

LEVELED Book • X

The Transcontinental Railroad



Written by Katherine Follett

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Focus Question

How did the Transcontinental Railroad connect the eastern and western United States?

Words to Know

ballast
declaring
engineers
financial
foremen
immigrants

laborers
looted
raided
settlers
ties
veterans

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Table of Contents

Introduction	4
Who Will Build the Railroad?	5
Who Will Win the Race?	7
Who Will Conquer the Mountains?	11
Where Will They Meet?	14
Conclusion	15
Glossary	16

Introduction

One hundred and fifty years ago, it could take six months to travel from New York City to San Francisco. If you left New York in April, you would not arrive in California until October. Over the long months of traveling, you would have to carry all of your food or hunt and gather it from the wild. You would have to cross freezing, windswept prairies, roasting deserts, and dangerous mountains.



Pioneers spent months on the road, and many died.

Yet thousands of people were making this journey across the United States to California every year. The West Coast offered rich farmland, wonderful weather, and best of all, gold.

At the time, the fastest way to travel was by railroad. Railroads crossed the eastern United States as far west as Chicago, Illinois, and Omaha, Nebraska. Building a railroad across the United States would allow the **settlers** to get to California much faster. It would also allow the settlers in California and all across the West to reach the East Coast to order goods, send and receive mail, and visit loved ones they may not have seen for years.

Who Will Build the Railroad?

People had wanted a transcontinental railroad, or a railroad that crossed the entire North American continent, for years. But no one had built one.

Building a railroad of that size was too expensive for any one person or company to pay for. **Engineers** had no calculators, no computers, and no airplanes to photograph and chart the land. There were hardly any maps of the areas the railroad would cross. Most important, the Northern and Southern states were fighting each other in the Civil War.



Civil War soldiers using railroad equipment

In July of 1862, Congress passed the Pacific Railroad Act, **declaring** that a transcontinental railroad must be built. The act called for two companies to share the cost of building it. The Central Pacific Railroad would start laying track east from Sacramento, California, and the Union Pacific would work west from Omaha, Nebraska. The government would give both companies huge areas of land on either side of the track they built. They could sell this land to pay for the railroad.



Thomas Durant



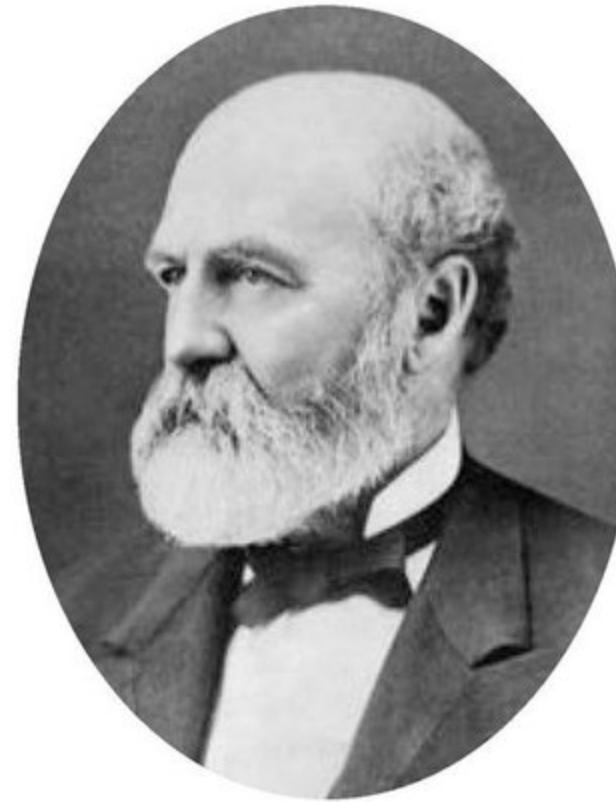
Mark Hopkins



Charles Crocker



Leland Stanford



Collis Huntington

The owners of the Union Pacific Railroad (Thomas Durant) and the Central Pacific Railroad (all others)

This two-company system made sure that the railroad would be built quickly because it set the two companies against each other in a race. The company that built the most track would get the most money. These companies began the task right away. The Central Pacific started work in January 1863 just outside Sacramento, California.

