

The Transcontinental Railroad

A Reading A-Z Level Z1 Leveled Book
Word Count: 2,012

Connections

Writing

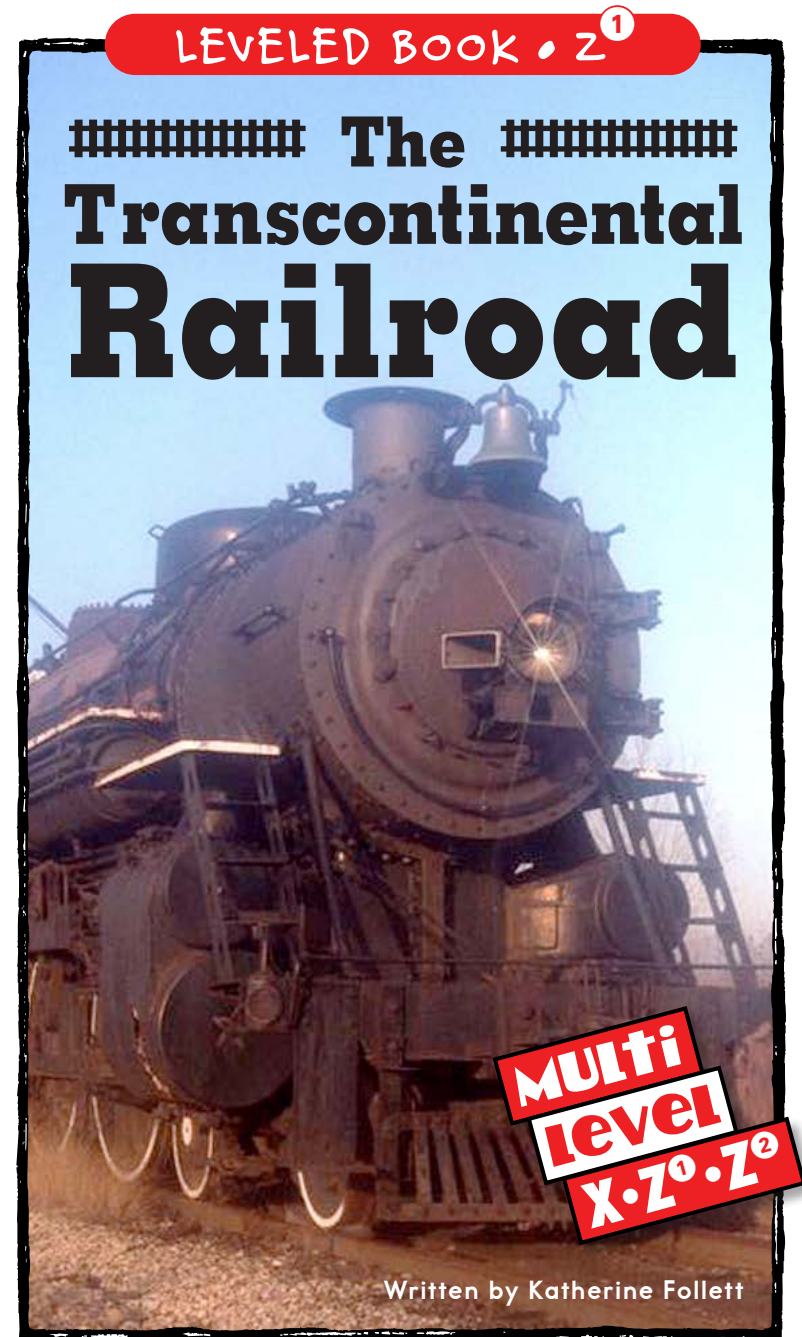
Write a journal entry from the perspective of a Native American during the building of the Transcontinental Railroad. Discuss the impact of the railroad on your family and how you feel about it.

