

Teacher's Guide

The Transcontinental Railroad

**UNION PACIFIC
RAILROAD MUSEUM**



BUILDING AMERICA®

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The Transcontinental Railroad
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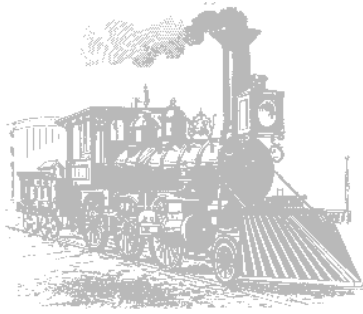
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*Funding provided by the Friends of the Union Pacific Railroad Museum and
The Iowa West Foundation*



**The Historic General Dodge House
The RailsWest Railroad Museum
The Union Pacific Railroad Museum**

Patricia LaBounty, Outreach Coordinator

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Dear Educator,

Welcome to an exciting resource for incorporating the Union Pacific Railroad Museum into your classroom curriculum! Our goal is to make it easy for you to incorporate this exciting History into your planned classroom activities or before your visit to the Union Pacific Railroad Museum. This Teachers Guide is designed to be flexible enough for you to pick and choose which areas you need to accomplish your goals in the classroom.

To begin, read through the Introduction and Curriculum/Bibliography to see how this Unit will fit into the standards for your grade, and then read the background information. This section can be used either as a student reading, or for your own information. There are many activities included at the end of the Unit.

Good Luck and happy journey through this exciting time in American and Railroad History. If you have any questions, please feel free to contact me.

Sincerely,

Patricia LaBounty

Patricia LaBounty
Outreach Coordinator

The Transcontinental Railroad

Introduction and Bibliography

Introduction:

After the completion of the Transcontinental Railroad it was possible for a person to travel from the New York City to San Francisco in just *ONE WEEK*. Before the completion of the railroad it could take up to six months to reach the Pacific Coast. People wanting to emigrate to all points west of the Missouri had to endure great hardships to arrive at their destination. The completion of the Transcontinental allowed immigrants to not only reach their destination but insure that once they were there they could receive supplies and the tools needed for their survival. Long before the first rail was laid many men worked to convince politicians and businessmen that a railway and telegraph line was not only practical, but possible.

Lesson Grade Level(s): 4,5,8

Council Bluffs, IA Social Studies Benchmarks:

Grade 4:

- Compare regions based on Historical patterns
- Explain the importance of transportation and communication to economic growth
- Describe relation between Iowa's geography and settlement patterns

Grade 5

- Identify major events, people and periods of growth in American History
- Recognize technological /scientific advances and their effects on history
- Recognize contributions of men, women and groups of people.

Nebraska Schools History Standards:

Grades 2-4 United States History, Nebraska History, Geography, Civics/Government and Economics

- 4.1.3 Explain the impact of advance in transportation, communication, immigrations and economic development.
- 4.1.5 Explain how historic and geographic factors affected the expansion and development of Nebraska
- Describe the impact of westward expansion on tribal nations
- 4.1.7 Identify, analyze and make generalizations using primary sources...
- 4.1.8 Identify how changing modes of transportation and communication by entrepreneurs have changed the economic system of the United States and Nebraska

Grades 5-8 United States History

- 8.1.5 Describe how the physical geography and various incentives influenced the movement of people goods and services
- 8.1.7 Describe federal policies of expansion and how they affected various culture groups...

Lesson Objectives:

Upon completion of this lesson, students will be able to:

- 1) Identify the states through which the Transcontinental Railroad passes.
- 2) Identify the legislation that made it possible to build the Railroad.

- 3) Discuss the impact of the Railroad on business and settlement in the western states.
- 4) Utilize internet research skills to examine primary sources about the Transcontinental Railroad.
- 5) Discuss how the Railroad impacted Native Americans living in the area and their response to it.

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GUIDE TO THE UNION PACIFIC RAILROAD LANDS

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The Transcontinental Railroad

General Information

In the mid-1820s the first steam-powered railroad lines, such the Baltimore & Ohio or the Mohawk & Hudson, had just begun to offer passenger and freight service. The contractors and construction companies who built the railroads were already aspiring to bigger and better things. At the time, Eastern railroads were seeking a way to cross the Allegheny Mountains and reach Ohio or the Great Lakes. Pioneering spirits wanted to figure out how to build a railroad that would cross the American continent; a *Transcontinental Railroad*.

One such pioneer was Asa Whitney, a New York tea merchant who began to promote the idea of a transcontinental railroad in 1844 after returning from China. Fully aware of the benefits such a railroad promised for trade with China and East India, Whitney declared his intention to build a railroad from Lake Michigan through the South Pass to the Pacific, backed with a land grant 60 miles wide along the length of the road.

Whitney brought his proposal to Congress in 1848, but it was voted down due to its unrealistic construction scheme. Another, better-prepared proposition was presented to Congress in 1850 and again in 1851, but it failed to earn sufficient support because of conflicting interests between the Northern and Southern states. The Southern states were opposed to the project altogether. Whitney then turned to the English government and proposed a similar plan for a transcontinental railroad through Canada. This attempt failed as well.

Asa Whitney ran out of money and finally gave up his campaign in 1852. However, his dream of the Pacific Railroad stayed alive. The discovery of gold in California not only created the market for transcontinental traffic, it also significantly changed the public attitude towards the West. The West was no longer considered a wasteland of mountains and plains. It was seen as the land of opportunity. Scores of people wanted to travel beyond the Mississippi, through the territories that stretched to the Pacific Coast.

In 1853, Congress passed an act providing for the survey of possible railroad lines from the Mississippi to the Pacific. At least five routes were surveyed, the Central Pacific Route by General Grenville Dodge, and each received support from a different sector. Unfortunately, the multitude of diverse interests among the supporters and an increasing rift between the North and the South rendered agreement on a route impossible.

In 1859, Abraham Lincoln traveled to Council Bluffs, IA to inspect land that had come into his possession. He stayed with his long time friends the Officer family, and by chance was introduced to Grenville Dodge who was completing his railroad survey. As they talked, Lincoln became more and more convinced that the Central Pacific Route, beginning in Council Bluffs, was the best route for the transcontinental railroad.

In 1860, Republican Abraham Lincoln won election to the White House on an anti-slavery ticket. His election almost immediately caused the longstanding rift between the North and the South to intensify, and very shortly thereafter the Southern states followed

South Carolina into secession. The violent conflict that would later be known as the Secession War, or the American Civil War, had begun.

However, with the Southern states out of the picture the major antagonism to the transcontinental railroad was gone, and both the Senate and House of Representatives were able to pass the Pacific Railroad Acts of 1862 and 1864. The Act of 1862 mandated that a telegraph line be built along side the railroad. These laws also granted rights of way and use of building materials to be issued to railroad companies as follows: \$16,000 for every mile of track laid on flatlands, \$32,000 per mile of track laid in the foothills and \$48,000 for every mile of track laid in the mountains to companies that would build the transcontinental railroad and its feeder lines. The varying amounts were supposed to account for the greater degree of difficulty presented by mountainous terrain. This money was not a gift, however, and had to be repaid in 30 years at the rate of 6% per year. Those companies included:

- the Union Pacific Railroad, to be built from the Platte River Valley in Nebraska to the border between Nevada and California, with two feeder lines from Omaha and Sioux City;
- the Central Pacific Railroad, to be built as a feeder line from Sacramento over the Sierra Nevada to meet the Union Pacific eastwards and to San Francisco in the West;
- and the Leavenworth, Pawnee & Western, later to be known as the Union Pacific Eastern Division, which was to link the 100th meridian Southeast with Kansas City.

The charters awarded to the railroads provided rights of way and use of stone and timber to build the roadbed, and granted 10 square miles of land for each mile of railroad built. This was increased in the 1864 Pacific Railway Act to 20 square miles of land per mile. This land was the railroads to sell and use as needed to generate the money needed to finish the Railroad. Based on the estimates made after the surveys, the government agreed to provide nearly half the needed capital for the project, about *60 million dollars*. More than 50 million dollars would have to be raised from private investors.

The Central Pacific broke ground in Sacramento, California in January, 1863. The Union Pacific broke ground at the Missouri River bluffs near Omaha, Nebraska in December, 1863. A competition arose between the construction crews of the two railroads, to see who could finish first.

The physical construction of the rail line was a job with an enormous scope, and it was often a painfully slow process. There was also constant pressure to meet time or geographical deadlines. The construction crews had to cut grade, build snow sheds, blast through hard rock and lay track through snow. Deep fills, switchback routes, high trestles, huge rock cuts and fifteen tunnels were necessary to make it over the Sierras.

To create this rail line, an enormous amount of tools, materials and supplies were required. Each mile of track required 100 tons of rail, about 2,500 ties and two or three tons of spikes and fish plates (metal pieces that joined the rails and prevented climatic

expansion and contraction of the metal). Some of the tools needed included wheelbarrows, horse drawn scrapers, two-wheel dump carts, shovels, axes, crowbars, blasting powder, quarry tools and iron rods. On top of that, locomotives, wheel trucks, switch mechanisms and foundry tools were needed as well.

Providing these supplies was no small challenge. All supplies for the Central Pacific came from the East, and the Panama Canal shortcut did not exist at that time. All rails, rolling stock and machinery were shipped around Cape Horn on the southernmost tip of South America, en route to California. River steamers then took the material upriver to Sacramento, where it was offloaded to platform cars and hauled up into the mountains. If a shipment didn't leave the East Coast on time (and this happened frequently) or if an accident occurred in the shipping, the resulting delay could create a great hardship.

In 1865, the Central Pacific Company faced another challenge, a labor shortage. Many of the men they hired to work the railroad stayed only as far as the gold mines and then went their own ways. The Central Pacific figured they needed 5,000 workers to build the railroad, but the most they ever had using only white labor was 800. They then hired Chinese workers against the wishes of the other laborers and their foreman, but when the first group proved to be efficient and hardworking, the contractor recruited more from California and China itself. It was the Chinese men and their back-breaking labor that would get the railroad through the Sierra Nevadas.