Who Will Win the Race?

The Civil War and **financial** trouble held back the Union Pacific Railroad for two years. The war was taking up all of the iron, gunpowder, and workers that the railroad needed for building track. But work got underway soon after the war ended in 1865. By 1866, it looked as if the Union Pacific would easily win the race.

First, surveying crews studied the land, making measurements and putting stakes in the ground to mark exactly where the track would go. Second, a crew of graders went out. They removed any trees and other vegetation, filled in any low spots, and dug away any high spots to make a flat, smooth track. Across the flat land of the plains, the graders often had little to do.



Surveyors carefully measure distance and elevation.



The men on the left are hauling a heavy iron rail.

Laying the track required several groups of workers. First, a team of men laid down wooden timbers called **ties** across the track. Next, other men dragged the heavy iron rails into place. Then, another group of men pounded in iron spikes and bolts that held the rails to the ties. Finally, a last group of men carried in sand and gravel, called **ballast**, to fill in around the new tracks. Using this system, the Union Pacific Railroad could lay 2 or 3 miles (3–5 km) of track in a single day.

Right behind all of these crews, the very first train to cross the plains rolled down the new track. The train carried all of the wood, rails, iron spikes, tools, and ballast the crews needed. It also carried sleeping cars, a kitchen and food, repair shops, and goods such as clothing. It was like a rolling town that built itself as it went.

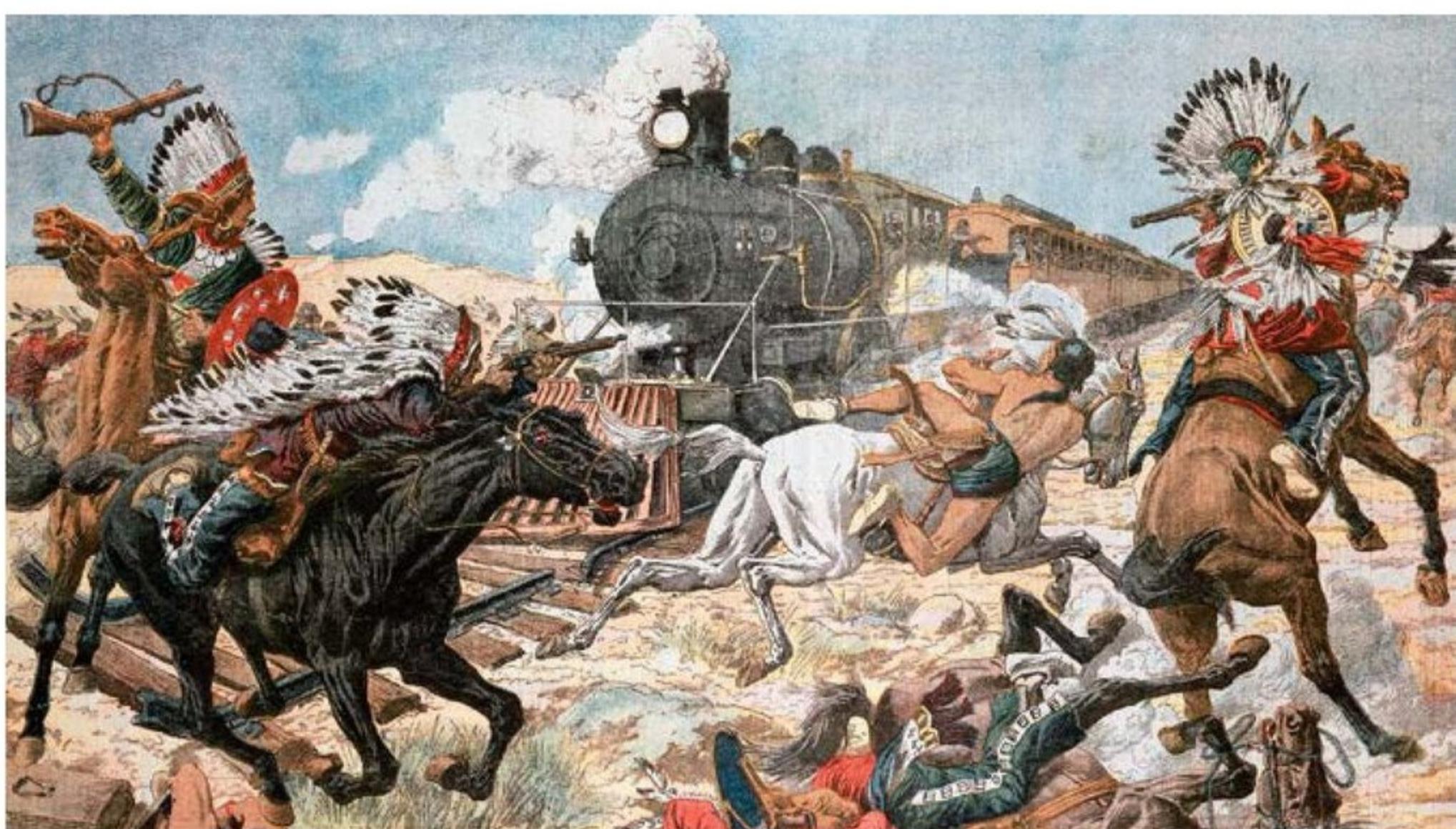
The citizens of this working town were mostly **immigrants** from Ireland, Germany, and the Netherlands; Civil War **veterans**; and freed African American slaves. They built the railroad across the plains with incredible speed, quickly reaching the Rocky Mountains.