Social Studies

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

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The ##### Transcontinental Railroad



Written by Katherine Follett

www.readinga-z.com

Focus Question

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

Words to Know

discrimination	laborers
efficient	portrayed
engineers	reluctantly
foremen	settlers
immigrants	treacherous
infamous	veterans

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Correlation

LEVEL Z1

Fountas & Pinnell	W-X
Reading Recovery	N/A
DRA	60



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Introduction

One hundred and fifty years ago, it could take six months to travel overland from New York City to San Francisco. That meant that if you left New York in April, the beginning of spring, you would not arrive in California until October, during the chilly days of fall. Over the long months of traveling, you would have to carry all of your food, or hunt and gather it from the wild. There were few maps, so it was easy to get lost. You would have to cross freezing, windswept prairies, roasting deserts, and **treacherous** mountains, all on foot or horseback, or in a creaky wagon that would often break down.

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. If only there were some way to get people and supplies to and from California more quickly and safely.



Pioneers spent months on the road, and many died.



A busy eastern railroad station

At the time, the fastest way to travel was by railroad. Railroads crisscrossed 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. The booming state of California would have a link to the businesses and government of the East. But how could anyone build something as big and expensive as a railroad across the immense, rugged American West?

You will find out how in this book.



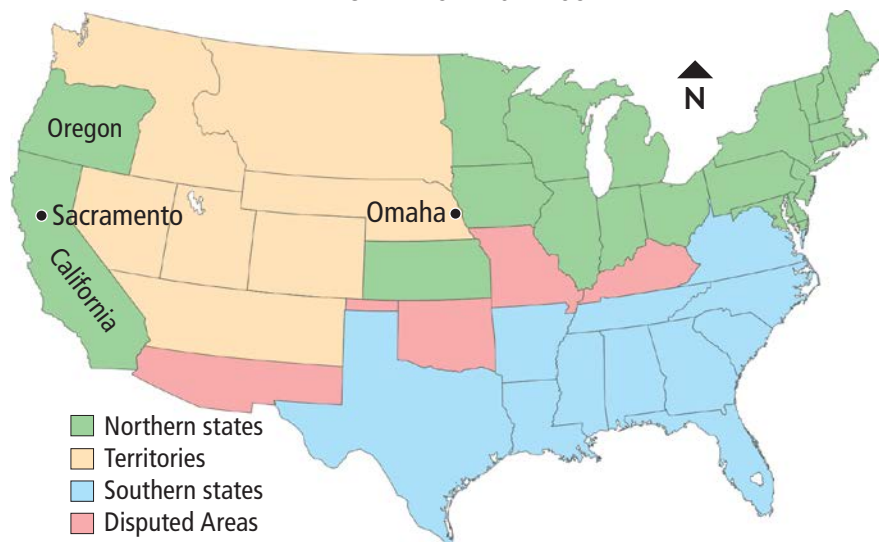
Civil War soldiers using railroad equipment

Who Will Build the Railroad?

People had wanted a transcontinental railroad, or a railroad that crossed the entire North American continent from the Atlantic Ocean to the Pacific Ocean, for years. But no one had built one for many reasons.

