into Pullman to stop striking railroad workers.

## HISTORY from VISUALS

### Interpreting the Graph

Have students trace the lines showing the development of each union. Ask them when AFL membership and total union membership in the nation were essentially the same. (*about 1897*)

**Extension** Have students research the membership of the AFL today—now known as the AFL-CIO. (*About 13 million as of 2001*) You might also ask them to identify other influential unions, such as the Teamsters Union.

## ACTIVITY COOPERATIVE LEARNING

### Reporting on Union Goals **ELPS** 3E, 3F

**Class Time** 45 minutes

**Task** Creating an oral presentation about the history and goals of a specific union

**Purpose** To help students understand the causes and effects of union activity

**Directions** Each group of students should research the history of a particular union, for example: electrical workers, plumbers, building trades, steel workers, mine workers, and agricultural workers. Groups should identify the founder, reason for founding, the main goals established by the union, and which goals were met and when. They should then create a presentation for the class accompanied by visual aids, such as time lines or charts.

Integrated Assessment  
• Rubric 3

## BLOCK SCHEDULING



Tracing Themes

WOMEN AND POLITICAL POWER


Women in the Labor Movement

Women from all backgrounds lent their hands to the nation's labor movement of the late 19th and early 20th centuries. Mary Elisabeth Dreier headed the Women's Trade Union League from 1906 to 1914. It was a coalition of women workers and middle-to-upper-class women reformers who sought to organize working women and educate the public about labor conditions. Women labor reformers also hailed from the lower ranks of society. Mary Anderson, for example, immigrated to the United States from Sweden, where she worked as a dishwasher and stitcher at a shoe factory before becoming a prominent activist.

KEY PLAYERS

Eugene Debs and Mother Jones

Ask students to consider what might have driven Jones to become the "Mother" of union activism. Have them also write a paragraph describing the relationship between Debs's labor activism and his belief in socialism.

 In-Depth Resources: Unit 2  
 · American Lives: Mary Harris "Mother" Jones, p. 38

guards from the Pinkerton Detective Agency to protect the plant so that he could hire scabs, or strikebreakers, to keep it operating. In a pitched battle that left at least three detectives and nine workers dead, the steelworkers forced out the Pinkertons and kept the plant closed until the Pennsylvania National Guard arrived on July 12. The strike continued until November, but by then the union had lost much of its support and gave in to the company. It would take 45 years for steelworkers to mobilize once again.

**THE PULLMAN COMPANY STRIKE** Strikes continued in other industries, however. During the panic of 1893 and the economic depression that followed, the Pullman company laid off more than 3,000 of its 5,800 employees and cut the wages of the rest by 25 to 50 percent, without cutting the cost of its employee housing. After paying their rent, many workers took home less than \$6 a week. A strike was called in the spring of 1894, when the Pullman company failed to restore wages or decrease rents. Eugene Debs asked for arbitration, but Pullman refused to negotiate with the strikers. So the ARU began boycotting Pullman trains.

After Pullman hired strikebreakers, the strike turned violent, and President Grover Cleveland sent in federal troops. In the bitter aftermath, Debs was jailed. Pullman fired most of the strikers, and the railroads blacklisted many others, so they could never again get railroad jobs.

**WOMEN ORGANIZE** Although women were barred from many unions, they united behind powerful leaders to demand better working conditions, equal pay for equal work, and an end to child labor. Perhaps the most prominent organizer in the women's labor movement was **Mary Harris Jones**. Jones supported the Great Strike of 1877 and later organized for the United Mine Workers of America (UMW). She endured death threats and jail with the coal miners, who gave her the nickname Mother Jones. In 1903, to expose the cruelties of child labor, she led 80 mill children—many with hideous injuries—on a march to the home of President Theodore Roosevelt. Their crusade influenced the passage of child labor laws.

