

CHAPTER 9

Section 2, 314-318

Guided Reading Activity 9-2

Name _____ Date _____ Class _____

Guided Reading Activity #2

Background: Identify the supporting details that each main idea. Use your textbook to supply the details that support or explain each main idea.

Main Idea: After the Civil War, railroad construction expanded dramatically, and by 1890 the United States boasted over 200,000 miles of track.

1. Detail: The railroad boom began in 1862 when President Lincoln signed the _____.

2. Detail: The _____ had four primary innovations known as the _____.

3. Detail: Because of a _____ in California, the Central Pacific Railroad hired about 10,000 workers from _____.

Main Idea: The expansion of the railroads spurred America's industrial growth.

4. Detail: Railroad companies spent enormous amounts of money on _____.

Reading Check

Answer: a shortage of laborers in California

World History Connection

Background: A passenger train traveling the Trans-Siberian route takes eight days to complete the journey from Moscow to Vladivostok.

Answer: Towns would prosper during and after the construction. **Ask:** How different do you think the conditions were for workers on the Trans-Siberian line compared to the transcontinental railroad in the United States? (Students' answers will vary. They might mention that weather conditions might have been worse in Siberia.)

HISTORY Online

Objectives and answers to the student activity can be found in the Web Activity Lesson Plan at tarvol2.glencoe.com.

became governor of California and later served as a United States senator after founding Stanford University in 1885.

Because of a shortage of labor in California, the Central Pacific Railroad hired about 10,000 workers from China. All the equipment—rails, cars, locomotives, and machinery—was shipped from the East, either around Cape Horn at the tip of South America or over the Isthmus of Panama in Central America.

Reading Check **Examining** Why were many workers on the Central Pacific Railroad recruited from China?

Railroads Spur Growth

The transcontinental railroad was the first of many lines that began to crisscross the nation after the Civil War. This expansion spurred American industrial growth. By linking the nation, railroads helped increase the size of markets for many products. Huge consumers themselves, the railroads also stimulated the economy by spending extraordinary amounts of money on steel, coal, timber, and other necessities.

Linking Other Lines In the early 1800s, most railroads had been built to promote specific cities or to serve local needs. By 1865 hundreds of small

unconnected lines existed. The challenge for eastern capitalists was to create a single rail transportation system from this maze of small companies.

Railroad consolidation proceeded rapidly from 1865 to 1900. Large rail lines took over about 400 small railroads, and by 1890 the Pennsylvania Railroad was a consolidation of 73 smaller companies. Eventually seven giant systems with terminals in major cities and scores of branches reaching into the countryside controlled most rail traffic.

One of the most famous and successful railroad consolidators was **Cornelius Vanderbilt**, a former boat captain who had built the largest steamboat line in America. By 1869 Vanderbilt had purchased and merged three short New York railroads to form the New York Central, running from New York City to Buffalo. Within four years he had extended his control over lines all the way to Chicago, which enabled him to offer the first direct rail service between New York City and Chicago. In 1871 Vanderbilt began the construction of New York's Grand Central terminal.

The Benefits of a National System Before the 1880s each community set its clocks by the position in the sky at high noon. At noon in Chicago, for example, it was 12:50 P.M. in Washington, D.C., 12:09 P.M. in Louisville, Kentucky, and 11:41 A.M. in St. Paul, Minnesota. Local time interfered with scheduling and at times even threatened passenger safety. When two trains traveled on the same track, collisions could result from scheduling errors caused by variations in time.

To make rail service safer and more reliable, in 1883 the American Railway Association divided the country into four **time zones** in regions where the same time was kept. The federal government made this change in 1918.

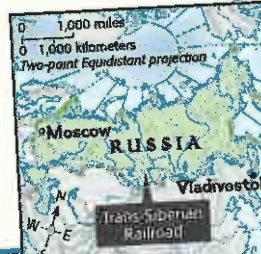
Large integrated railroad systems benefited the nation. They were able to shift cars from one section of the country to another according to seasonal needs and in order to speed long-distance transportation. At the same time, new locomotive technology and the introduction of air brakes enabled railroads to haul longer and heavier trains on their lines. The new rail systems, along with more powerful locomotives,

World History Connection

The Trans-Siberian Railroad

Nearly 50 years after Americans completed their transcontinental railroad, the Russians hammered the final spike into their own cross-country rail line. Begun in 1891 and completed in 1916, the Trans-Siberian Railroad was the longest in the world, running nearly 5,800 miles (9,330 km) from Moscow in the west to Vladivostok on the Sea of Japan in the east. Like the American railroads, the Trans-Siberian line opened up the way for trade and settlement throughout Russia's frontier—an arctic, windswept land known as Siberia.