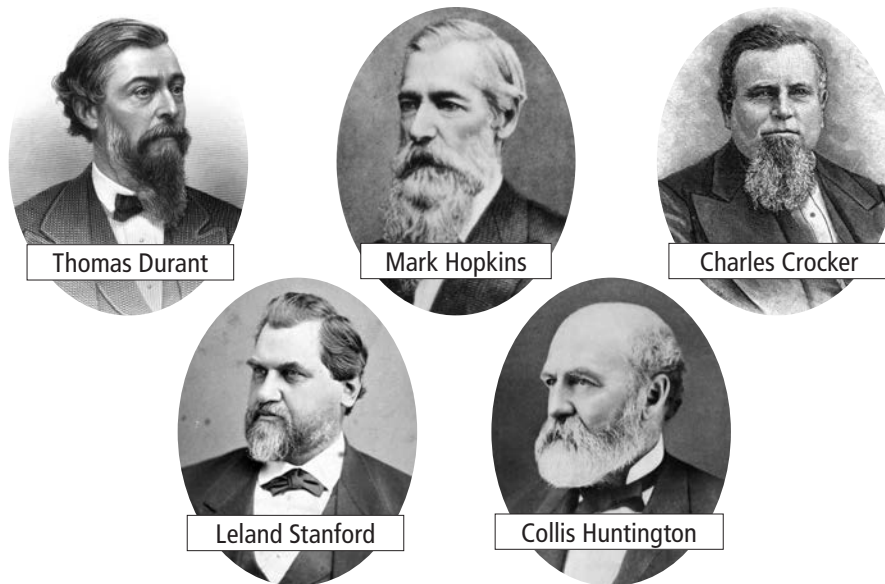
First, building a railroad of that size was far too expensive for any one person or company to pay for. Second, the technology of the time did not seem advanced enough for such a big job. **Engineers** had no calculators, no computers, and no airplanes to photograph and chart the land—in fact, there 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. Even before the war began, the states had argued about whether the railroad should cross the northern or southern half of the country.

The United States in 1862



The vast area of non-state territory had no railroads, leaving California and Oregon unconnected to the rest of the United States.

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.



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

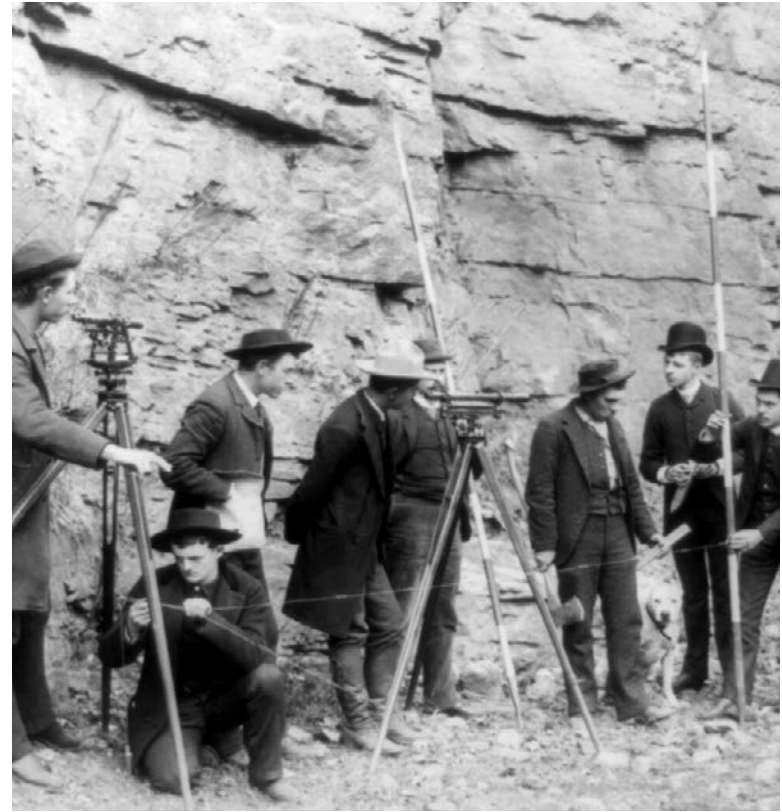
This two-company system cleverly ensured that the railroad would be built quickly because it set the two companies against each other in a race. The company that built the most track would get the most money. The Union Pacific was headed by Thomas Durant. The Central Pacific was owned by four gold-rush businessmen known as the “big four”: Mark Hopkins, Collis Huntington, Charles Crocker, and Leland Stanford, who was then the governor of California. Immediately, these competitive men began the task. 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 like the Union Pacific would easily win the race. The crews of workers were quickly laying down the railroad across the Nebraska prairie west of Omaha.