Other organizers also achieved significant gains for women. In 1909, Pauline Newman, just 16 years old, became the first female organizer of the International Ladies' Garment Workers' Union (ILGWU). A garment worker from the age of eight, Newman also supported

KEY PLAYERS



**EUGENE V. DEBS**  
1855–1926

Born in Indiana, Eugene V. Debs left home at the age of 14 to work for the railroads. In 1875 he helped organize a local lodge of the Brotherhood of Locomotive Firemen, and after attempts to unite the local railroad brotherhoods failed, Debs organized the American Railway Union.

While in prison following the Pullman strike in 1894, Debs read the works of Karl Marx and became increasingly disillusioned with capitalism. He became a spokesperson for the Socialist Party of America and was its candidate for president five times. In 1912, he won about 900,000 votes—an amazing 6 percent of the total.



**MOTHER JONES**  
1830–1930

Mary Harris "Mother" Jones was a native of Ireland who immigrated to North America as a child. She became involved in the American labor movement after receiving assistance from the Knights of Labor. According to a reporter who followed "the mother of the laboring class" on her children's march in 1903, "She fights their battles with a Mother's Love." Jones continued fighting until her death at age 100.

Jones was definitely not the kind of woman admired by industrialists. "God almighty made women," she declared, "and the Rockefeller gang of thieves made ladies."

ACTIVITY LINK TO MATHEMATICS

 BLOCK SCHEDULING

Comparing Men's and Women's Pay

Class Time 30 minutes

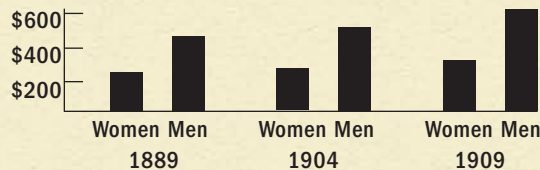
Task Charting the annual earnings for men and women for various years

Purpose To recognize the disparity in pay between men and women

Directions Have students make a bar graph showing the relative annual earnings of men and women. Have them use the figures at the right and research and add others, if desired.

- 1899: women \$267; men \$498
- 1909: women \$339; men \$631
- 1904: women \$289; men \$540

Students' bar graphs might look like this:



the “Uprising of the 20,000,” a 1909 seamstresses’ strike that won labor agreements and improved working conditions for some strikers.

The public could no longer ignore conditions in garment factories after a fire broke out at the Triangle Shirtwaist factory in New York City on March 25, 1911. The fire spread swiftly through the oil-soaked machines and piles of cloth, engulfing the eighth, ninth, and tenth floors. As workers attempted to flee, they discovered that the company had locked all but one of the exit doors to prevent theft. The unlocked door was blocked by fire. The factory had no sprinkler system, and the single fire escape collapsed almost immediately. In all, 146 women died; some were found huddled with their faces raised to a small window. Public outrage flared after a jury acquitted the factory owners of manslaughter. In response, the state of New York set up a task force to study factory working conditions. **H**

**MAIN IDEA****Summarizing**

**H** What factors made the Triangle Shirtwaist fire so lethal?

**H. Answer**

The factory had only one fire escape and no sprinklers. The factory was full of cloth and oil.

**MANAGEMENT AND GOVERNMENT PRESSURE UNIONS**

The more powerful the unions became, the more employers came to fear them. Management refused to recognize unions as representatives of the workers. Many employers forbade union meetings, fired union members, and forced new employees to sign “yellow-dog contracts,” swearing that they would not join a union.

Finally, industrial leaders, with the help of the courts, turned the Sherman Antitrust Act against labor. All a company had to do was say that a strike, picket line, or boycott would hurt interstate trade, and the state or federal government would issue an injunction against the labor action. Legal limitations made it more and more difficult for unions to be effective. Despite these pressures, workers—especially those in skilled jobs—continued to view unions as a powerful tool. By 1904, the AFL had about 1,700,000 members in its affiliated unions; by the eve of World War I, AFL membership would climb to over 2 million.



▲ The fire department's ladders reached only to the sixth floor, two floors below the burning Triangle Shirtwaist Company.