While the Central Pacific crews were struggling through the mountains, they heard tales of the speed with which the Union Pacific crews were able to work. As they grew closer to the point where the two railroads would meet, the Central Pacific crews decided they had something to prove. Spurred on by their supervisors, on April 28, 1869 they laid an extraordinary ten miles of track across the Utah desert between sunrise and sunset. They used 25,800 ties, 3,520 rails, 55,000 spikes and 7,040 fishplates. The Irish and Chinese crews worked together and completed the ten mile stretch in 12 hours. This feat has never been duplicated by human beings in railroad construction since. It also brought the Central Pacific rail within ten miles of the Union Pacific line, ensuring the Union Pacific could not hope to replicate the achievement.

While the Union Pacific began construction in 1863, it wasn't until the end of the Civil War in 1865, that there was enough labor to get very far. In fact, they had only reached the outskirts of Omaha by 1865. Then the workforce, largely made up of Irish Americans, was supplemented by organized and disciplined veterans from the Civil War. General Dodge was one such veteran. Led by construction superintendent Samuel B. Reed, chief engineer Grenville M. Dodge and contractors John S. and Dan T. Casement, the task facing Union Pacific construction crews was relatively easy at first. Their route went largely through flat plains, following the Oregon Trail through the Platte Valley, then crossing the Continental Divide through the Black Hills in Wyoming.

While the terrain was comparatively easy to work in, Union Pacific construction crews faced one problem that their Central Pacific rivals didn't. In Nebraska, the Sioux and Cheyenne tribes continually harassed the Union Pacific construction crews. Forts were established along the line to protect the railroad. When the workers weren't at work or asleep, they were at war with rifles at their sides, ready for the next Indian attack.

Sometimes the Indians fought the workers; other times, they damaged the progress made by the construction crews. In August 1867 at Plum Creek, Nebraska, the Cheyenne pried up some rails and caused the derailment of a freight train. The train crashed and the Indians looted the cars.

The Union Pacific's construction materials were sailed up the Missouri or brought in by wagon. Their biggest difficulty lay in getting railroad ties, since there were few natural trees in the Prairie and many had to be brought from forests and wooded areas many miles from track construction..

Both companies laid track essentially the same way. They sent crews far ahead to do a preliminary survey, then location surveys. The graders would grade 100 miles of track at a time. In the mountains they graded as much as 200 to 300 miles at a time since the actual building took so much longer. Bridge, culvert and trestle crews worked five to 20 miles ahead. Then the tracklayers came in, grabbing rails out of horse-drawn carts. Then came the men to pound in the spikes. At the end of each line was a base camp that supplied material and food to the workers. As construction of the line was completed every 100 to 200 miles, the base camp would move up to keep in proximity to the crews.

As the two companies approached the Promontory Mountains in Utah, both realized there was only one route through. Blasting began on both sides to lay track. Fills and trestles were necessary, for both lines, in crossing deep ravines. On April 8, 1869 Grenville Dodge of the Union Pacific and Collis P. Huntington of the Central Pacific met in Washington D.C. and agreed on a location to join the railroad. The Treaty of Hooper's House, called for the joining of the rails to be at Promontory Summit, Utah.

At noon on May 10, 1869 a ceremony began with approximately 600 people in attendance. The two engines, the Central Pacific's **Jupiter** and the Union Pacific's **No. 119**, stood facing each other at each end of the last rail.

In return for the dedication and hard work of the diligent Chinese laborers, an eight man Chinese crew was given the honor of bringing up and placing the last section of rail. At 12:20 p.m., one official from each railroad joined together to lay in the ceremonial last tie using the gold spikes. The silver sledgehammer was used to "drive" the spikes, but not enough to damage them. (The real final tie, spike and sledge were ordinary.) The two trains were then driven together, and a bottle of champagne was broken over the laurel tie. A telegraph went out across the nation with the simple message: "Done." The transcontinental railroad was complete. At that instant in Promontory Summit, Utah, coast-to-coast travel time was reduced from four-six months to six days. In just seven years, the Union Pacific Railroad had built 1,086 miles of railroad lines from Omaha, Nebraska. The Central Pacific had built 690 miles from Sacramento, California. Both railroads had crossed a major mountain range, the Rocky Mountains in the east and the Sierra Nevadas in the west.

While the Transcontinental Railroad was started in the midst of a war that divided America, its completion marked a new unity and connection between the east and west coasts that further defined the United States as a single nation. The physically demanding and dangerous work of building the railroad cost many lives along the way, but the ability

to travel from the east to the west in a matter of days rather than months was instrumental in the growth and development of the United States.

The Transcontinental Railroad **Activities**

- Use the attached Transcontinental Railroad information :
 - As a student reading.
 - For the teachers' information
 - Use all or part as a research tool for the other activities or to support your unit in class.
 - Answer the questions in the worksheet provided.
- Using the US map provided, plot the course of the Transcontinental Railroad. Color the Central Pacific Line one color and the Union Pacific Line another color.
 - On your map add the Mountain ranges the Railroads had to cross as well as major rivers.
- Complete the Anatomy of a Steam locomotive worksheet.
- Complete the word search and cross word puzzle
- Participate in the Transcontinental Simulation
 - Choose one person and write down questions you have for them about their experiences on the Railroad.
 - Looking at the other accounts of the Promontory Summit ceremony and the building of the Transcontinental Railroad, which participants were not given "press" time and why?

The Transcontinental Railroad Simulation

Historical Setting:

Soon after the lines joined, they were extended in the west to San Francisco and in the east across the Missouri River to tracks which linked the railroad to all the others in the eastern United States. Originally, the plan was to finish the railroad in ten years. Incredibly, the job got done in six.

Nearly everything done on the transcontinental railroad was done by hand. Dirt excavated for cuts through ridges was removed one handheld cart at a time. Some of the gaps that needed to be filled were more than a quarter of a mile long and hundreds of feet high. All of the rubble to fill the gaps had to be hauled in and dumped there by hand. Black powder and nitroglycerin were used to blast tunnels; after handheld drills had been sledge hammered into the rock to open holes deep enough to pack the explosives into. All the work of grading and laying ties and spiking down the thirty-foot long rails weighing 560 pounds each, was backbreaking. It is not efficient for a railroad to travel on a steep track, so gradients of no more than 116 feet of rise per mile had to be prepared along the whole route.

The transcontinental railroad cut the travel time from New York to California from months to one week. It cut the cost of the trip from more than \$1000 per person to about \$100 per person. The United States government gave the railroad companies a square mile of land for each mile length of track built, and loaned the companies money to pay for much of the construction. It was a good investment for the United States. Even before the railroad was completed, in 1867 the US government saved about two million dollars using the railroad (at less than 10 cents per ton per mile) to send supplies to its troops on the Great Plains, rather than hauling the freight at 40 or 50 cents per ton per mile by wagon.

The land alongside the railroad track, half of it still owned by the United States government, greatly increased in value. The settlers who built and moved into towns along the railroad track helped to stabilize the US government's control over the Great Plains. The western territories soon became populated enough to be added to the country as states.

All the details in the stories provided below under Railroad Voices, are true. The names in quotation marks are invented. All other names are real individuals.

Hypothetical Situation:

Each of you will be decision-makers in this simulation. You will speak for your character, and then use your own personal best judgment to vote on the simulation outcome.

It is May 9, 1869, and you are at Promontory Summit, Utah. You are getting ready for **tomorrow's big event – the official completion of the first transcontinental railroad on May 10, 1869**. You and the other characters in this simulation have gathered together because you have heard that the newspaper reporters will be restricted in their news coverage to only 500 words per article. You are concerned that your important contribution to the building of the first transcontinental railroad will be overlooked by history unless the news media covers it properly while you are here to tell the tale.

It is your job to tell the story of your important contribution to the construction of the transcontinental railroad, and to evaluate the contributions of all those who speak, including yourself. You will be educating all the listeners about your character and the facts surrounding him/her. Find a way to include all the information in your identity description. Afterwards, you will vote nine times (but you may vote for yourself only once). You will determine which five characters contributed the most to the building of the railroad. In addition, you will identify which student you thought was most In Character, was the Most Convincing Storyteller, was the Best Questioner, and was the Best Responder to Questions. Each of the top vote-getters will receive a Golden Spike Award.

Newspaper reporter option: The reporter has been informed that he may pose the people at the ceremony for the official photographs. In addition, the telegraph operators have informed the reporter that he may use the telegraph wires to submit a story of no more than 500 words to his New York (or San Francisco – pick one) office. From this story, people in New York (or San Francisco) will learn about the event. The story will record officially, for all the world, the history of this important event.

As soon as the official photographer/reporter was announced, he started being besieged by people who want him to emphasize the part they played in getting the railroad built. He has agreed to listen to everyone, as they debate who should get the most credit when the reporter writes the story.

Your Written Assignments:

Everyone – Take notes on the contributions of each person and group involved in building the first transcontinental railroad. You will get a notetaking chart in class. After the speeches and the follow-up question/debate period, **vote on your ballot.**

Railroad Voices – You will prepare a **two-page statement** (one page typed) describing why your contribution to getting the railroad built should be the main focus of the reporter's story. Educate your listeners about your contributions, using specific details. Use all the facts in your identity description. **Use your own words** and make your contributions into a story that is so interesting you will capture the imagination of the listeners. You may attack other groups' contributions if you wish, but above all, emphasize your own contributions.

Reporter/photographers – You will listen to all the sides in the discussion, and gather the information to write **an article of no more than 500 words**, telling your readers about the construction and completion of the first transcontinental railroad. In your article emphasize the people/groups you think deserve the most credit for getting the railroad built, and give specific information about their contributions. **You must pick no more than five individuals or groups to credit and discuss in detail.** Give your article a catchy headline and put the most important facts in the first paragraph. Then, once you have the reader's attention, go on to develop the details of the story you are telling.)