Flat Nebraska land was easy to build on.



Surveyors carefully measure distance and elevation.

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 vegetation, filled in any low spots, and dug away any high spots to make a flat, smooth track. In the flat, smooth land of the plains, the graders often had little to do. Finally, the tracklayers came.

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 with heavy sledgehammers pounded in iron spikes and bolts that held the rails to the ties. Finally, a last group of men carried in wheelbarrows and wagonloads of 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.



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

Right behind all of these crews, the very first train 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.



A lunch break on the job

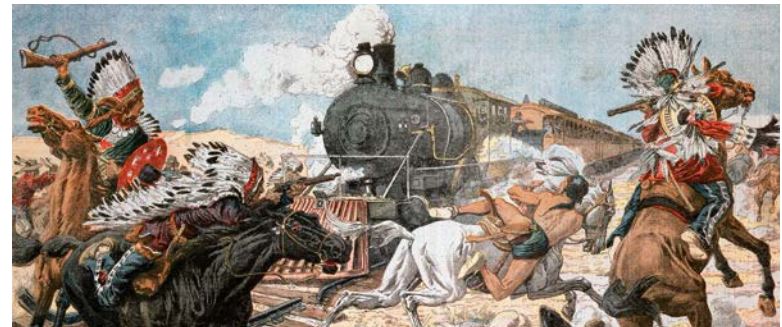
The citizens of this working town were mostly **immigrants** from Ireland, Germany, and the Netherlands; Civil War **veterans**; and freed African American slaves. The newspapers **portrayed** the Union Pacific workers as tough, proud men who worked hard all week and gambled on Sunday, their day off. They built the railroad across the plains with incredible speed, quickly reaching the Rocky Mountains.

But for another group of people, the advancing track was the beginning of the end of their way of life. 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 migrate across the tracks. Train passengers shot buffalo by the thousands just for sport, and within a few years, the animals were almost totally 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. They did not ask the Native Americans for permission or offer them payment. 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, the 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 the 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?

Meanwhile, the Central Pacific was going agonizingly slowly. Right away, the company had to cut a track into the steep and snowy Sierra Nevada mountains. Their route went over the **infamous** Donner Pass, where a group of pioneers had starved horribly when they were stranded in fierce winter snowstorms. 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. Most young men had come to California to try to strike gold. Almost all of the men hired by the Central Pacific Railroad quit within a week to seek their fortunes elsewhere.

Finally, the Central Pacific **reluctantly** hired a small group of Chinese workers. There was an incredible amount of **discrimination** against Chinese people in California at the time. The railroad bosses thought that they were small and weak. The bosses were only convinced to hire them when someone pointed out that their ancestors had built the Great Wall of China.



Chinese workers loading ballast to fill in under a track

The Chinese workers proved to be up to the challenge—and more. They organized themselves into **efficient** 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.

Do You Know?

Why did the Chinese workers do so well? Part of the reason is that they stayed healthy while many other workers became sick. There were many things about Chinese culture that kept the workers in good health:

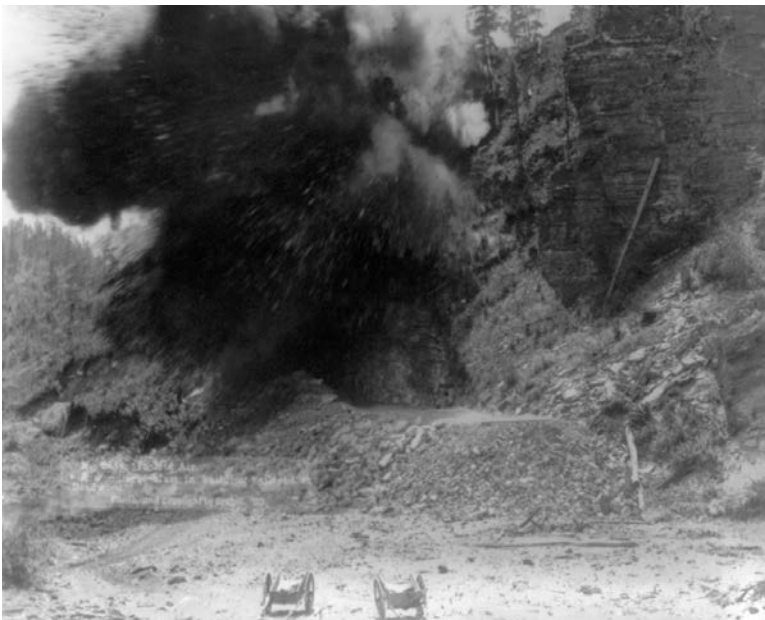
- They ate a low-fat, healthy diet with lots of fresh fruit and vegetables that they carried themselves. Many other workers ate a heavier, less healthy diet of meat, potatoes, cabbage, bread, and butter.
- They drank tea rather than water or beer. The hot tea kept them warm, and boiling the water killed harmful germs in the water supply.
- At the time, Chinese culture valued cleanliness and bathing much more than American culture did. The workers bathed often, keeping germs off their bodies.



Chinese workers constructing a tunnel.

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 44 snowstorms buried the mountains. The workers built tunnels, sleeping areas, and workspaces under 18 feet (5.5 m) of snow. Because these were only the grading crews, not the tracklayers, there was no track where trains could bring supplies to the work site. Everything 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. They used an old, but dangerous, technique that had been used in China. Workers wove 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, lit a fuse, and then shouted to the men above. 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.



Loose gunpowder blasts away a section of mountain.



The cold weather and snows were the cause of the most deaths.

But with these accomplishments came tragedy. Accidents crushed hands, feet, and even whole bodies. The cold weather froze many workers to death. Avalanches buried entire groups of men alive—some were not found until spring. Nobody at the Central Pacific Railroad kept 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.

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. By 1869, the two companies were approaching each other. Their meeting place would be at Promontory Point, Utah.



The railroad near the Rocky Mountains

On May 10, 1869, workers, railroad owners, journalists, and politicians gathered at Promontory Point 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 mountains.



A special ceremony was held for the last spike.

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. The spikes were made of gold and silver. Workers from both companies dragged the last rails into place. Leland Stanford, the head of the Central Pacific, and Thomas Durant, head of the Union Pacific, both took up sledgehammers. They carefully aimed—and missed! But the telegraph reporters sent out the signal anyway. The Transcontinental Railroad was complete.

Conclusion

Suddenly, California was a few days of travel away from New York, instead of months. 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 Union Pacific and the Central Pacific made millions of dollars, because every railroad town had to buy land from them. 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.

The Route of the Transcontinental Railroad



Glossary

discrimination (<i>n.</i>)	the unfair treatment of a person or group based on gender, race, age, religion, or other differences (p. 16)
efficient (<i>adj.</i>)	making good use of time or resources (p. 17)
engineers (<i>n.</i>)	people who design, build, or repair machines, buildings, bridges, or other structures (p. 6)
foremen (<i>n.</i>)	people who organize and watch over groups of workers (p. 17)
immigrants (<i>n.</i>)	people who come to live in a new country, especially for the purpose of settling there (p. 12)
infamous (<i>adj.</i>)	famous for being evil, bad, or dangerous (p. 15)
laborers (<i>n.</i>)	people who do physical work for payment (p. 17)
portrayed (<i>v.</i>)	described or showed in a particular way (p. 12)
reluctantly (<i>adv.</i>)	unwillingly or hesitantly (p. 16)
settlers (<i>n.</i>)	people who make a new, permanent home on a frontier (p. 5)
treacherous (<i>adj.</i>)	dangerous or hazardous (p. 4)
veterans (<i>n.</i>)	people who served in the armed forces (p. 12)