**More About . . .****The Triangle Fire**

The cause of the fire was never determined. Over 50 of the dead were killed jumping from the windows to the street. The rest died in the fire or were trampled to death. Public outrage over the tragedy led to major reforms in building and factory laws, especially those related to fire safety.

- Electronic Library of Primary Sources
- from “141 Die in Factory Fire”

**Assess & Reteach****SECTION 3 ASSESSMENT**

Ask students to discuss questions 3 and 4 and answer them as a group.

- Formal Assessment
- Section Quiz, p. 120

**SELF-ASSESSMENT**

Have students list three new facts that they learned and one misconception that was corrected as they read this section.

**RETEACH**

Draw a time line on the board and have students fill in major events in labor activism.

- In-Depth Resources: Unit 2
- Reteaching Activity, p. 27

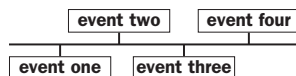
**SECTION 3****ASSESSMENT**

**1. TERMS & NAMES** For each term or name, write a sentence explaining its significance.

- Andrew Carnegie
- laissez-faire
- Social Darwinism
- vertical and horizontal integration
- John D. Rockefeller
- Sherman Antitrust Act
- Samuel Gompers
- American Federation of Labor (AFL)
- Eugene V. Debs
- Industrial Workers of the World (IWW)
- Mary Harris Jones

**MAIN IDEA****2. USING YOUR NOTES**

Make a time line of the notable achievements and setbacks of the labor movement between 1876 and 1911.



In what ways did strikes threaten industry?

**CRITICAL THINKING****3. EVALUATING LEADERSHIP**

Would you classify 19th century industrialists as robber barons or captains of industry? How does their philanthropy affect your opinion?

**Think About:**

- their tactics and strategies
- their contributions to the economy
- their attitude toward competition

**4. DRAWING CONCLUSIONS**

Does the life of Andrew Carnegie support or counter the philosophy of Social Darwinism? Explain.

**5. HYPOTHESIZING**

If the government had supported unions instead of management in the late 19th century, how might the lives of workers have been different?

**1. TERMS & NAMES**

Andrew Carnegie, p. 241  
laissez-faire, Social Darwinism, p. 242  
vertical and horizontal integration, p. 243  
John D. Rockefeller, p. 243  
Sherman Antitrust Act, p. 244  
Samuel Gompers, p. 245  
AFL, p. 245  
Eugene V. Debs, IWW, p. 246  
Mary Harris Jones, p. 248

**2. USING YOUR NOTES**

1866 NLU organized; 1869 KOL organized; 1869 CNLU organized; 1877 The Great Strike; 1886 The Haymarket Affair; 1886 AFL organized; 1892 steel strike; 1894 Pullman Strike; 1905 IWW organized; 1911 Triangle fire. Strikes threatened industry because they affected production and could lead to higher wages and shorter hours for employees

**3. EVALUATING LEADERSHIP**

Opinions should show understanding of differing perspectives of corporate leaders and note how philanthropy impacts their view. Industrialists were seen by critics as robber barons who profited unfairly by the hard work of others and by supporters as captains of industry who helped businesses grow and flourish.

**4. DRAWING CONCLUSIONS**

**Support**—Carnegie well-suited to his society; caused his success  
**Counter**—advantages beyond Carnegie's personal qualities

**5. HYPOTHESIZING**

Labor relations more peaceful; larger unions; higher wages, safer working conditions; lower profits



**TERMS & NAMES**

1. Thomas Alva Edison, p. 232
2. Alexander Graham Bell, p. 232
3. George M. Pullman, p. 238
4. transcontinental railroad, p. 237
5. Interstate Commerce Act, p. 239
6. Andrew Carnegie, p. 241
7. Sherman Antitrust Act, p. 244
8. Samuel Gompers, p. 245
9. AFL, p. 245
10. Mary Harris Jones, p. 248

