

# How to Write with an Expert

NAME: \_\_\_\_\_

DATE: \_\_\_\_\_

*The Transcontinental Railroad was the most important event in American History.*

☐ REASON #1:

☐ REASON #2:

☐ REASON #3:

*Directions: Here are some expert opinions. Please choose the best facts that support your thesis statement and match it to Reason #1, #2, or #3. If the fact does not match, write “Not Applicable” in the space provided.*

Reason	EXPERT QUOTES	EXPERT NAME & QUALIFICATIONS & DATE

Directions: You will research some expert opinions. Please choose the most relevant experts. Be sure to list the source information, as much as you are able to find.

TOPIC: \_\_\_\_\_

Information from an expert	Name of Expert	How is this person qualified as an expert?	What date was this published?

How to write with an expert: More Support

NAME: \_\_\_\_\_

DATE: \_\_\_\_\_

*The Transcontinental Railroad was the most important event in American History.*

- REASON #1: People can now travel from one ocean to the other ocean, carrying goods, cultures and ideas.
- REASON #2: The city of San Francisco and the city of New York grew, leading to the wealth of our country.
- REASON #3: Opportunity for all increased, from freed slaves, to new immigrants, to all dreamers, from all walks of life.

Directions: Here are some expert opinions. Please choose the best facts that support your thesis statement and match it to Reason #1, #2, or #3. If the fact does not match, write “Not Applicable” in the space provided.

Reason	EXPERT QUOTES	EXPERT NAME & QUALIFICATIONS & DATE
	“The road must be built, and you are the man to do it. Take hold of yourself. By building the Union Pacific, you will be the remembered man of your generation.”	Abraham Lincoln, 1865
	“Within ten years of its completion, the railroad shipped \$50 million worth of freight coast to coast every year.”	PBS, Public Broadcasting System Non-Profit Education Organization
	“Railroads were also needed in the West to provide better postal service.”	Library of Congress

## *Subject: Transcontinental Railroad*

*Article Citation:* By History.com, adapted by Newsela staff Published:06/06/2017

### *Article:*

In 1862, the U.S. government made a law called the Pacific Railroad Act. The law involved two companies: the Central Pacific Railroad Company and the Union Pacific Railroad Company. The law let both companies work on a railroad to connect the entire United States from east to west.

The Central Pacific Railroad Company started building tracks in the west. The Union Pacific started in the east. The two companies raced toward each other over seven years. Both faced great difficulties before they met in Utah, in 1869.

America's first steam train engine was shown in 1830. Burning coal was used to heat water that turned into steam. The steam-powered engine made the train move. Over the next 20 years, railroad tracks connected many cities on the East Coast.

In the 1800s, American settlers were moving west to set up homes on new land. Even more people moved west after gold was discovered in California. However, the trip by land was dangerous and difficult.

### *Building through the mountains*

In 1860, a young engineer named Theodore Judah wanted to find a better solution. He decided the best path was through Donner Pass. This route went through the Sierra Nevada mountains in California. Judah wanted to build a railroad across the pass, so that people could cross the country more easily.

Judah started the Central Pacific Railroad Company and went to Washington, D.C. He helped convince government lawmakers and President Abraham Lincoln to support the railroad project. Then the government made the Pacific Railroad Act.

The act said the Central Pacific Railroad Company would start building in Sacramento and continue east. The Union Pacific Railroad would start from Omaha, Nebraska. The government would give each company land and money for every mile of track built.

The two companies had to compete with each other. Both wanted to build as much of the railroad as possible, in order to get more land and money.

### *Union Pacific moves west after the Civil War*

There were other ways of making a profit too. Thomas Durant was the main owner of the Union Pacific. He paid lawmakers in the U.S. government. These lawmakers made the government give extra money to Union Pacific, even if it was not needed. Some owners of the Union Pacific made a lot of money this way.

The Union Pacific was started in 1863, but could not build much at first because the Civil War was happening between the North and South.

The Civil War ended in 1865. In 1866, the Union Pacific Company finally began to move west. The workers were attacked by Native Americans, who were trying to protect their territory. Members of the Sioux, Arapaho and Cheyenne tribes felt threatened by the white man and his trains, which they called "iron horses." Still, the Union Pacific was able to move quickly across the plains.