Extend the lesson:

1. You may add a drawing showing how the people in your official photograph will be posed to communicate the meaning of the event. Keep details of clothing and equipment historically accurate!
2. You may make a poster advertising the railroad and its attractive features (cost, speed & convenience compared to other ways of crossing the continent). Keep details historically accurate!
3. You may write a statement for another role in the simulation besides the one you played yourself.
4. Plan a program of events for a ceremony to celebrate the completion of the building of the transcontinental railroad. List the events in the order in which they should occur, and tell who should be doing what. Add a sentence after each event explaining why you included it in the program, and how it expresses the meaning of the event. You may make it an ornamental program, a memento of the occasion for people who attend.

Leland Stanford, speaking for the “Big Four”, who are Leland Stanford, Collis Huntington, Mark Hopkins, & Charles Crocker (who also serves as chief engineer for the building of the Central Pacific RR).

You are the Governor of California, and one of the four owners of the Central Pacific Railroad (CPRR). You and the other three owners have sunk your entire personal fortunes into getting the railroad built. In addition, Charlie Crocker has given every waking minute for the past six years to building this railroad, and has coordinated every step of its construction.

Even with the land grants and money loans contributed by the United States government, you four still had to spend every penny you could raise and borrow to get the railroad built. It was a huge gamble, which you hope will pay off in big profits once the railroad is running. You owe a vast amount of money for the expenses you've incurred: workers' wages, locomotives, train cars, rails, spikes, tools, millions of dollars' worth of explosives, everything it took to build the railroad. Your reasons for building this railroad are the desire for profit and fame, and the belief that the railroad is necessary to grow California's economy and connect California with the rest of the United States. Already, the railroad is paying off, and is starting to earn you hundreds of thousands of dollars per year.

Californians will be able to distribute farm products, wine, lumber and minerals (including gold) to the rest of the country more cheaply by rail. Travelers and settlers will be able to move across the country easily and quickly. Trade with Asian countries will enter through California ports and be distributed across the United States by rail. The US Postal service will be able to distribute mail cheaply and quickly by rail. Mail order companies like Sears & Roebuck Company will be able to send out catalogues and deliver the orders. Even entire houses will be deliverable in kit form. Towns are already springing up along the route of the railroad. The railroad is civilizing and settling the interior of the continent, and drawing the nation together as nothing else could have done.

You Big Four claim you have made this all possible. Without your leadership and investment, the railroad would not have been built.

James Harvey Strobridge, head of construction for the Central Pacific, and his wife Hanna Maria and six children

James Strobridge, you are the person who, at the urging of Charlie Crocker, decided to try hiring the Chinese workers who became the main workforce for the Central Pacific Railroad. You hired Irish crew bosses to supervise the Chinese crews, who did the most dangerous work. You rule the work crews with an iron hand. You curse the men and lose your temper easily. You are 40 years old, over six feet tall, agile and energetic. You lost an eye in a black-powder explosion, and your Chinese workers have nicknamed you the “One-Eyed Bossy Man”. When your workers get into a fight, you wade in with an axe handle to confront the ringleaders, and the fight quickly stops. Your workers respect you, and fear you, and work very hard for you. Even with one eye, you see everything that is going on.

In terms of organizing the supplies and the construction across the open spaces of Nevada and Utah, you face the same challenges as the Casement brothers (see below) working to build the Union Pacific. Going through the Sierra Nevada in California, your crew had to blast their way through granite at the rate of about ten inches per day, and build huge trestle bridges across gorges. Your supplies of rails and spikes cost far more than for the Union Pacific, because they had to be brought by ship around Cape Horn (the southern tip of South America) to California, and then brought by rail to the end of the track. You constantly worried about problems of supply, and had to depend on the uncertainties of ocean shipping to get much of what you needed. Fortunately, you had Charlie Crocker working closely with you to get you the supplies and money you needed to pay your workers.

Hanna Maria Strobridge, you have one of the most interesting stories on the railroad. For the past six years, you have been living in a three-room railroad car, a house on wheels, with your husband and your six adopted children, as the railroad is being built. You are practically the only wife and children around as the crews build the CPRR. Your tough and capable husband is getting the job done, and you are with him on this great adventure. You have a canary in a cage, and a small porch built onto the right side of your railroad car home, with an awning over the top. When your house on wheels is not moving, you hang the canary and houseplants near the door. Before people come into your home, they wipe their feet. The other workers envy your husband, because he has you with him, and has a home life nearby. All the rest of the workers are far from their loved ones.

You have seen the Chinese workers blast their way through the Sierra Nevada, hanging from the cliff sides in baskets as they drill holes, fill them with black powder and yell to be hauled out of the way quickly before the explosion. You have seen twenty feet of snow fall in one storm, and snow slides that buried groups of workers, freezing them in standing death until spring melted their bodies free. You have watched workers build wooden trestles across gorges more than a hundred feet deep. You are a loyal and courageous companion. Your husband's leadership and management have been vital to getting the railroad built. You have helped keep him healthy and happy and hard at work. Your own experiences make a fascinating story, and should be told to the world.

Ulysses S. Grant, speaking for United States Presidents Abraham Lincoln, Andrew Johnson and himself

The United States government should above all get the credit for the construction of the transcontinental railroad. If it had not been for the commitment and support of each of you presidents, and the Congress, the project could never have begun. No private organization could have raised the funds or obtained the land by itself. Only the US government was able to obtain the land through treaties with Native Americans, and extend millions of dollars in low-interest loans (at 6% interest) to aid in the railroad construction. Only the United States Army had the force to protect the construction crews.

For construction over flat land, the US government issued bonds at \$16,000 per mile, (\$32,000 per mile for foothills, and \$48,000 per mile for mountainous terrain), and forty miles had to be built before each new issue of bonds. The government loaned a vast amount of money to build the 2000 miles of transcontinental railroad.

It was only after the Civil War began, that Congress could agree to build the railroad. Before the war, neither the North nor the South would agree to build a railroad along a route that might extend the spread of slavery into the West, or not extend it. Once the war began, Congress was controlled by the Union. Abraham Lincoln urged Congress to pass a law granting land and loans for the building of the railroad. Each president for the past ten years has supported the building of the railroad. The railroad will bind the nation together, it will speed communication, trade and travel. It is good for the country, and the government of the whole country should get the credit for the existence of the railroad. The people of the whole country will benefit from the railroad, and it was built for them.

Thomas “Doc” Durant, speaking for the many investors in the Union Pacific Railroad

You did whatever it took to get the money and apply the political pressure to build the Union Pacific Railroad. You are a wheeler and dealer, a person of vision and remarkable powers of persuasion. You know every important person in Washington, DC, and have enormous energy. The Union Pacific, which was built because of your tireless efforts in fundraising and coaxing (and sometimes lying), was the longer of the two parts of the transcontinental railroad. You had the good sense to hire Grenville Dodge to be the chief construction engineer for the UPRR.

You gave stock in the construction company for the railroad to Congressmen to “thank” them for their support in passing funding legislation. You persuaded many investors to buy stock in the railroad. As fast as money came in, you spent it. When the sections of railroad already built started earning money, you paid the investors handsome dividends to keep them happy, and promised the workers that they would get paid. More investors kept buying stock, and you kept the money flowing. In order to get more government loans, you pressured the builders build faster, faster, faster. The more miles they built, the more land the government gave the railroad, and the more loans the government paid to help construction.

You promised Brigham Young and his Mormon workers whatever they demanded as wages in order to get them to build the railroad, even when you did not have the money to pay. Then, you arranged to pay them in equipment and supplies left over after the railroad was built. They got they wanted – a railroad line linking to the transcontinental line – and you got the main line built.

On May 6, 1869, your railroad car was held up by workers demanding their wages. They had not been paid in months. They refused to let you go to the ceremony in Promontory Summit, Utah, until they were paid. You used your considerable powers of persuasion to raise \$253,000 in cash by telegraphing friends, and paid the workers enough to secure your release.

Without your efforts, it would have taken a much longer time to build the Union Pacific. The country has its railroad, and you made it happen, and happen fast.

General William Tecumseh Sherman on behalf of the United States Army

You are the famous Civil War general who led the March through Georgia, using “total war” tactics to demoralize and defeat the Confederacy. During the Civil War you became aware of the engineering skills and competence of Grenville Dodge. He earned your respect and friendship, and you have done all you could to promote his career and his next great project, the transcontinental railroad.

After the Civil War, you were sent by the United States government to fight the Indian Wars on the Great Plains. You have many Civil War veterans in your regiments. Some of the soldiers are African-Americans, who are nicknamed “Buffalo Soldiers” by the Indians because their hair is dark and curly, reminding the Indians of the shaggy hair on the head and neck of the bison.

Building forts, moving an army from place to place, and protecting outlying settlements is a hard job on the Great Plains. Wood and other materials have to be brought from great distances. Often, the army cannot arrive at a trouble spot quickly enough to prevent disaster. You have been convinced from the beginning that a railroad is the best, the only, way to gain mastery of the region. The army must be moved and re-supplied swiftly. The railroad, and its accompanying telegraph line, is the key to this. You are convinced that the future wellbeing of the nation depends on establishing order over the vast interior part of the continent.

You have been informing the Indians with whom you negotiate that they must give up their hunting and raiding way of life. If they change their way of life and agree to live peacefully alongside the settlers, they deserve protection like everyone else. If they do not, you will deal ruthlessly with them. You have been using your troops to protect the railroad construction workers and the settlers moving onto the Great Plains. Without your protection, it is doubtful that the construction crews would have been able to complete this vital project.

