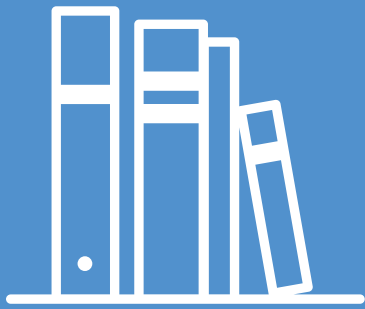


Los Angeles, California

Wells Fargo History Museum curriculum guide



Lessons



Activities

Wells Fargo History Museum, Los Angeles

Curriculum guide



Lessons and activities for students

Together we'll go far



About this guide

Dear Educator:

Thank you for your interest in Wells Fargo's history! This curriculum guide contains information about the history of Wells Fargo & Co., the Gold Rush, and life in the 19th century. Although primarily aligned with California's 4th grade content standards, the activities can be used for other grades as well. (See page 4 for a list of 4th grade standards covered by each activity, and pages 6-8 for standards reference pages). They are intended as a classroom aid for the study of California history. This packet will be a useful resource whether or not your class tours our museum.

The lessons and activities are designed to help reinforce what your students are learning about California history and life in the old West. Teachers need not seek any further permission for limited use of these materials in the classroom. The historical materials included are from the Archives of Wells Fargo. By examining the documents and doing the activities you can give your students the experience of learning history by analyzing original materials.

We would love your feedback, so we would appreciate it if you could complete and mail the curriculum guide evaluation (page 52).

Enjoy using this guide with your students!

Sincerely,

Wells Fargo History Museum, Los Angeles

Table of Contents and Standards Covered

Activity	Page	History-Social Science	English-Language Arts*	Math**	Science
Lesson 1 — Wells Fargo’s history					
A Brief history of Wells Fargo & Co.	9	4.4.1, 4.4.2	R 1.0, 2.0		
What’s in a name?	10		R 1.0, 2.0		
Primary sources vs. secondary sources	11		R 1.0, 2.0		
Reading a historic map	12 - 13	4.1.3			
Wells Fargo Advertisement, 1867	14 - 15	4.3.2	R 1.0, 2.0; W 1.0	MR 3.2	
Diversity and Wells Fargo: African-Americans	16	4.4.4	R 1.0, 2.0		
Diversity and Wells Fargo: Chinese-Americans	17	4.4.3	R 1.0, 2.0		
Diversity and Wells Fargo: Latinos	18	4.4.3	R 1.0, 2.0		
Diversity and Wells Fargo: Women	19	4.3.4	R 1.0, 2.0		
Lesson 2 — The California Gold Rush					
Gold Rush vocabulary list and activity	20 - 21	4.3.3	R 1.0, W 1.0		
Gold Rush questions	22 - 27	4.1.3, 4.1.4, 4.3.2, 4.4.2	R 1.0; W 1.0, 2.0; W&OC 1.0		
Gold Rush place names	28	4.3.3			
Gold Rush reading list	29				

* English-Language Arts Key: R = Reading; W = Writing; W&OC = Written and Oral Conventions; L&S = Listening and Speaking

**Mathematics Key: NS = Number sense; A&F = Algebra and Functions; SDAP = Statistics, Data, Analysis, Probability; MR = Mathematical Reasoning

Table of Contents and Standards Covered (*cont.*)

Activity	Page	History-Social Science	English-Language Arts*	Math**	Science
Lesson 3 — The stagecoach					
Historical accounts of stagecoach travel	30 - 33	4.3.2, 4.3.3, 4.4.1, 4.4.3	R 1.0, 2.0, 2.2, 2.3; W 1.0; W&OC 1.0		
How fast did the stagecoach travel?	34			NS 3.0, 3.4; A&F 1.1; SDAP 1.0; MR 1.0, 2.4, 2.6	
Traveling by stagecoach	35	4.3.2	R 1.0, 2.0		
Packing for your journey	36	4.3.2			
My diary of a stagecoach trip	37		W 1.0, 2.0; W&OC 1.0		
Lesson 4 — Innovation and invention					
Build a telegraph	38 - 41	4.4.1			1a, 1c, 6
Using Morse code	42	4.4.1			
Microhydraulic Mining	43 - 44				4a, 5a, 5b, 6
Appendix					
Pre-Tour Ideas	45	4.1.3, 4.2.8, 4.3	1.0, 2.0		1a, 1c, 6
Post-Tour Ideas	46	4.1.3, 4.3.2, 4.3.3, 4.4.2	1.0, 1.1, 1.2, 2.1		
Post-Tour Q & A	47 - 48	4.3.3, 4.4.2			4a, 5a, 5b, 6
Essay: LA, a Bystander in California's First Boom	49 - 50	4.1.3	1.0, 2.0		
Suggested reading	51				
Curriculum guide evaluation	52				