**MAIN IDEAS**

1. Steel created demand for coal and iron ore; it was used extensively in the railroad, agriculture, food, and construction industries.
2. They opened up new jobs for women, drew people to the cities, and made jobs less backbreaking.
3. Railroad companies were very powerful and often corrupt.
4. Railroads had a great deal of political power and fought legal battles against regulation.
5. Free enterprise supported industrialization by allowing private businesses to grow and run industries, controlling wages and prices through competition.
6. The Southern economy and terrain had been devastated by the Civil War and had to be rebuilt. The South had less capital for investment.
7. Women were primarily barred from joining unions, but many, such as Mother Jones, rallied behind powerful leaders organizing strikes and protests to advocate for better pay and working conditions, as well as ending child labor.
8. Powerful business leaders fired union workers, forbade union meetings, or made workers sign agreements not to join a union. Sometimes the government intervened to stop strikers. Labor leaders also disagreed about who should be included in the union, the size of the group, or the goals.

**VISUAL SUMMARY**

**A NEW INDUSTRIAL AGE**

**LONG-TERM CAUSES**

- abundant natural resources
- harnessing of early power sources such as water and coal
- invention of the steam engine
- construction of roads, canals, and railroads in early 1800s

**IMMEDIATE CAUSES**

- expansion of railroads in late 1800s
- cheap labor supply provided by increasing immigration
- burst of technological innovation
- new management techniques and business strategies
- investment capital

**BIG BUSINESS BOOMS**



**IMMEDIATE EFFECTS**

- growth of large corporations
- new and plentiful manufactured goods
- poor working conditions in factories and sweatshops
- increased labor activism

**LONG-TERM EFFECTS**

- regional economies are linked
- labor movement wins shorter workweek

**TERMS & NAMES**

For each term or name below, write a sentence explaining its connection to the industrialization of the late 19th century.

- |                              |                                       |
|------------------------------|---------------------------------------|
| 1. Thomas Alva Edison        | 6. Andrew Carnegie                    |
| 2. Alexander Graham Bell     | 7. Sherman Antitrust Act              |
| 3. George M. Pullman         | 8. Samuel Gompers                     |
| 4. transcontinental railroad | 9. American Federation of Labor (AFL) |
| 5. Interstate Commerce Act   | 10. Mary Harris Jones                 |

**MAIN IDEAS**

Use your notes and the information in the chapter to answer the following questions.

**The Expansion of Industry** (pages 230–233)

1. How did the growth of the steel industry influence the development of other industries?
2. How did inventions and developments in the late 19th century change the way people worked?

**The Age of the Railroads** (pages 236–240)

3. Why did people, particularly farmers, demand regulation of the railroads in the late 19th century?
4. Why were attempts at railroad regulation often unsuccessful?

**Big Business and Labor** (pages 241–249)

5. How did the free enterprise system support industrialization?
6. Why did the South industrialize more slowly than the North did?
7. How did women organize to expand their economic opportunities during this period?
8. What factors limited the success of unions?

**CRITICAL THINKING**

1. **USING YOUR NOTES** In a chart like the one shown, list what you see as the overall costs and benefits of industrialization.

INDUSTRIALIZATION	
Costs	Benefits

2. **RECOGNIZING BIAS** In 1902 George Baehr, head of the Philadelphia and Reading Railway Company, said, “The rights and interests of the labor man will be protected and cared for not by the labor agitators but by the Christian men to whom God in his infinite wisdom has given the control of the property interests of the country.” What bias does this statement reveal? How does Baehr’s view reflect Social Darwinism?
3. **DEVELOPING HISTORICAL PERSPECTIVE** What were the costs and benefits of the laissez-faire doctrine? How does the government’s response to the laissez-faire doctrine represent the changing relationship between the federal government and private business?