General Grenville Dodge, chief engineer and surveyor for the Union Pacific

You are an engineering genius. You are finest designer/planner of railroads in the United States, and probably in the world. You have been working on railroads since you began as a surveyor at the age of fourteen. In 1859 Abraham Lincoln asked you for your advice about the best route along which to build a transcontinental railroad. At the time he was running for president, and thinking ahead about the needs of the nation. You advised Abraham Lincoln to start the track in Council Bluffs, near Omaha, Nebraska, and follow a route through the Platte River valley. President Lincoln later signed your recommendations into law, and construction began in 1863. Your advice to the President, that a railroad was possible, necessary and which route across the Great Plains was the best, was firm and clear. Abraham Lincoln, a man who was quick to recognize talent, questioned you closely and heeded your advice.

During the Civil War, you were begged to leave the Union Army to go lead the construction of the Union Pacific Railroad. You refused. You saw it as your duty to serve the nation during wartime, and you were put in charge of numerous vital projects, building railroads, bridges and other structures for the war effort. General W.T. Sherman learned to trust your skill; you have earned his friendship and undying respect.

Once the war ended, you left immediately to join in building the transcontinental railroad. Its completion will be your greatest lifetime achievement. Every decision you make is for the good of the railroad. You are committed to quality in construction. When Doc Durant tries to insist on saving money by using cheaper or faulty materials, you insist that a certain level of quality has to be maintained, while allowing certain cost-saving shortcuts (like treated cottonwood ties that will need to be replaced after three years) in the interests of speeding the pace of construction. Every good decision about route and construction of the Union Pacific, shows your influence.

The Casement brothers, Jack and Dan, heads of construction for the Union Pacific

You were both generals during the Civil War, and used your skills at organizing people and moving supplies to keep tons of materials every day flowing to the railroad construction crews, and to keep the construction moving forward. You organized the construction of the railroad with the efficiency of a military campaign. The end of track, where the rails gave out, was the point of advance. Everything had to be organized to move that point forward as rapidly as possible. You kept the track under construction at a pace as fast as a man could walk. On extraordinary days, your crews laid more than four miles of track per day. In order to give your workers an incentive, in 1866 you began offering workers a pound of fresh tobacco for each day during which a mile or more of track was laid. On days when two miles were laid, you offered workers time-and-a-half pay (an extra 50% of pay for the day). These incentives kept your railroad construction moving fast.

In order to accomplish this extraordinary rate of construction, the workers in teams had to build a grade (a level built up for the track), lay the wooden ties across it sideways, spike the thirty-foot long rails down to the ties in parallel lines exactly four feet and eight-and-a-half inches apart, and fill ballast in the gaps. Two rails were laid every thirty seconds, one on each side, four rails to a minute. Nothing like it had ever been done before on such a huge scale. Your railroad, the Union Pacific, was in competition with the Central Pacific to try to lay the most track and get the most land and money in loans from the government. During the early years, your crews had to work with guns nearby, ready to fight off an Indian attack.

The pressure on you both, day after day, was intense. The railroad owners wanted you to build faster, faster. You needed to keep the supplies flowing to the front of the track, tons per day, on six miles of trains, constantly moving. If anything went wrong, you were blamed. You had to keep the workers from striking or slowing down, even when they had not been paid for months. Your crews worked in rainstorms, and into the winter, blasting the ground apart in frozen chunks to lay the grade. You kept at the work, year after year, for six long years until the job was done. You want the world to know that building the railroad would have been impossible without the discipline and organizational skill, the bold courage, of Civil War veterans. Most of the men working on the Union Pacific were Civil War veterans like you.

Telegraph operators

As the railroad has been built, the telegraph has been built alongside it, strung from tall poles. Without the telegraph, the railroad could not have been built. You are the people who have spent all day, every day, communicating along the line so that supplies are moved forward to the front of construction. You have to tap out the messages accurately in Morse Code to communicate with suppliers, to tell how many rails are needed, how many spikes, pickaxes, shovels, carts, and everything else. Without the messages you tap out, the workers would not get fresh food. When Indians attack, you tap out the message that calls for help from the Army. When bison scratch their backs on the telegraph poles, and the poles topple over, everyone is reminded how important your telegraph is. Until the line is restrung, messages cannot move swiftly across the Great Plains. Any reporter sending his story to the newspaper about the finishing of the railroad and the driving of the Golden Spike will have to depend on you to tap out his 500 words. You should be in the story!

George Booth, engineer of the locomotive Jupiter, for all the locomotive crews
You can't build a railroad, or operate it, without trains. From the beginning, you engineers and train crews have been moving the freight and equipment to build the railroad along the tracks as they are built, hundreds of tons every day on long strings of cars. The locomotives use steam power, and are sensitive and complicated to operate. The firebox must be kept heated just right with fuel so that the water boils and the steam pressure moves the engine. It is your crew's job to keep the expensive locomotive engine from overheating and cracking or exploding. You need to understand every piece of equipment on your engine, and how to adjust it. You need to plan so that you always have enough water and fuel to keep running. You are responsible for passenger safety. If the track is washed out, or a tree falls across it, or a herd of bison or cattle stand in the way, you have to stop the train before the train crashes and derails. You are constantly on the alert. Engineers are often killed in accidents, because they steer the front of the train, which is moving fast. You and your crew will keep the railroad running, and the world should not overlook your contribution.

Lee Chew, for the Chinese workers on the Central Pacific Railroad

You “Celestials” (China was called the “Celestial Kingdom”) did the hardest and most dangerous work of all to get this railroad built. More than 7000 of you were hired to build the CPRR, and more than 1200 of you died, more than any other group. It was Chinese workers who tunneled through the Sierra Nevada, who built the trestles that took trains across gorges hundreds of feet deep, and who covered the track with many miles of shed roofing to keep it clear of winter snows.

At the start of the railroad construction, many Chinese men were already in California. They had come there hoping to earn enough money to help their families in China. In California, the Chinese encountered brutal racism. They were attacked, beaten up, driven off if they found a good place to dig for gold, not allowed to become citizens, not allowed to attend school, not allowed to testify in court, ridiculed and insulted. The Chinese were required to pay many extra taxes not charged to other Californians. A humiliation was for a harasser to cut off a Chinese man’s long braid of hair, or queue, as an insult to his culture and his manhood. Typical phrases included in a Chinese to English phrasebook from 1867 are: “You must not strike me”, “He does not intend to pay me my wages”, “He claimed my mine”, “He assaulted me”, “The man struck the Chinese boy on the head”, and “He was frozen to death in the snow.” Their lives were so hard that a saying developed, “Not a Chinaman’s chance”, meaning that the situation was hopeless.

When James Strobridge started to hire Chinese workers, he quickly discovered that they were excellent team workers, hard working, clean, precise and reliable. Chinese workers stayed on the job, worked hard, and accepted lower wages (\$1 per day) than other workers (because they were discriminated against for most jobs and had to take what they could get!). The Chinese workers lived crowded together in tent shelters, and rapidly organized themselves into groups to keep their sleeping areas clean and orderly. One of their work requirements was food that was fresh and prepared by their own cooks. Therefore, the Central Pacific transported to the construction site fresh vegetables from California and a wide variety of seafood, meat, noodles, rice and other Chinese foods. The Chinese ate more nutritious meals, and better cooked, than anyone else on Central or Union Pacific Railroads.

Within a few months, more than five thousand Chinese workers were building the CPRR (Central Pacific Railroad). When more workers were needed, more were recruited in China and brought over by ship. Their skill in using the dangerous explosives black powder (which the Chinese had invented), and nitroglycerine, made it possible for the CP to blast cuts and long tunnels through the Sierra Nevada granite, working around the clock in three shifts every twenty-four hours. Thousands of Chinese railroad workers died in snow slides, landslides and explosions.

The Chinese accomplished a marvel of railroad construction. The Summit Tunnel alone was 7,024 feet above sea level in the Sierra Nevada, and was blasted so accurately that the halves of the tunnel met in the middle to within two inches of matching up perfectly. All the work was done by hand. Of all the Big Four investors for whom you built the railroad, only Charlie Crocker ever publicly praised or thanked your group for all you accomplished. Now you want to be thanked publicly, for all the world to hear.

“Patrick O’Rourke”, speaking for the Irish workers on the Union Pacific Railroad

Your group was by far the most numerous building the UPRR. You were recruited in Ireland, and came to the United States by the thousands to work on the railroad. There were not enough workers already in the United States were willing to do such backbreaking work, and the railroad builders were in a hurry. So they brought you over.

You lived in one of the bunk cars (converted box cars), along with seventy-seven others in bunks. You workers were paid \$2.50 to \$4.00 each day, depending on the work, and had to pay \$5 per week for room and board. Irish-Americans were usually the ones hired to supervise teams of workers, as well as to do the spiking, grading, track laying and so on; very precise work. You learned your jobs quickly, and were immensely strong and tough workers. You worked hard, played hard, and many of you drank hard off duty. From time to time you got into fights. You also read, wrote and sang songs, and told stories. You suffered many accidents when hands got bashed by sledgehammers, and when explosions detonated too soon as cuts were being blasted in hillsides and through the Rocky Mountains.

When the CPRR reached Utah, your team was laying track near the Chinese team of the CPRR. Congress had not yet specified where the tracks were to meet, and both sides wanted to make more money by building more track. In order to slow the CPRR builders down, Irish workers attacked and fought with the Chinese workers. When the Chinese fought back, the Irish planted explosives that killed several Chinese workers. The fighting and sabotage did not stop until the Chinese set off explosives nearby that buried several Irish workers alive in a cascade of dirt and rocks.

Now the track is completed. You are proud of what you were able to accomplish, and have exciting stories to tell. You plan to stay in the United States and make your home here. You want the world to know that the Irish made this railroad possible – who else would have done such good work in so short a time under such appalling conditions?