* English-Language Arts Key: R = Reading; W = Writing; W&OC = Written and Oral Conventions; L&S = Listening and Speaking

**Mathematics Key: NS = Number sense; A&F = Algebra and Functions; SDAP = Statistics, Data, Analysis, Probability; MR = Mathematical Reasoning

Standards reference sheet

History — Social Science

4.1.3	Identify the state capital and describe the various regions of California, including how their characteristics and physical environments (e.g., water, landforms, vegetation, climate) affect human activity.
4.1.4	Identify the locations of the Pacific Ocean, rivers, valleys, and mountain passes and explain their effects on the growth of towns.
4.2.8	Discuss the period of Mexican rule in California and its attributes, including land grants, secularization of the missions, and the rise of the rancho economy.
4.3	Students explain the economic, social, and political life in California from the establishment of the Bear Flag Republic through the Mexican-American War, the Gold Rush, and the granting of statehood.
4.3.2	Compare how and why people traveled to California and the routes they traveled (e.g., James Beckwourth, John Bidwell, John C. Fremont, Pio Pico).
4.3.3	Analyze the effects of the Gold Rush on settlements, daily life, politics, and the physical environment (e.g., using biographies of John Sutter, Mariano Guadalupe Vallejo, Louise Clapp).
4.3.4	Study the lives of women who helped build early California (e.g., Biddy Mason).
4.4.1	Understand the story and lasting influence of the Pony Express, Overland Mail Service, Western Union, and the building of the transcontinental railroad, including the contributions of Chinese workers to its construction.
4.4.2	Explain how the Gold Rush transformed the economy of California, including the types of products produced and consumed, changes in towns (e.g., Sacramento, San Francisco), and economic conflicts between diverse groups of people.
4.4.3	Discuss immigration and migration to California between 1850 and 1900, including the diverse composition of those who came; the countries of origin and their relative locations; and conflicts and accords among the diverse groups (e.g., the 1882 Chinese Exclusion Act).
4.4.4	Describe rapid American immigration, internal migration, settlement, and the growth of towns and cities (e.g., Los Angeles).

English-Language Arts: Reading

1.0	Word Analysis, Fluency, and Systematic Vocabulary Development: Students understand the basic features of reading. They select letter patterns and know how to translate them into spoken language by using phonics, syllabication, and word parts. They apply this knowledge to achieve fluent oral and silent reading.
2.0	Reading Comprehension: Students read and understand grade-level-appropriate material. They draw upon a variety of comprehension strategies as needed (e.g., generating and responding to essential questions, making predictions, comparing information from several sources). The selections in Recommended Literature, Kindergarten through Grade Twelve illustrate the quality and complexity of the materials to be read by students. In addition to their regular school reading, students read one-half million words annually, including a good representation of grade-level-appropriate narrative and expository text (e.g., classic and contemporary literature, magazines, newspapers, online information).
2.2	Use appropriate strategies when reading for different purposes (e.g., full comprehension, location of information, personal enjoyment).
2.3	Make and confirm predictions about text by using prior knowledge and ideas presented in the text itself, including illustrations, titles, topic sentences, important words, and foreshadowing clues.

English-Language Arts: Writing

1.0	Writing Strategies: Students write clear, coherent sentences and paragraphs that develop a central idea. Their writing shows they consider the audience and purpose. Students progress through the stages of the writing process (e.g., prewriting, drafting, and revising, editing successive versions).
-----	---

Standards reference sheet (cont.)

1.1	Select a focus, an organizational structure, and a point of view based upon purpose, audience, length, and format requirements.
2.1	Write narratives: A) Relate ideas, observations, or recollections of an event or experience. B) Provide a context to enable the reader to imagine the world of the event or experience. C) Use concrete sensory details. D) Provide insight into why the selected event or experience is memorable.

English-Language Arts: Written and Oral Conventions

1.0	Students write and speak with a command of Standard English conventions appropriate to this grade level.
1.1	Use simple and compound sentences in writing and speaking.
1.2	Combine short, related sentences with appositives, participial phrases, adjectives, adverbs, and prepositional phrases.