The Native Americans of the Great Plains understandably did not like the railroad. The buffalo, which the Native Americans depended on for their entire existence, would not travel across the tracks. Train passengers shot buffalo by the thousands just for sport. Within a few years, the animals were almost gone. Without the buffalo, the Native Americans could not survive as they had.



Settlers slaughtered the buffalo and left them to rot.

The railroad also brought a flood of settlers to the plains. These settlers began farming and building their homes on land that had always been occupied by the Native Americans. The trains also brought litter, noise, air pollution, and prairie fires caused by sparks from the wood- or coal-burning engines.



Native Americans prepare to raid a train.

As the Union Pacific advanced across the West, Native Americans **raided** and **looted** the construction crews. They stole supplies and livestock, and even killed the workers. The Union Pacific demanded that the army protect the workers and the railroad. Soon, soldiers were sent onto the plains, where they engaged in many battles with Native Americans. In time, the tribes of the plains, like the buffalo, had all but disappeared.



Workers had to build a railroad across these mountains.

Who Will Conquer the Mountains?

The Central Pacific was going slowly. Right away, the company had to cut a track into the steep and snowy Sierra Nevada mountains. Because trains at the time could not climb steep hills or go around sharp corners, the workers somehow had to make the jagged mountains into a smooth, gently rising trail.

The workers cut away the solid granite mountainsides and filled in gorges and ravines with rocks and soil, wheelbarrow by wheelbarrow. It was slow, painful work, and very few people wanted to do it. Almost all of the men hired by the Central Pacific Railroad quit within a week.

Finally, the Central Pacific reluctantly hired a small group of Chinese workers. The railroad bosses thought that they were small and weak.

The Chinese workers proved to be up to the challenge—and more. They organized themselves into groups of **laborers** and **foremen**. They did not leave the job, no matter how difficult it was. The Central Pacific hired more and more Chinese workers until they made up almost the entire workforce.