**CRITICAL THINKING**

1. **Using Your Notes Costs:** Increased power of big business; corruption; labor-management conflicts; dangerous jobs; loss of creativity and skill in manual labor; Social Darwinism leads to discrimination. **Benefits:** Better transportation; faster communications; less isolation; economic opportunities for women; advances in construction.
2. **Recognizing Bias** Baehr’s statement reveals a bias that favors wealthy people and successful entrepreneurs. His view is typical of Social Darwinism, the belief that the wealthy and successful people are naturally better suited to have positions of power in society.
3. **Developing Historical Perspective** In laissez-faire capitalism, companies were allowed to run their businesses with no interference from the federal government. This meant there was no regulation and businesses made their own rules. This attitude helped many businesses become very successful, but at a cost. Businesses often exploited workers and tried to control the competition through monopolies and trusts.

Use the quotation below and your knowledge of U.S. history to answer question 1.

**“No man, however benevolent, liberal, and wise, can use a large fortune so that it will do half as much good in the world as it would if it were divided into moderate sums and in the hands of workmen who had earned it by industry and frugality.”**

—Rutherford B. Hayes, from *The Diary and Letters of Rutherford Birchard Hayes*

- Which of the following people could best be described by Rutherford B. Hayes’s words *benevolent, liberal, and a large fortune*?
  - A Thomas Edison
  - B Eugene V. Debs
  - C Charles Darwin
  - D Andrew Carnegie
- The American Federation of Labor (AFL) differed from the Knights of Labor in that the Knights of Labor focused on —
  - F collective bargaining and aggressive use of strikes.
  - G organizing only unskilled workers.
  - H arbitration and use of strikes as a last resort.
  - J winning a shorter workweek.

- How did the railroads both benefit from and contribute to the industrialization of the United States?
  - A The railroads needed government protection, and their development helped government grow.
  - B The railroads used new inventions and brought people to see the inventions.
  - C The railroads used steel and coal and delivered both to new markets.
  - D The railroads needed passengers, and passengers needed to get to new industries.
- In the 19th century, government attempts to regulate industry in the United States included the Interstate Commerce Act (1887) and the Sherman Antitrust Act (1890). What posed the biggest obstacle to enforcement of these laws?
  - F the business tactics of industrialists
  - G the use of vertical integration
  - H the rulings of the Supreme Court
  - J the theory of Social Darwinism

**TEST PRACTICE**

For additional test practice, go online for:  
 • Diagnostic tests • Tutorials

**INTERACT WITH HISTORY**

Recall the issues that you recorded in *myNotebook* as you read the chapter. Consider how knowledge of the effects of railroad expansion and business consolidation might influence one’s opinion of the Industrial Age. Then write a newspaper editorial about the Great Strike of 1877 (see page 247), supporting the position of either the railroad owners or the striking workers. Use *myWriteSmart* in your eBook to write your editorial.

**FOCUS ON WRITING**

Imagine you are a union leader in a factory. If your demands for better working conditions are not met, all of the employees will stop work and go on strike. Write a persuasive letter in which you urge your employer to adopt specific reforms to improve working conditions. Use *myWriteSmart* in your eBook to write your letter.

**COLLABORATIVE LEARNING**



In a small group read and discuss the feature on pages 234-235. Consider the following question: What are the qualities of effective leadership? Choose a political or social leader from the chapter and do library or Internet research to discover how he or she embodied those characteristics. Then make a poster describing your leader’s personal qualities and how they helped him or her to lead and inspire others. Include your own assessment of which qualities might have been most important in the success of your selected leader. Add an image of the leader to the poster and display it in your classroom.

TEXAS TEST PRACTICE

- The correct answer is letter D. Letter A is not correct because Edison was not known for being benevolent. Letter B is not correct because Debs did not have a large fortune. Letter C is not correct because Darwin was a philosopher and not characterized by the traits listed here.
- The correct answer is letter H. Letter F is not correct because the Knights of Labor did not support the aggressive use of strikes. Letter G is not correct because Knights organized both skilled and unskilled workers. Letter J is not correct because both groups wanted a shorter workweek.
- The correct answer is letter C. Letter A is not correct because growth of government does not contribute to industrialization. Letters B and D are not correct because the activities listed do not contribute to industrialization.
- The correct answer is letter H. Letters F, G, J are not correct because only the Supreme Court could block enforcement of the laws.