### *Central Pacific hires Chinese workers*

The Central Pacific was much slower, because its railroad had to pass through the mountains. In 1865, the company began hiring Chinese workers who were living on the West Coast. White Americans were racist toward the Chinese. Yet the Chinese were hard workers, so Central Pacific continued to hire them. By 1867, thousands of Chinese were doing dangerous work in the mountains. Meanwhile, the workers of the Union Pacific were Irish immigrants who were veterans from the Civil War.



By the summer of 1867, the Union Pacific had gotten farther than the Central Pacific. The Central Pacific workers didn't break through the mountains until June. But now the hard part was behind them.

### *The railroad is finished*

Both companies rushed to build as quickly as possible. The work started getting even less safe. Workers built weak bridges or tracks that had to be rebuilt later.

At the beginning of 1869, the companies were close to each other. The new president, Ulysses S. Grant, made them decide where to make the railroads meet. They decided on Promontory Summit in Utah. On May 10, the tracks were finally connected. The news was sent to President Grant and the whole country. The transcontinental railroad was complete.

## *Subject: Chinese Workers. A Narrative*

*Article Citation:* By Ava Chin, The Washington Post    Published:05/20/2019

### *Article:*

One of the earliest stories I heard as a child was that my immigrant great-great-grandfather worked out West on the first transcontinental railroad. Yuan Son, along with tens of thousands of other Chinese workers, blasted tunnels, carved footholds and laid grade at death-defying heights through the most arduous parts of the Sierra Nevada, miraculously making it out alive. I envisioned him tough and swashbuckling - a cross between my tall, bartender grandfather, who often told me these stories while smoking a Marlboro in our home in Queens, and Yosemite Sam.

My great-great-grandfather and his fellow laborers toiled around the clock in rotating shifts, handling explosive nitroglycerine, blasting through miles of granite, hauling tons of rock and dirt, even in upwards of 30 feet of snow. They endured brutal working conditions we would consider unconscionable today to complete the most difficult sections through the Sierra Nevada - the same terrain that stopped the ill-fated Donner Party in its tracks - and finally out to Nevada and Utah's blistering desert heat. They were paid less and worked longer hours than their Irish or American counterparts, and they had to provide their own food and accommodations. Although some claimed it could never be done, Yuan Son and other Chinese workers completed the task in record time.

It wasn't until, as an adult, I traveled to Promontory Summit, Utah, and saw the site of the railroad's completion with my own eyes that I realized the true weight of this legacy. The railroad is a complicated affair for Chinese American descendants like me: The greatest U.S. engineering feat of the 19th century may have physically unified the country when it was finished in 1869, but this new network of rail also brought scores of white workers to the West, many of whom grew resentful when they saw Chinese holding down jobs they considered rightfully theirs. Not 15 years after the completion of the railroad, this ire, coupled with a severe economic depression, helped usher in the Chinese Exclusion Act - the country's first major federal law that limited immigration based on race, class and nationality - setting the tone for future wide-reaching restrictive immigration policies.

My great-great grandfather was a teenager when he arrived in California, a mere boy, one of upwards of 20,000 Chinese, mainly from the Pearl River Delta area (in Guangdong province), who made up the majority of the Central Pacific Railroad workforce. He, like most of the others, was raised in a poor farming family, in a country that had been hammered by drought, famine, Western colonialism, warlordism and one of the bloodiest civil wars of the 19th century - conditions that would look familiar to many refugees and migrants today. So when the opportunity arose to feed his family by working for a railroad an ocean away, he took it.

As a schoolgirl, I scanned the official photograph that came to symbolize the railroad's completion - engineers shaking hands, flocks of laborers posing for the camera, the champagne toast, a carefully choreographed scene - more than 100 years later, searching for faces like my great-great-grandfather's. Only white faces stared back. Chinese workers were written out of this triumphant American story.

Their contributions were already being erased when Chinese Exclusion was enacted, and soon followed by a tsunami of anti-Chinese violence that swept across much of the West - lynchings, expulsions, boycotts of Chinese businesses, politicians jumping on the bandwagon. Nativism was as popular and potent then as it is today. Yuan Son, now an entrepreneurial shop owner, had happily settled in Idaho, where, after the railroad's completion, Chinese made up close to 30 percent of the population. Although he had been living in the country for almost 30 years, one day he was forced out of his home at gunpoint by a band of masked vigilantes.