Jack Ellison (and if an extra is needed, “John Henry”), speaking for Freedmen workers on the Union Pacific Railroad (John Henry, the “steel-driving” man of railroad legend and song, worked on a later railroad, and died in the effort to keep up with the pace of new machine technology. The name was borrowed for this simulation.) There are about three hundred of you who have been working on the transcontinental railroad, and you have accomplished something important. You have proved to the nation that former slaves have the initiative, the perseverance, the sheer grit, to work as hard and skillfully as people who have been free all their lives. You have worked alongside Irish workers, alongside immigrants from other countries, and have been a vital part of the construction teams. You got to know them and they got to know you. You have suffered from the heat and cold and dust, from the long hours and hard living conditions. With all the other workers you have gone months at a time without being paid, and kept on working. You have done the hardest jobs, dealt with insults, held your own and earned everyone’s respect. You are proud of your accomplishments. You took the job because you wanted the work, you wanted to get away from where your family once lived in slavery, you wanted to see the country, you wanted an adventure, and you had something to prove.

This railroad will tie together the whole nation. It will open up opportunities in far places for you and the ones you love. It will open up communities in the West where you may decide to become a homesteader, and have land of your own. Working on this railroad has been the beginning of a new life for you. You want the world to know that you, too, are an American citizen and have played a big part in growing this nation – during slavery, and now in freedom.

Brigham Young, leader of the Mormons (Church of Latter Day Saints) and Mormon railroad workers

Brigham Young, you are the charismatic second leader of the Mormons, who led your followers out across the Great Plains to the Utah territory, where they founded Salt Lake City. When Joseph Smith was murdered, you took over the huge organizational and religious challenge of leading the Mormons, and of helping them find a place where they could create a godly society on earth according to their beliefs. Under your leadership, the Mormons have prospered and Salt Lake City has become the only major white settlement between the Mississippi River and California along the route taken by the railroad.

Your Mormon workers have been vital to the completion of the railroad, particularly to the Union Pacific branch. They are hardworking, sober (they don't drink alcohol and are never hung over) and honest. They avoid the rowdies in Hell on Wheels. They are excellent at teamwork. They will faithfully carry out any work agreement to which you have committed them and for which they have signed a work contract. When there were not enough reliable Irish and freedmen workers available, the Mormons undertook to help complete the job for the Union Pacific. It was, in your view, an act of God which sent a plague of grasshoppers in 1868. The grasshoppers by the millions ate up the Mormon crops and left many men free (and needing money) to go work on the railroad.

For you, Brigham Young, and your fellow Mormons, the construction of the railroad will mean that you are able to communicate easily once again with friends and family far away. You will be able to send out missionaries more easily, bring more of the faithful to Utah, and expand trade for your farm products. You were disappointed that this first railroad line will not go right through Salt Lake City, but you have accepted the judgment of the surveyors as to the best route for the track. Since the Union Pacific owners are having difficulty finding enough money to pay your workers, you will agree to accept payment in leftover equipment and supplies (rails, spikes, ties, etc.) With these materials, you and your workers will complete a spur line to Salt Lake City within a year, linking you to the main line.

Without Brigham Young's leadership and remarkable organizational abilities, and the skill and heroic efforts of the Mormons, it would have been impossible for the Union Pacific part of the line to be completed so swiftly or so well. You want the world to know of and respect your contributions. Perhaps this will help overcome some of the religious and lifestyle prejudices against your people.

Anna Judah, wife of Theodore Judah, surveyor of the route taken by the Central Pacific railroad

The Central Pacific railroad was your husband's idea. In his surveying and mapmaking explorations of the Sierra Nevada, he found the mountain pass which made it possible to cross the Sierra by going across (and through) one ridge instead of two. Theodore Judah spent years exploring the mountains and surveying the best places to put the track of a railroad, so that it would be able to move through the mountains along a gradient not too steep or dangerous. His precise maps guided the railroad builders.

Your husband was a visionary who became convinced that the railroad was possible and necessary to unite the huge United States from coast to coast. He dedicated his life to convincing politicians (and the Big Four) in California and Washington to pass the laws needed to start the project. He knew that only with government aid could the resources be raised to pay for such a huge project.

Theodore Judah died before the project was completed. You helped him in his efforts to lobby Congress, to explore and survey the mountains. You believe that his spirit is hovering over this great event. You know that without Theodore Judah's persistence and dedication, this day would never have come to pass. You want to make sure that his contribution is not forgotten.

Spotted Tail, Lakota warrior, speaking for Plains Indians displaced by the railroad

These prairies, and the bison who roam them still in herds numbering tens of millions, are vital to your way of life. You have been fighting for ten years to keep control of the Great Plains, and you are worried. Already you can tell that the bison herds are being unsettled by the railroad. The bison do not like crossing the raised grade of gravel and sand on which the ties and track rest. The bison have been shot in large numbers (by people like “Buffalo Bill” Cody) to feed the construction crews. Railroad travelers using the track already completed have started shooting the bison from the train windows, just for sport. The herds are being shot for skins and tongues, and their bodies are left to rot where they lie. Where the railroad track has gone, already settlers are moving in and building towns, plowing up the prairie, bringing in herds of cattle, driving your people and the bison further away. No wonder you attacked the railroad construction crews, and tried to drive them away. You want all these people out of your territory.

You are proud of your nomadic, hunting way of life. It has made your people strong and skillful and kept you healthy. The United States government has repeatedly made treaties with your leaders promising to keep settlers off your lands and has repeatedly broken these treaties. When settlers do not obey the treaties and move into Indian Territory, the government soldiers protect the settlers. Sometimes they attack and kill peaceful Indians who did not disturb the peace. They punish some Indians for attacks committed by different Indians. It is not fair.

You were not asked for permission, or offered any payment for the use of the land on which the railroad was built, and it is destroying your way of life. You hope that the reporter(s) will tell your story and concerns to the people in the cities. Tell them to leave the Great Plains alone. Tell them to stay away from the bison and stay in their cities. Tell them to let you live your lives.

NOTE: There are no buffalo in North America, but this has long been the name given to Bison. Where historically appropriate for a name, I have kept Buffalo in place, but have used the word Bison to denote the large plains mammal.

(Please review this section for content and decide if it is grade/age appropriate for your class!)

Tavern Keepers, “soiled doves”, gamblers, preachers and bookstore owners in Hell on Wheels (pick your role from this list, and create a name for yourself)

You speak as a representative for all those who work in the traveling town (nicknamed “Hell on Wheels”) near the construction front of the Union Pacific railroad. The town is thrown together from flimsy materials, and many tents. Every week or so the town relocates as the railroad construction moves rapidly forward. The workers use the traveling town for recreation, as an escape from the hard conditions of work on the railroad. The railroad workers have their own dormitory and dining hall railroad cars, but often turn to Hell on Wheels to let off steam, to buy a book or a drink or the comfort of a woman’s company, or to hear a sermon. Your town is rough, but you are convinced that your services are necessary and in demand by the railroad workers – or the town would not exist! Yes, there is an average of one murder per day in Hell on Wheels, often over gambling. Yes, the construction bosses wish you would all go away and leave the workers to sober up. However, you argue that the workers are only human. The prairies are wide and lonely, bitterly cold in the winter, blistering hot in the summer, dusty and windy at any time of the year. The work is dangerous. No wonder the men seek comfort. You want Hell on Wheels to be part of the story of the transcontinental railroad and its construction. Your town will fold and go away in a few days when the railroad is all built – but you don’t think it should be forgotten or overlooked!

Bibliography:

Ambrose, Stephen E.; *Nothing Like it in the World: The Men Who Built the Transcontinental Railroad, 1863-1869*. New York: Simon and Schuster, 2000)

Simulation courtesy of Andrea Volckmar, DeWitt Middle School, Ithaca City School District

The Transcontinental Railroad

Quiz

Please circle the best answer for the following questions:

NAME: _____ DATE: _____

- 1) What 2 events occurred that made it possible to pass the Pacific Railway Act in 1862?
 - a. A warm winter and plenty of supplies.
 - b. Election of President Lincoln and the Succession of the southern states.
 - c. Invention of the steam locomotive and the telegraph.
 - d. The Civil War and General Dodge.

- 2) General Grenville Dodge was:
 - a. A noted biologist.
 - b. Living in Texas.
 - c. Chief Engineer for the Union Pacific Railroad.
 - d. Our first astronaut.

- 3) The Union Pacific Railroad began building from
 - a. Omaha, NE.
 - b. Cheyenne, WY
 - c. New York, NY
 - d. Sacramento, CA

- 4) The Sioux and Cheyenne
 - a. Helped to build the railroad.
 - b. Lived in California.
 - c. Bought land from the Union Pacific.
 - d. Resented the railroads coming into their territory.