Chinese workers loading ballast to fill in under a track

To get the railroad over the Sierra Nevada mountains, the Chinese workers had to cut fifteen tunnels through solid rock. They used only hand drills, sledgehammers, and loose gunpowder. Through the winter, a total of forty-four snowstorms buried the mountains. The workers built tunnels, sleeping areas, and workspaces under an average of 18 feet (5.5 m) of snow. All of their supplies had to be brought up the side of the mountain by ox wagon or by hand.

The most famous accomplishment of the Chinese workers was to cut a track into the side of an enormous cliff they called Cape Horn. People who wrote about the project later described workers in woven reed baskets big enough to hold two men. They lowered workers in the baskets from the top of the cliff. The workers drilled holes into the sides of the cliff, stuffed the holes with black powder, and lit a fuse. The men at the top hauled up the baskets as fast as they could, hoping to pull everyone out of the way before the cliff was blown apart.

But with these accomplishments came tragedy. Accidents crushed some workers, and the cold weather froze many to death. Avalanches buried entire groups of men alive—some were not found until spring. The Central Pacific Railroad did not keep track of how many Chinese laborers were killed while building the Transcontinental Railroad. It was probably hundreds.

Finally, in 1867, the track broke through the mountains, and the Central Pacific moved onto the deserts of Utah.

A special ceremony was held for the last spike.



Where Will They Meet?

The Union Pacific had a much easier time crossing the Rocky Mountains than the Central Pacific had crossing the Sierra Nevada. They took a gentle route called the South Pass, and they also moved quickly onto the deserts of Utah.

On May 10, 1869, workers, railroad owners, journalists, and politicians gathered at Promontory Point, Utah, for the completion of the Transcontinental Railroad. The race was over—the Union Pacific had laid 1,086 miles (1,748 km) of track, and the Central Pacific had laid 689 miles (1,109 km), though the Central Pacific got extra money for building through the Sierra Nevada mountains.

To celebrate the completion of the first railroad to cross the United States, the heads of the two companies would drive the last four spikes into the track. Special spikes were made of gold and silver. Leland Stanford, the head of the Central Pacific, and Thomas Durant, head of the Union Pacific, both raised sledgehammers, carefully aimed—and missed! But the Transcontinental Railroad was complete.

The Route of the Transcontinental Railroad



Conclusion

Suddenly, California was a few days of travel away from New York. Railroads soon stretched to Salt Lake City, Oregon Territory, and the Southwest. Towns sprang up along the track now that trains could bring passengers, supplies, and mail quickly and safely. The end of the Civil War had reunited the country from north to south. And for the first time, a transcontinental railroad united the country from east to west.

Glossary

ballast (<i>n.</i>)	a heavy material used to increase stability, such as around the foundation of railroad tracks (p. 8)
declaring (<i>v.</i>)	making a strong statement or announcement (p. 5)
engineers (<i>n.</i>)	people who design, build, or repair machines, buildings, bridges, or other structures (p. 5)
financial (<i>adj.</i>)	of or relating to matters dealing with money (p. 7)
foremen (<i>n.</i>)	people who organize and watch over groups of workers (p. 12)
immigrants (<i>n.</i>)	people who come to live in a new country, especially for the purpose of settling there (p. 9)
laborers (<i>n.</i>)	people who do physical work for payment (p. 12)
looted (<i>v.</i>)	stole things, often during a destructive event such as a war or riot (p. 10)
raided (<i>v.</i>)	carried out a surprise attack or invasion with a specific purpose (p. 10)
settlers (<i>n.</i>)	people who make a new, permanent home on a frontier (p. 4)
ties (<i>n.</i>)	wooden pieces that form the base of a railroad track (p. 8)
veterans (<i>n.</i>)	people who served in the armed forces (p. 9)

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Connections

Writing

Write a journal entry from the perspective of a Native American during the building of the Transcontinental Railroad. Discuss the impact of the railroad on your family and how you feel about it.

Social Studies

Construct a timeline of the building of the Transcontinental Railroad. Include at least five events on your timeline.

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