Despite these hardships, Yuan Son resettled back into life in China and surprisingly spoke of the work he had done on the railroad with great pride. He even taught my grandfather his first words in English: "Central Pacific," "Southern Pacific" and "Union Pacific." My chain-smoking grandfather repeated these names back to me through his ringing Cantonese intonations, in our home half a world away, as if he were a conductor calling out stations.

As the government now attempts to rally support for ever more stringent immigration policies, I can't help reflecting on railroad pioneers like Yuan Son. These men risked their lives hammering and detonating gunpowder, surviving avalanches and extreme conditions - engaging in the kind of backbreaking, chisel-to-granite "bone-work" that others refused to do. I am confronted by this complicated history, even as some wave patriotic flags amid cries to "make America great again." One hundred and fifty years ago, my grandfather's grandfather did help make this nation great, along with scores of his countrymen. So, what does that really mean, "Make America great?" We already made it great.



## *Subject: Modern Day Bullet Trains*

*Article Citation:* By Cricket Media, adapted by Newsela staff    Published:12/18/2019  
This story was originally published May 1, 1998, in Odyssey Magazine. © Carus Publishing Company

### *Article:*

The world's fastest train doesn't have an engine. Instead, it's powered by powerful electromagnets. An electromagnet is a magnet with an electrical current running through it.

These super fast trains are known as maglev trains. They use something known as magnetic levitation. It allows the trains to levitate, or float. These trains move at very high speeds. They go up to 600 kilometers per hour (around 370 miles per hour).

Japan, China and South Korea have maglev trains. Some cities in the United States are looking into having them. They include Baltimore, Maryland, and Washington, D.C.

### *Attraction And Repulsion*

To understand how maglev trains work, it helps to review magnetic forces. Every magnet has a north pole and a south pole. Opposite poles of two magnets attract each other. Like poles repel, or push each other away. This action of pushing away is called repulsion.

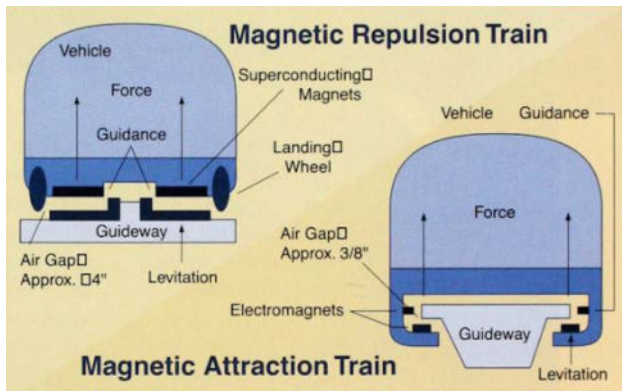
Permanent magnets, like iron, are always magnetic. Electromagnets are magnetic only when an electric current flows through them. An electrical current means there is a flow of tiny particles called electrons. The poles of an electromagnet are related to the direction of the current. If the direction of the current changes, the poles change too.

### *The Push And Pull Of Magnets*

To picture how a maglev train moves, think of three bar magnets lined up on the floor. The magnet in front pulls with an opposite magnetic pole. The magnet in back pushes with the same magnetic pole. The magnet in the middle moves forward.

Maglev trains are moved by electric motors located in the guideway. The guideway is the single track that the train sits on. The motors are long machines that contain a series of electromagnets. The electromagnets pull the train from in front. They push it from behind. The electromagnets can quickly change their poles. This continues to move the train forward.





## *Less Electricity Needed*

Some maglev trains levitate, or float, because like poles repel. They push the train upward. This system was designed for trains with groups of extremely powerful superconducting electromagnets. Superconducting is a state in which electricity moves freely through a metal without anything stopping it. These magnets use less electricity than conventional electromagnets, but they must be cooled to temperatures as low as minus 267 degrees Celsius (minus 450 degrees Fahrenheit).