English-Language Arts: Listening and Speaking

1.0	Students listen critically and respond appropriately to oral communication. They speak in a manner that guides the listener to understand important ideas by using proper phrasing, pitch, and modulation.
2.0	Speaking Applications (Genres and Their Characteristics): Students deliver brief recitations and oral presentations about familiar experiences or interests that are organized around a coherent thesis statement. Student speaking demonstrates a command of standard American English and the organizational and delivery strategies outlined in Listening and Speaking Standard 1.0.

Science

Physical Sciences, 1

Electricity and magnetism are related effects that have many useful applications in everyday life. As a basis for understanding this concept:

A.	Students know how to design and build simple series and parallel circuits by using components such as wires, batteries, and bulbs.
B.	Students know how to build a simple compass and use it to detect magnetic effects, including Earth's magnetic field.
C.	Students know electric currents produce magnetic fields and know how to build a simple electromagnet.
D.	Students know the role of electromagnets in the construction of electric motors, electric generators, and simple devices, such as doorbells and earphones.
E.	Students know electrically charged objects attract or repel each other.
F.	Students know that magnets have two poles (north and south) and that like poles repel each other while unlike poles attract each other.
G.	Students know electrical energy can be converted to heat, light, and motion.

Earth Sciences, 4

The properties of rocks and minerals reflect the processes that formed them. As a basis for understanding this concept:

A.	Students know how to differentiate among igneous, sedimentary, and metamorphic rocks by referring to their properties and methods of formation (the rock cycle).
B.	Students know how to identify common rock-forming minerals (including quartz, calcite, feldspar, mica, and hornblende) and ore minerals by using a table of diagnostic properties.

Standards reference sheet (cont.)

Earth Sciences, 5

Waves, wind, water, and ice shape and reshape Earth's land surface. As a basis for understanding this concept:

- A. Students know some changes in the earth are due to slow processes, such as erosion, and some changes are due to rapid processes, such as landslides, volcanic eruptions, and earthquakes.
- B. Students know natural processes, including freezing and thawing and the growth of roots, cause rocks to break down into smaller pieces.
- C. Students know moving water erodes landforms, reshaping the land by taking it away from some places and depositing it as pebbles, sand, silt, and mud in other places (weathering, transport, and deposition).

Investigation and Experimentation, 6

Scientific progress is made by asking meaningful questions and conducting careful investigations. As a basis for understanding this concept and addressing the content in the other three strands, students should develop their own questions and perform investigations. Students will:

- A. Differentiate observation from inference (interpretation) and know scientists' explanations come partly from what they observe and partly from how they interpret their observations.
- B. Measure and estimate the weight, length, or volume of objects.
- C. Formulate and justify predictions based on cause-and-effect relationships.
- D. Conduct multiple trials to test a prediction and draw conclusions about the relationships between predictions and results.
- E. Construct and interpret graphs from measurements.
- F. Follow a set of written instructions for a scientific investigation.

Mathematics

Number sense

- 3.0 Students solve problems involving addition, subtraction, multiplication, and division of whole numbers and understand the relationships among the operations
- 3.4 Solve problems involving division of multi-digit numbers by one-digit numbers.

Algebra and Functions

- 1.1 Use letters, boxes, or other symbols to stand for any number in simple expressions or equations (e.g., demonstrate an understanding and the use of the concept of a variable).

Statistics, Data, Analysis and Probability

- 1.0 Students organize, represent, and interpret numerical and categorical data and clearly communicate their findings

Mathematical Reasoning

- 1.0 Students make decisions about how to approach problems
- 2.4 Express the solution clearly and logically by using the appropriate mathematical notation and terms and clear language; support solutions with evidence in both verbal and symbolic work.
- 2.6 Make precise calculations and check the validity of the results from the context of the problem.
- 3.2 Note the method of deriving the solution and demonstrate a conceptual understanding of the derivation by solving similar problems.

A brief history of Wells Fargo & Co.



After the discovery of gold in California, Wells Fargo became a business that connected the East with remote gold fields out West. Henry Wells and William Fargo met in New York City on March 18, 1852, and started Wells Fargo to offer banking, express, and mail delivery services to merchants and miners. Soon after, on July 13, Wells Fargo opened offices in San Francisco and Sacramento. Before the year ended, the company had 12 offices in operation on the Pacific and Atlantic coasts.

From the beginning, Wells Fargo offices established a reputation for service and fairness to all who walked through their doors. Agents were often respected members of their communities and were relied on for any needed banking or express service. In 1864, Henry Wells summed up the company's philosophy: "There was one very powerful business rule. It was concentrated in the word courtesy." This was part of the reason California operations were immediately successful. By doing business with Wells Fargo, miners knew they would never be taken by the sharp deals so common in the hustle and bustle of Gold Rush California. "Pay no more for gold dust than it is worth," wrote a Wells Fargo superintendent to one of the company's Gold Country agents, "nor pay any less. This is the only true motto to do any kind of business on."