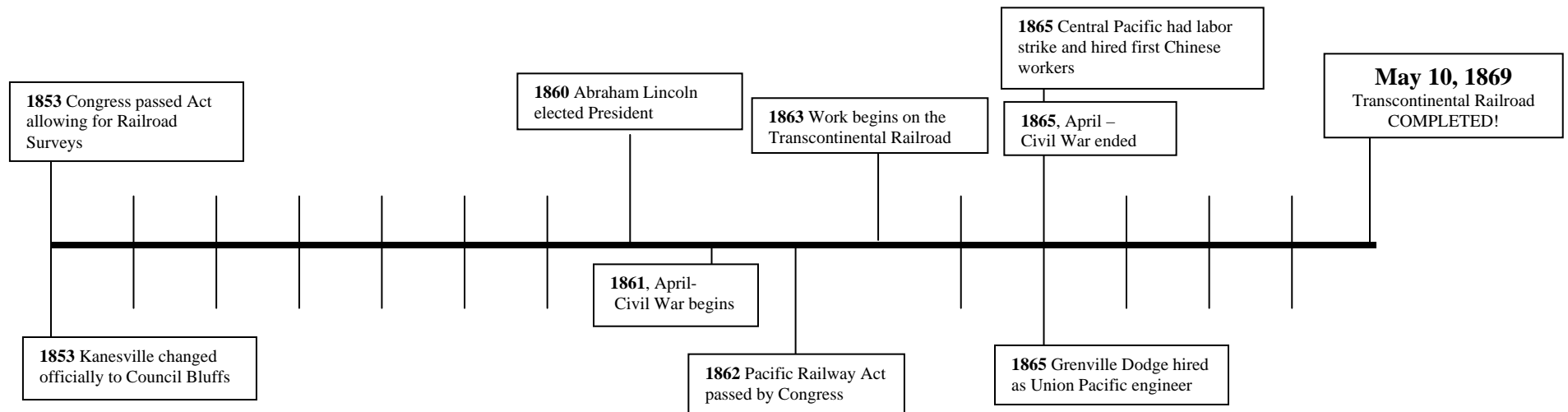
- 5) The Central Pacific Railroad began building from
 - a. San Francisco, CA
 - b. Sacramento, CA
 - c. Los Angeles, CA
 - d. Denver, CO

- 6) Laborers from this country helped to build the railroad through the Sierra Nevada mountains.
 - a. Chile
 - b. China
 - c. Mexico
 - d. Japan

- 7) Which President passed the Pacific Railway Act in 1862?
 - a. Bush
 - b. Clinton

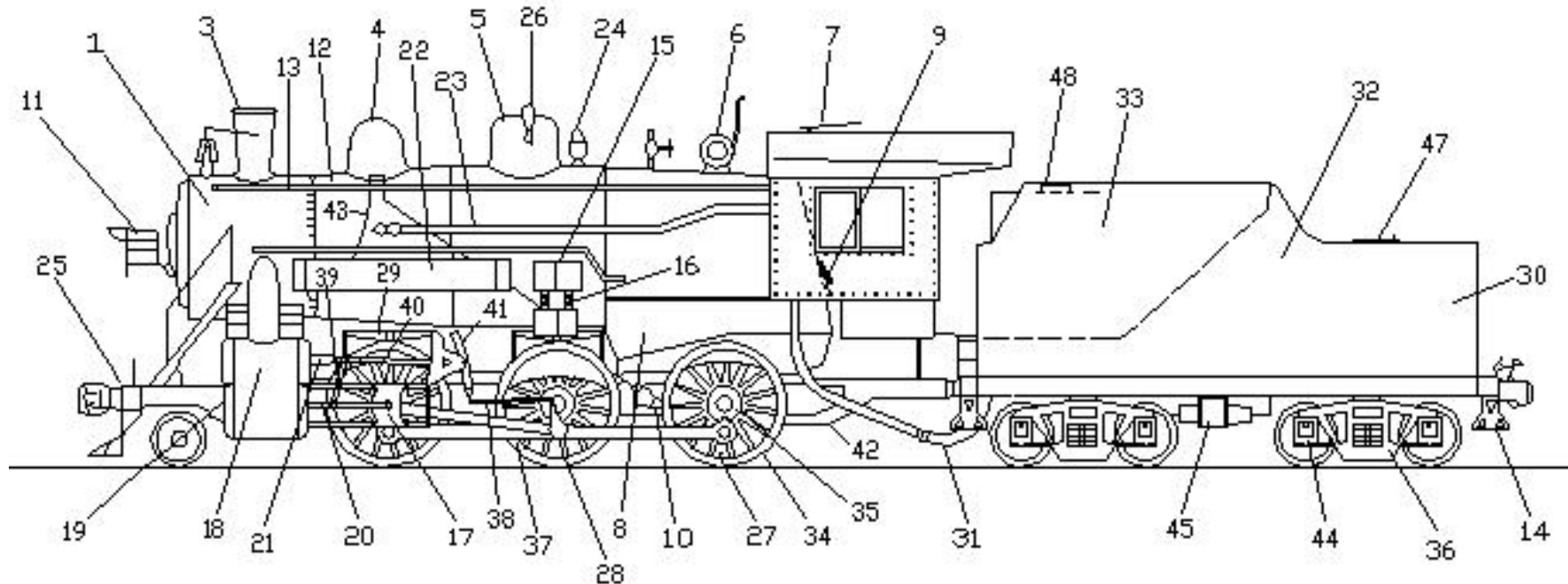
- c. Lincoln
 - d. Garfield
- 8) Abraham Lincoln met Grenville Dodge in which Midwestern city?
- a. Omaha, NE
 - b. Council Bluffs, IA
 - c. St. Louis, MO
 - d. Kansas City, KS
- 9) The Transcontinental Railroad was completed at
- a. Cheyenne, WY
 - b. Salt Lake City, UT
 - c. Promontory Summit, UT
 - d. Lincoln, NE
- 10) These two groups of people helped to build for the Union Pacific Railroad
- a. Irish Americans and Civil War Veterans
 - b. Polish Americans and World War I Veterans
 - c. Spanish American War Veterans and Mexican Americans
 - d. Vietnam Veterans and Native Americans

Transcontinental Railroad Timeline



The Transcontinental Railroad

Anatomy of a Steam Locomotive

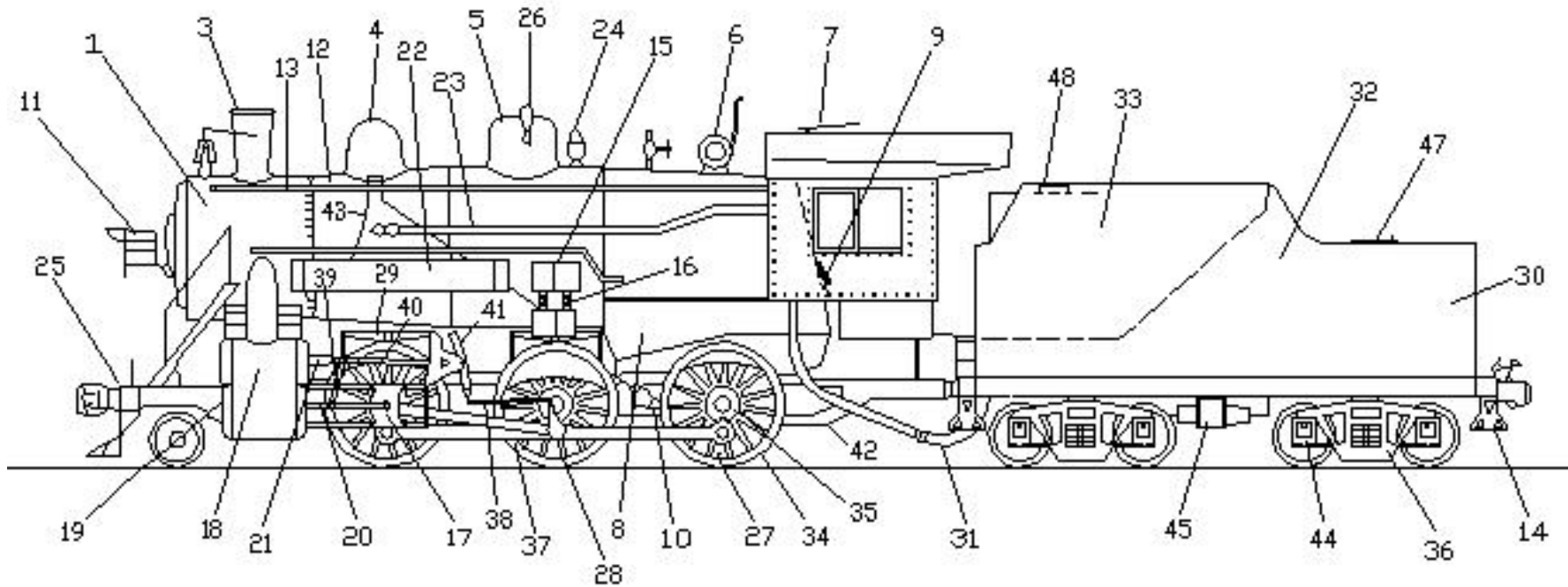


<http://www.threeriversrambler.com/innerworkings.html> for additional information about how a steam locomotive works!!

1. Smokebox	11. Headlight	21. Valve Stem	31. Tank Hose	41. Reverse Link
2. Boiler (tubes) front	12. Boiler jacket	22. Air Tank	32. Water Compartment	42. Frame
3. Stack	13. handrails	23. Delivery Pipe	33. Coal Compartment	43. Sand Pipe
4. Sand Dome	14. Steps	24. Safety Valves	34. Driver	44. Journal Box
5. Steam Dome	15 Air Compressor	25. Pilot	35. Driving Wheel Axle	45. Brake Cylinder
6. Turbo-generator	16. Air Compressor Piston	26. Whistle	36. Tender truck	46. Smokebox Door (on front)
7. Cab (with Roof hatch)	17. Crosshead	27. Side Rod	37. Main Rod	47. Water hatch
8. Firebox	18. Steam Chest	28. Eccentric Crank	38. Eccentric rod	48 Hatch to Oil Compartment (Used with oil Fired Locomotives)
9. Firedoor	19. Cylinder	29. Springs	39. Combination lever	
10. Ashpan	20. Piston Rod	30. Tender	40. Radius Rod	

The Transcontinental Railroad

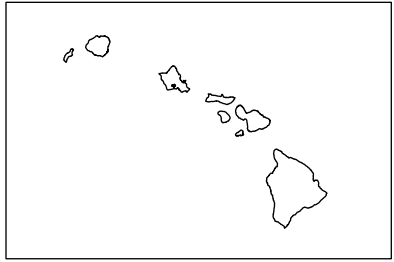
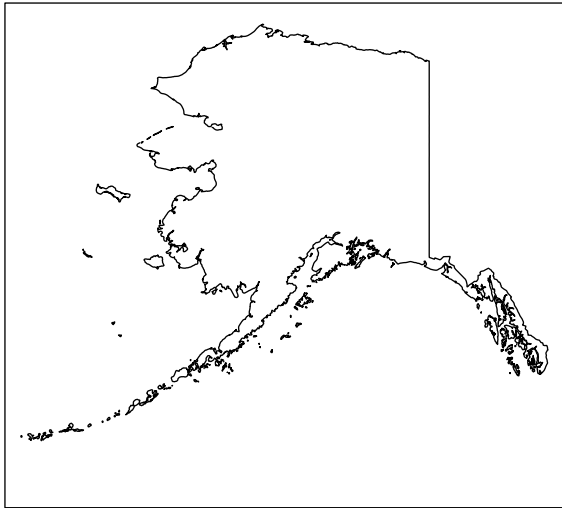
Anatomy of a Steam Locomotive



Please write the number of the locomotive part next to its name.