Other maglev trains levitate by magnetic attraction. Here, like poles repel and push the train forward. Opposite poles attract and pull the car forward. Imagine a C-shaped bracelet floating around your wrist without touching it. Magnets on the underside of the guideway attract the opposite poles of magnets in the wraparound section of the track. This raises the train off the track a few centimeters into a "floating" position. The wraparound section does not touch the guideway.

Since the train doesn't touch the tracks, maglev trains have higher directional speed. They also use less energy and operate more quietly than regular trains.

## *Subject: Texas Expansion*

*Article Citation:* By Taylor Jung Published:10/20/2020

### *Article:*

Railroads in the late 1800s helped Texas to expand. At first, people settled in the eastern and southern parts of Texas, closer to river systems. Roads and rivers were not reliable for transportation.

The transportation system allowed people to move more easily. People could go westward. New land could be settled, which connected cities and towns within Texas and connected the area to other parts of the United States.

Railroads also helped farmers transport their goods, specifically cotton and cattle. As a result, Texas had an economic boom in the second half of the 1800s.

*All maps are sourced from the Library of Congress. Please zoom in to see map details.*

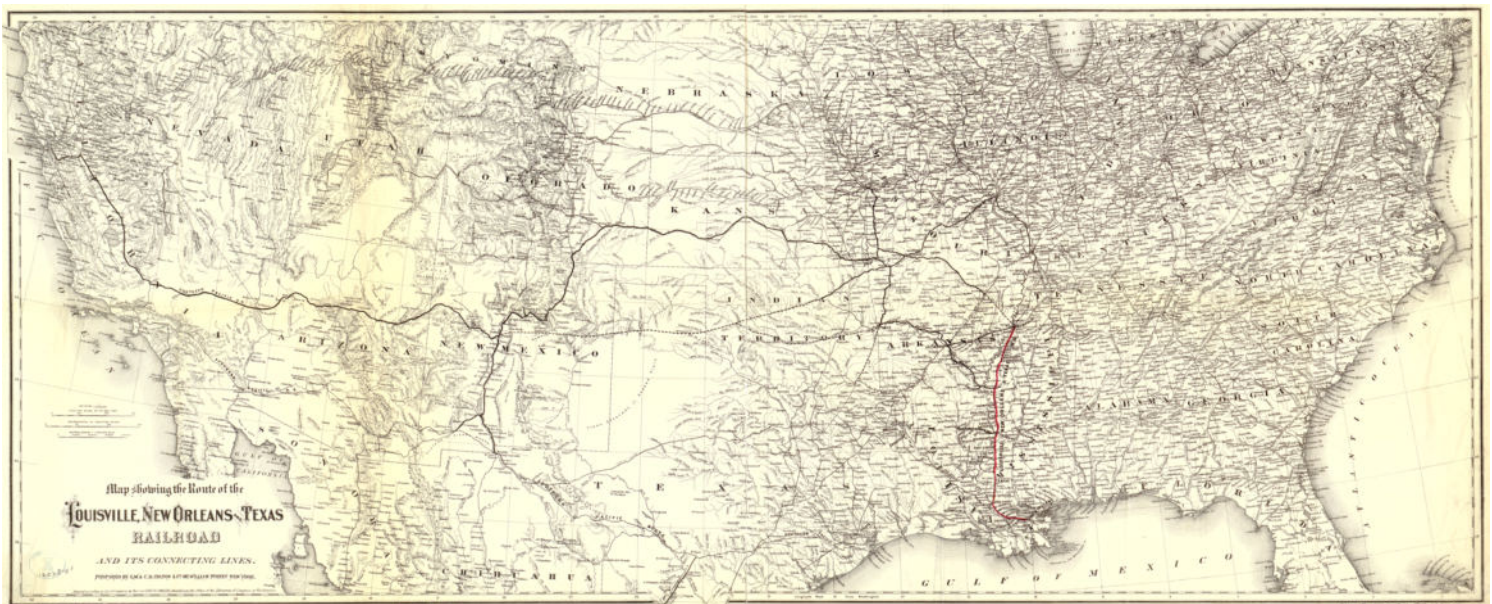


Image 3. Map showing the route of the Louisville, New Orleans, and Texas Railroad and its connecting lines from 1883.