UNIT PROJECT

ERAS AND CHARACTERISTICS WEBPAGES

The Unit Project is introduced on page 198 of the student text.

Tips for Teaching

- Have students review pages 194–197 to determine that this chapter’s content fits within the “Industrialization and Urbanization” era.
- Redirect students’ attention to pages 192–193 and encourage students to review the chapter with these characteristics in mind and to add appropriate characteristics and supporting materials to their webpages.



Formal Assessment  
 • Chapter Test, Forms A, B, and C, pp. 121–132

**INTERACT WITH HISTORY**

**Rubric**

The editorial should . . .

- demonstrate the ability to evaluate both sides and form an opinion
- clearly state a position with either the owners or the workers
- present a set of supporting arguments for the position

**FOCUS ON WRITING**

**Rubric**

The persuasive letter should . . .

- elaborate a main idea with appropriate supporting evidence
- present a clear point of view
- use vivid and engaging language

**COLLABORATIVE LEARNING**

**Rubric**

The poster should . . .

- describe qualities of effective leadership
- describe how the chosen political or social leader demonstrates these qualities
- identify how the leader helped or inspired others



## END-OF-CHAPTER SKILL ACTIVITY

### Objectives

- To understand relative and absolute chronology
- To analyze information by sequencing
- To understand the relationships between events based on chronology

## Instruct

Share these tips with students as they read the passage.

1. Look at the dates provided. What is the time frame covered in this passage? Compare this time period with other events going on in the United States and the world at this time.
2. Read the title of the passage. What does this tell you about the topic of this sequence of events? Does it relate to one time period, one person, or one event? Does it relate to several of these items? Sequence of events can be related to one discovery or person or to several.
3. Look for the order of events. Note the length of time between events.
4. Look for relationships among events. Did one event cause another?

## End of Chapter Skill Activity

### Sequencing

#### DEFINING THE SKILL

**Chronological order** is the sequence of events in time. Chronology may be either relative or absolute. **Relative chronology** relates one event to another. This helps historians to see causes, effects, and other relationships between people, events, and time periods. **Absolute chronology** ties events to an exact time or date, pinpointing dates in one universal framework—the passage of time.

By **sequencing events** in chronological order you can gain greater and more accurate understanding of the relationships among them. You can even understand how a past event may influence the outcome of a pending event.

#### UNDERSTANDING THE SKILL

**STRATEGY: FOLLOW CHRONOLOGICAL ORDER** Think about the order in which things happen to better understand absolute and relative chronology. The following paragraph is about significant events in the life of Andrew Carnegie.

#### Carnegie and Steel

Andrew Carnegie lived a true rags-to-riches story. Born in **1** November, 1835 in Scotland to poor parents, Carnegie and his family immigrated to the United States in 1848 when he was **1** 12. In 1853, at age **1** 17, he took a job with the Pennsylvania Railroad. He quickly advanced and began investing in the iron, oil, railroad, and telegraph industries. He **2** soon founded his own company and rose to the top of the business.

Carnegie held down costs by using vertical integration, buying supplies in bulk, and producing items in large quantities. **2** By **1** 1890, the Carnegie Steel Company dominated the American steel industry. In **1** 1901 Carnegie sold the company to banker J.P. Morgan for \$480 million. **2** After retiring, Carnegie began to devote his time to philanthropy, or charity. **3** At the same time, he gave money to universities and built hundreds of public libraries.

- 1 Examine all text and visuals for specific dates.** Dates, times of the day, seasons of the year, and people's ages are helpful in determining the specific sequence of events, which is known as absolute chronology.
- 2 Look for clue words about time.** Clue words such as *by, in, after, first, last, before, next, then, soon, and finally* help indicate the general sequence of events, which is known as relative chronology.
- 3 Identify events that occurred at the same time.** Words such as *while, meanwhile, and during* signal the occurrence of simultaneous events.