Firebox _____ Valve Stem _____ Steam Dome _____ Stack _____ Cab _____

Boiler (Tubes) _____ Cylinder _____ Piston Rod _____ Smoke box _____

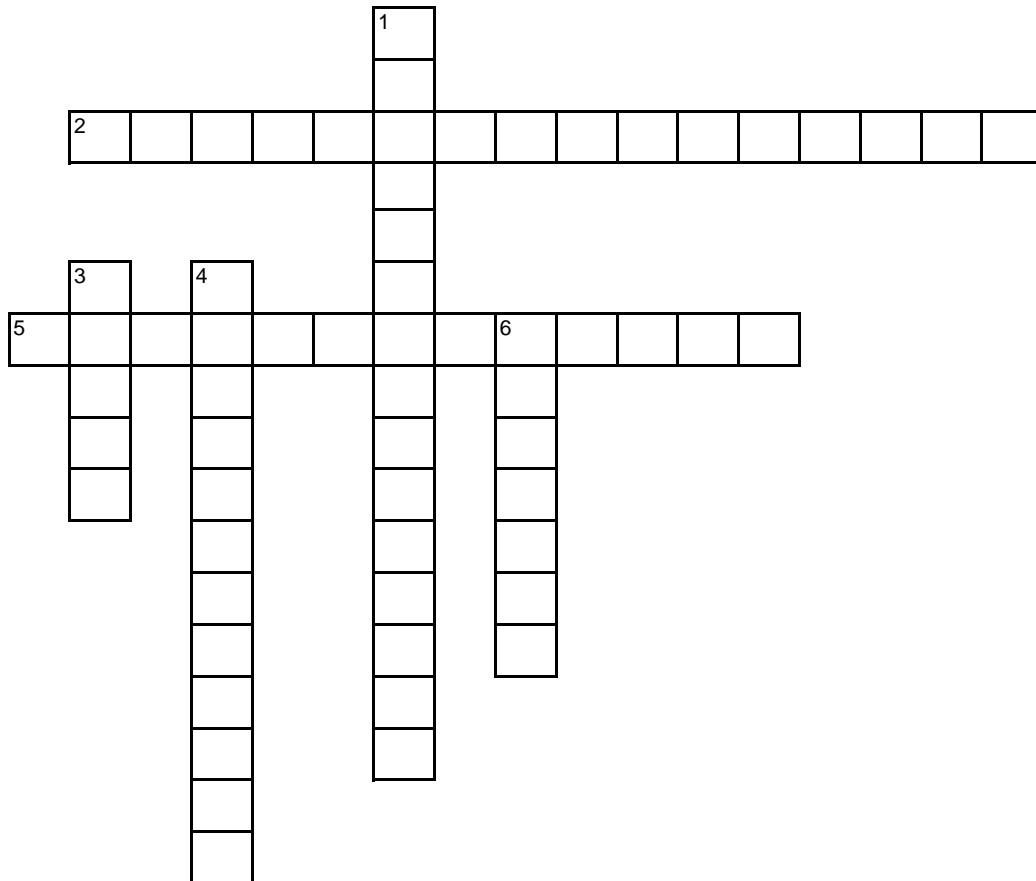


The United States

(not to scale)

Union Pacific Railroad Museum

Transcontinental Railroad



Across

2. The Transcontinental Railroad met at _____, Utah.
5. The city where Abraham Lincoln met Grenville Dodge

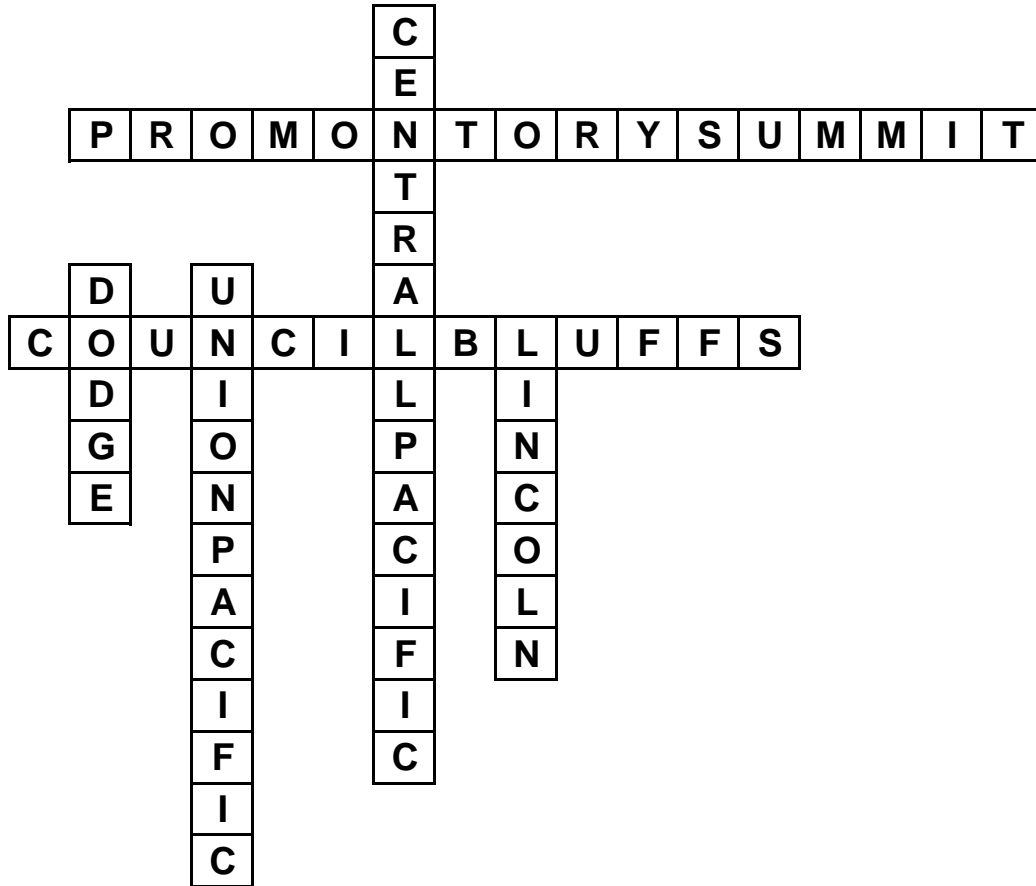
Down

1. The Railroad Company beginning in Sacramento, California.
3. The Chief Engineer for the Union Pacific Railroad.
4. The Railroad Company beginning in Omaha, Nebraska.
6. The President who passed the Pacific Railway Act

Union Pacific Railroad Museum

Answer Key

Transcontinental Railroad



Across

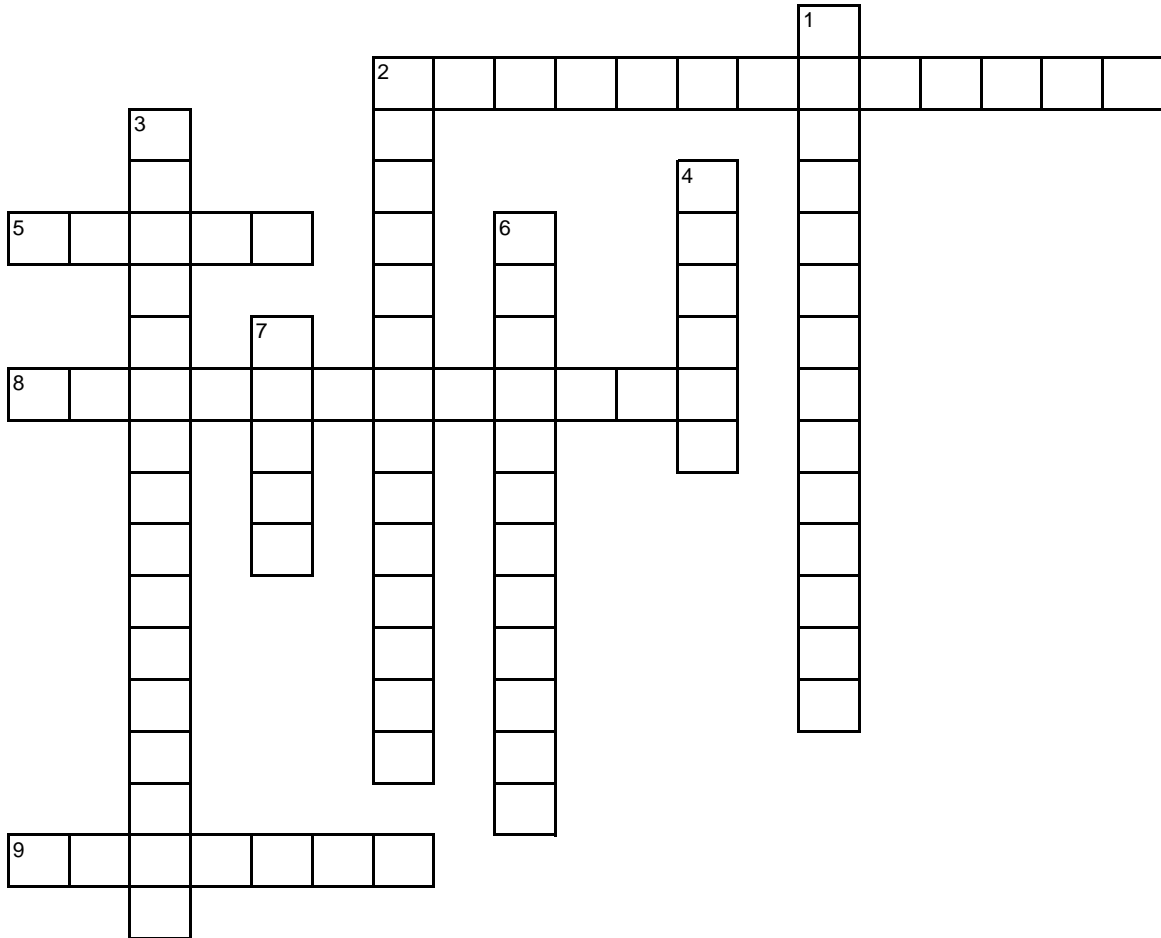
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Union Pacific Railroad Museum

Transcontinental Railroad



Across

2. The City where Abraham Lincoln met Grenville Dodge.
5. A Plains tribe angry at the Railroad.
8. The Chief Engineer for the Union Pacific Railroad.
8. People who came to live in the West were often called _____.
9. These people made up the largest part of the Central Pacific's workforce.