## *Subject: Spreading Diversity*

*Article Citation:* By Atlas Obscura, adapted by Newsela staff Published:05/19/2021

### *Article:*

In February 1883, the cross-country "Sunset Route" rail line was completed. The Southern Pacific Railroad created a new path for Americans who wanted to migrate West. The line connected New Orleans, Louisiana, to California. It was the second cross-country connection between the Southeast and the Pacific.

The rail line brought new business to the West. It also shifted migratory patterns in a way that changed the new state of California. In particular, some of Los Angeles, California's present-day Black population has Creole influences. This is a direct result of the Sunset Route.

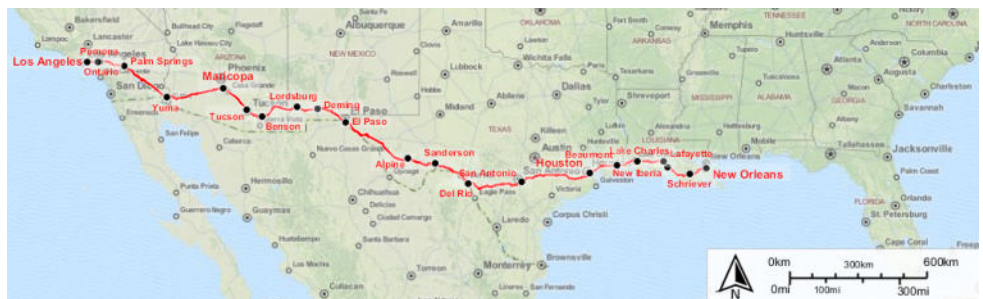
Four railroad businessmen were responsible for this rail line across the nation. They were Collis P. Huntington, Charles Crocker, Leland Stanford and Mark Hopkins. They were called the "Big Four." Huntington's company owned 85 percent of California's tracks. He wanted to expand by laying down a railway through the South. Huntington bought several smaller railroads, which eventually created the Sunset Route. Chinese immigrants did much of the dangerous labor to complete and connect the smaller railroads to create the Sunset Route. They were paid low wages.

When completed, the route covered 9,000 miles of track. It gave the "Big Four" complete control over the shipping business on the Pacific coast. This ensured that their interests in the ports there would be taken seriously. The railroad also moved goods through Los Angeles. This helped fuel the real estate boom, which took place later in the 1880s.

### *Sunset Route Brought Gains To Southern California*

California has had many economic booms. However, the financial gains that the Sunset Route

brought to the state were especially important to the state's economic development, said Faustina DuCros. She is a sociologist at San Jose State University. She teaches about society.



The Big Four could charge high shipping costs. In this way, they could make back the money they had invested to build the rail lines. Before, the city's main form of transit had been ox-carts and wagons. However, the Sunset Route helped open Los Angeles up to trade with other countries for the first time.

As a result of the economic possibilities California offered, the state began to attract people from other regions of the country. Black Americans from the South began migrating in large numbers to Los Angeles in the late 1800s and early 1900s. The South was segregated at the time under Jim Crow laws. These laws created much racial inequality and violence. Many Black Southerners moved West to escape this, DuCros said. They were looking for better work and educational opportunities for their families.

This direct line of transportation to California made starting a life there pretty easy. The number of Black Southerners and their descendants in California today reflects this common interest in leaving the shadow of slavery and segregation behind.

### *Many Black People Came From The South To Los Angeles*

The growth of the Black population in Los Angeles doubled from 1940 to 1950. They made their way via the rail lines, including the Sunset Route, DuCros said. Many of these migrants settled in the central area of the city, which was close to the rail station and jobs.

Some of these Southerners were seeking a new lifestyle and planned to find work once they arrived. For others, their work brought them to California. One example was the Pullman porters. The Pullman porters worked on passenger trains. Many of them were Black. They were among the first people involved in moving Black families westward in the Great Migration, DuCros said. They had seen California on their routes.

Today, Los Angeles still reflects the Southern influences that were brought to California along the railroad. There are restaurants and businesses offering Louisiana-inspired tastes in South Los Angeles. Some of the Catholic churches in South Los Angeles had a large population of church members from Louisiana. Clusters still remain to this day, DuCros said.

The Southern Pacific Railroad's Sunset Route has a new name. It is now known as Amtrak's "Sunset Limited" train. It has had an enduring impact on Southern California.