251 SK1

## DIFFERENTIATING INSTRUCTION

### Understanding Vocabulary

**ELPS** 1F, 2C, 2D, 3D, 4C, 4E

Use linguistic accommodation to help students understand the following terms and concepts. Have beginning ELLs act out or draw the terms. Have intermediate ELLs restate the meanings. Have advanced ELLs use the words in sentences to show understanding. Have advanced high ELLs explain the terms to another student.

### Passage

*immigrated*: moved from one country to another to live

*industries*: parts of the economy that manufacture and produce goods with machines in factories

*vertical integration*: a way of growing business in which one company controls different parts of the manufacturing process by creating several different goods or services

*charity*: aid given to those in need

### Strategy, page SK2

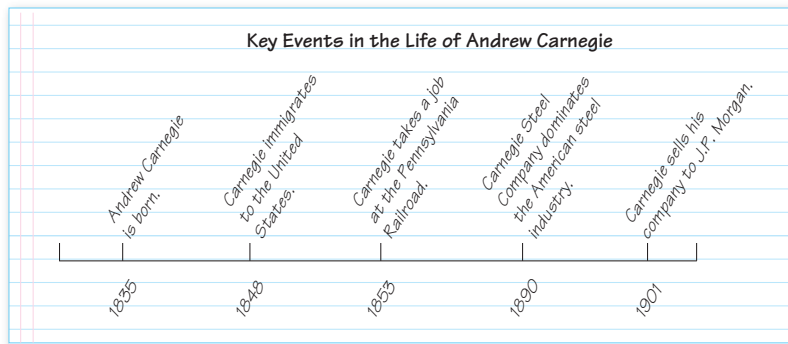
*sequence*: the order in which things occur

### Applying the Skill

*typewriter*: a machine for writing by which a person pushes keys on a keyboard to create print on paper

*inventions*: new products, methods, or processes

**STRATEGY: MAKE A TIME LINE** If the events in a passage are numerous and complex, organize them on a time line. The time line here lists the events from the passage above in chronological order. You can follow the sequence to find which events in Carnegie's life came first and which came next.



## APPLYING THE SKILL

Skim Chapter 6, Section 1, pages 232–233, “Inventions Promote Change,” to learn about inventors who changed the way people lived. Make a list of the important dates you find, starting with the year the typewriter was invented. Use absolute chronology and the model above to help you create your own time line of inventors arranged based on the year their inventions were introduced. Then use this information to write a short paragraph discussing the changes.

### 1. Look for specific dates in the text.

In what year was the typewriter invented? In what year was the telephone unveiled?

### 2. Look for clue words about time.

What clue words about time can you find in the passage? What do they tell you about the order of the events?

### 3. Identify events that occurred at the same time.

What two events happened in 1876? Why do you think both these things were happening at the same time? What does this tell you about the time period?

## Applying the Skill: Answers

- The typewriter was invented in 1867. The telephone was unveiled in 1876.
- You can find words such as *first*, *later*, *by*, *in*, and *previously*. These words indicate when something has occurred, or a relationship between two ideas, events, or concepts being discussed.
- In 1876, Thomas Edison established the world's first research laboratory and Alexander Bell and Thomas Watson unveiled the telephone. These events suggest that this was a period of significant discovery and innovation in the United States.

Students' time lines should include dates from the section such as: 1867, Christopher Sholes invents the typewriter; 1876, Thomas Alva Edison opens world's first research laboratory; 1876, Alexander Graham Bell and Thomas Watson unveil the telephone; 1880, the incandescent light bulb is patented.

Students' paragraphs should include these dates and discuss the impact on people, such as the effect the typewriter had on the percent of women who made up all office workers between 1870 and 1910.

## More About . . .

### Sequencing

Students might find it interesting to consider sequencing in various disciplines. In math, a sequence might involve a continuous series or ordered set of numbers. In science, it can relate to the order of DNA molecules or the order of atoms on a molecule. A sequence of music can involve a melody or pattern of harmony that is repeated successively. In a movie, a sequence refers to a series of related images that, taken together, show a complete unit of action. In history, sequence is used to show the order of events.

251 SK2