How might the construction of a railroad affect towns along the line?



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MEETING SPECIAL NEEDS

Kinesthetic Encourage students to use library and Internet resources to find drawings and diagrams of Edwin Drake's oil well. Then have students make a model of the well. Allow students to choose the construction material they wish to use. For students who need additional guidance, suggest making the model using 1-inch by 1-inch pinewood trim and 1.5-inch flat pine molding on a plywood base. Models should have labels explaining the parts and how they worked. L3

Refer to *Inclusion for the High School Social Studies Classroom Strategies and Activities* in the TCR.

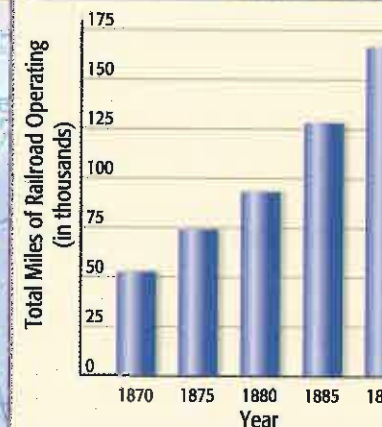
HISTORY Online
Student Web Activity Visit the American Republic Since 1877 Web site at tarvol2.glencoe.com and click on **Student Web Activities—Chapter 9** for an activity on industrialization.

NATIONAL GEOGRAPHIC

Railroads, 1870 and 1890



Miles of Track, 1870-1890



Source: Historical Statistics of the United States: Colonial Times to 1970.

Geography Skills

- Interpreting Maps** What part of the United States saw the greatest expansion in rail lines by 1890?
- Applying Geography Skills** In which time zone did the Central Pacific originate?

made railroad operation so efficient that the average cost per mile for a ton of freight dropped from two cents in 1860 to three-fourths of a cent in 1900.

The nationwide rail network also helped unite Americans in different regions. Looking back at a quarter century of railroad travel, the *Omaha Daily Republican* observed in 1883 that railroads had made the people of the country homogeneous, breaking through the peculiarities and provincialisms which marked separate and unmingling sections. This was, perhaps, an overstatement, but it represented a significant contribution that railroads made to the nation.

Reading Check **Explaining** Why did the American Railway Association divide the country into four time zones?

The Land Grant System

Building and operating railroad lines, especially in the vast unsettled regions of the West, often required more money than most private investors could raise on their own. To encourage railroad construction, the federal government gave **land grants** to private railroad companies. Railroads would then

sell the land to settlers, real estate companies, and other businesses to raise the money they needed to build the railroad.

In the 1850s, the federal government granted individual states over 28 million acres of public lands to give to the railroads. After the Pacific Railway Acts of 1862 and 1864, the government gave the land directly to the railroad companies.

During the 1850s and 1860s, the federal land grant system awarded railroad companies over 120 million acres of land, an area larger than New England, New York, and Pennsylvania combined. Several railroad companies, including the Union Pacific and the Central Pacific, earned enough money from the government's generous land grants to cover much of the cost of building their lines.

Reading Check **Summarizing** How did the government help finance railroads?

Robber Barons

The great wealth many railroad entrepreneurs acquired in the late 1800s led to accusations that they had built their fortunes by swindling investors and

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INTERDISCIPLINARY CONNECTIONS ACTIVITY

Language Arts Tell students that most large industries have their own specialized terms that are used on the job. Have interested students create a lexicon of terms used by railroad workers. Tell them that the lexicon should include the term, its pronunciation, and good, working definitions. For at least two of the terms, students should also include a drawing or diagram for further explanation. L2

CHAPTER 9

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Geography Skills

Answers:

- Great Plains
- Pacific

Geography Skills Practice

Ask: What was the only California city that you could reach by train in 1870? (San Francisco)

Reading Check

Answer: to make rail service safer and more reliable

Reading Check

Answer: land grants

3 ASSESS

Assign Section 2 Assessment as homework or as an in-class activity.

Have students use the Interactive Tutor Self-Assessment CD-ROM.

Reading Essentials and Study Guide 9-2

Name _____ Date _____ Class _____

Study Guide
Chapter 9, Section 2
For use with textbook pages 314-318

THE RAILROADS

KEY TERMS AND NAMES

Pacific Railway Act the law that provided for the construction of a transcontinental railroad (page 315)

Cornelius Vanderbilt entrepreneur who helped direct the building of the Union Pacific Railroad (page 315)

land grant area of the "Big Four" who made a huge fortune by investing in the Central Pacific Railroad Company (page 315)

Cornelius Vanderbilt consolidated seven railroads to form the New York Central (page 316)

time zone the division of the United States into regions where the same time was kept (page 316)