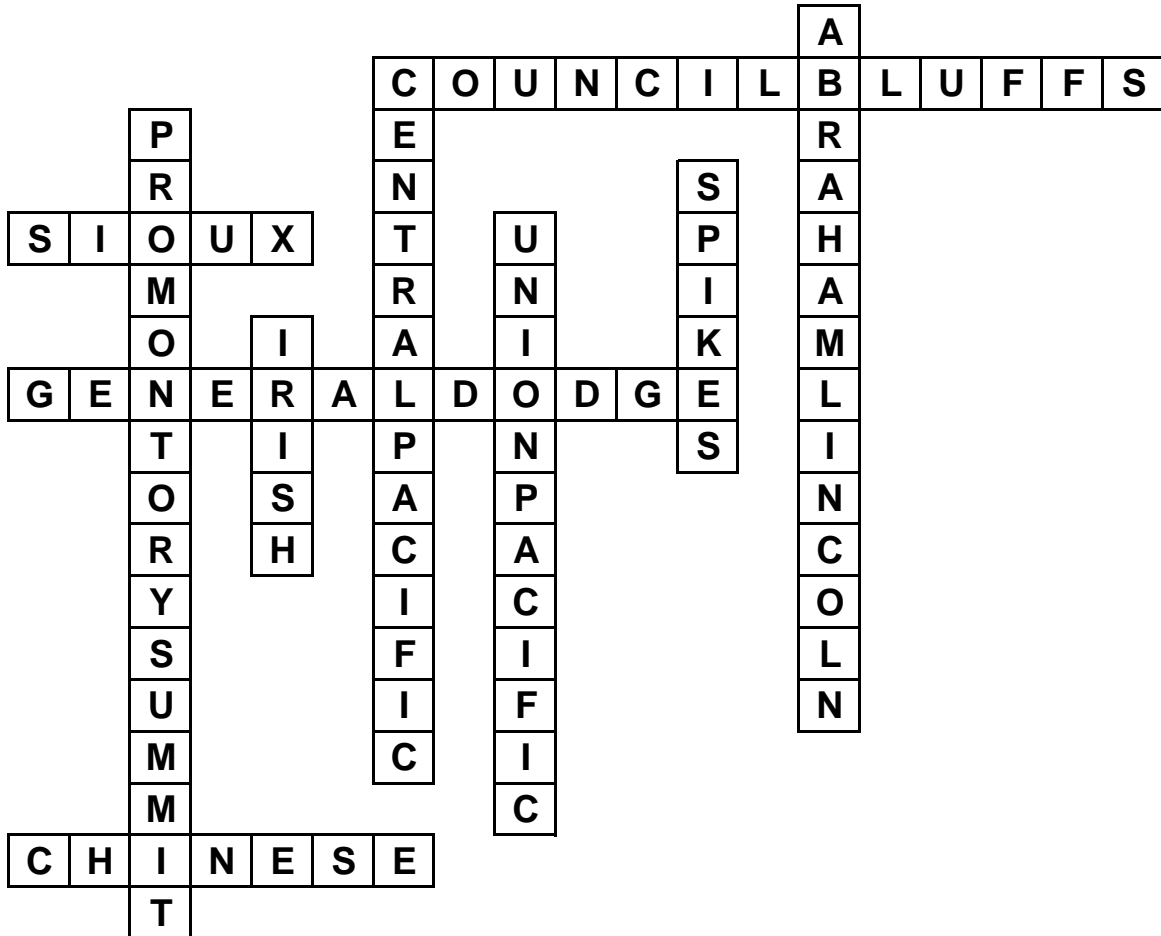
Down

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3. The Transcontinental Railroad met at _____, Utah.
4. Golden _____ were used to symbolically join the railroads together.
6. The Railroad Company beginning in Omaha, Nebraska.
7. The _____ made up the bulk of the Union Pacific's workforce.

Union Pacific Railroad Museum

Answer Key

Transcontinental Railroad



Across

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Union Pacific Railroad Museum

Transcontinental Railroad

Instructions: Find the words from the word bank in the puzzle below.

The words may be spelled across, down, diagonally, either forwards or backwards.

Good Luck

T	T	O	D	S	A	C	R	A	M	E	N	T	O	U
A	F	S	N	I	A	T	N	U	O	M	H	S	E	N
M	E	G	D	O	D	L	A	R	E	N	E	G	S	I
C	I	F	I	C	A	P	L	A	R	T	N	E	C	O
B	K	B	F	H	E	X	G	U	P	L	S	M	V	N
X	G	J	A	R	R	S	D	S	M	I	N	G	C	P
B	M	M	N	S	Q	A	E	J	I	R	I	S	H	A
A	O	I	C	S	K	A	S	N	U	G	A	H	V	C
H	R	P	I	R	G	A	R	W	I	E	L	X	N	I
G	M	T	R	Q	U	T	K	U	Y	H	P	B	Q	F
X	E	Q	Z	S	O	K	K	M	H	H	C	Q	K	I
A	B	R	A	H	A	M	L	I	N	C	O	L	N	C

Abraham Lincoln
General Dodge
Omaha
Union Pacific
Central Pacific

Irish
Chinese
Plains
Mountains
Sacramento

Union Pacific Railroad Museum

Answer Key

Transcontinental Railroad

Instructions: Find the words from the word bank in the puzzle below.

The words may be spelled across, down, diagonally, either forwards or backwards.

Good Luck

T T O D S A C R A M E N T O U
A F S N I A T N U O M H S E N I
M E G D O D L A R E N E G S I
C I F I C A P L A R T N E C O
B K B F H E X G U P L S M V N
X G J A R R S D S M I N G C P
B M M N S Q A E J I R I S H A
A O I C S K A S N U G A H V C
H R P I R G A R W I E L X N I
G M T R Q U T K U Y H P B Q F
X E Q Z S O K K M H H C Q K I
A B R A H A M L I N C O L N C

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General Dodge
Omaha
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Irish
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Good Luck

X O C A V C P E D Z R T U U S B C P E O
Z Z T P B O H K L U G N W N S Y O T M H
A C V N T R S E V T I B O Y D M U F I R
R X B Z E K A Z Y O S W H C I Q N R G Q
S Z R O S M U H N E S E C C R Y C E R W
W D H X Y K A P A H N Z R T I H I T A H
B I U S I A A R E M J N C T S J L I N R
K I G W O C W D C A L A E S H S B P T M
D R B A I E Y O U A Y I H R I W L U F O
X W H F M C S R Q A S V N X B V U J L U
M V I C F H G L W N P Q P C Q W F Y M K
I C E G D O D L A R E N E G O P F R A V
C N E S E N I H C W Q V Y S Z L S O L C
C E N T R A L P A C I F I C E F N T B V
N R X U R O H Q J N F O V N D G T N W H
Q O A M Z V M O B C U V N S E G V O B B
W H A R Z L M A S X V U N O N M K M Q M
G F Z I H P N W H M T Z V X P C K O P Q
S U R V E Y O R Y A E S O T F K D R I X
B R I D G E G A R C I G U O T V U P W I

Abraham Lincoln
General Dodge
Omaha
Union Pacific
Central Pacific

Irish
Chinese
Sacramento
Jupiter
Railway Act

Promontory
Surveyor
Trestle
Snowshed
Tunnel

Sioux
Cheyenne
Council Bluffs
Emigrant
Bridge

Union Pacific Railroad Museum

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Good Luck

X O C A V C P E D Z R T U U S B C P E O
Z Z T P B O H K L U G N W N S Y O T M H
A C V N T R S E V T I B O Y D M U F I R
R X B Z E K A Z Y O S W H C I Q N R G Q
S Z R O S M U H N E S E C C R Y C E R W
W D H X Y K A P A H N Z R T I H I T A H
B I U S I A A R E M J N C T S J L I N R
K I G W O C W D C A L A E S H S B P T M
D R B A I E Y O U A Y I H R I W L U F O
X W H F M C S R Q A S V N X B V U J L U
M V I C F H G L W N P Q P C Q W F Y M K
I C E G D O D L A R E N E G O P F R A V
C N E S E N I H C W Q V Y S Z L S O L C
C E N T R A L P A C I F I C E F N T B V
N R X U R O H Q J N F O V N D G T N W H
Q O A M Z V M O B C U V N S E G V O B B
W H A R Z L M A S X V U N O N M K M Q M
G F Z I H P N W H M T Z V X P C K O P Q
S U R V E Y O R Y A E S O T F K D R I X
B R I D G E G A R C I G U O T V U P W I

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