1853, San Francisco. Wells Fargo's first office in the West, which opened on July 13th, 1852.

By the 1860s, people needed faster travel and mail service across the nation, and the stagecoach was the swiftest way to span the distance. In 1866, Wells Fargo managed the largest stagecoach network in the world, covering over 3,000 miles in the West. The six-horse Concord stagecoach became a vital link between communities and a symbol of speed and reliability.

When Californians turned to farming and manufacturing, Wells Fargo continued to offer express services and used ships and trains to carry shipments. Wells Fargo offices blanketed the state and its trains went "ocean to ocean" to New York in 1888. By the time the United States entered World War I in 1917, Wells Fargo's service included 10,000 national offices along 80,000 miles of railroad.

In 1918, the federal government placed all the nation's express companies under its control as a wartime measure to move troops and cargo. Wells Fargo's signs came down across California, and Wells Fargo was left with only one bank in San Francisco.

After World War I, the nation grew at a rapid pace. Wells Fargo Bank continued to support communities with banking services to merchants and farmers. Steady management kept Wells Fargo on course during the Great Depression. Dramatic changes in banking took place after World War II, and Wells Fargo met the growing need for auto, home, and business loans. By adding neighborhood branch offices and motor banking, the company offered new ways to serve a generation on the move. In 1970, Wells Fargo continued its tradition of using new banking technology with the installation of Automated Teller Machines (ATMs) to give customers access to their accounts 24 hours a day. With the arrival of the digital age, Wells Fargo became the first bank to offer secure Internet banking in 1995 and mobile phone banking in 2007.

The name Wells Fargo has excited our imagination for generations, symbolizing secure banking and express services for pioneers, travel by stagecoach, and Pony Express riders who connected America from coast to coast. The story of Wells Fargo's legacy and its people continues as Wells Fargo carries on its original vision of helping satisfy all its customers' financial needs.

What's in a name?



Henry Wells (1805 – 1878)

Born in Thetford, Vermont, Henry Wells moved to New York State in his youth and worked for a farmer and shoemaker. Seeing an opportunity in the express business, he changed careers. In 1841, he became an agent in Albany, New York, for William Harnden, founder of an express business. Wells made his reputation for dependability when he delivered fresh oysters to Buffalo, New York.

As the express business expanded to the Midwest, Wells formed a partnership with other expressmen to deliver gold, mail, and people. In 1850, these partners started the American Express Company. He became its first president, serving until 1868.

In 1852, Henry Wells and William Fargo founded an express company called Wells, Fargo and Company to serve customers in Gold Rush California. When he visited the company headquarters in San Francisco a year later, Wells judged it a success and wrote, "This is a great country and a greater people."

Dedicated to educational opportunities for women, Henry Wells founded one of the nation's first colleges for women, Wells College, in Aurora, New York.



William G. Fargo (1818 – 1881)

Born in Pompey, New York, William Fargo was the oldest of twelve children. At age thirteen, he had a 40-mile mail route. In 1842, Fargo met Henry Wells in Auburn, New York, and entered the express business. In 1850, Wells and Fargo founded the American Express Company, with Fargo serving as its president from 1868 to 1881. Six of Fargo's brothers also worked for American Express.

William Fargo saw opportunity on the Pacific Coast. In 1852, he and Henry Wells started the express company Wells, Fargo and Company. Fargo came to California by stagecoach in 1863 to promote a railroad over the Sierra Nevada Mountains and to lay the foundation for Wells Fargo's stagecoach business. Fargo served as president of Wells Fargo from 1870 to 1872.

William Fargo was active in New York politics for many years and served two terms as mayor of Buffalo. He was also a director of the Northern Pacific Railroad, which led to the use of his name for the town of Fargo, North Dakota.

Primary sources vs. secondary sources



Many historians gather history from primary sources. A primary source is something actually from the time in history you are studying. For example, an excellent primary source is a journal or diary written by someone from the time and place you are concerned with. Other primary sources that historians consider important are called “ephemera” or items from daily life that give clues as to what the world was like. These can be tickets to events or for travel, receipts for purchases, brochures or playbills, or anything that people from that time used in daily life and from which you can gather an idea of what the world was really like.

Some primary sources:

- Journal or diary
- Ticket for travel
- Letter written by someone during the time period you are studying
- Envelopes
- Original documents like waybills, checks, etc.
- Advertisements from the time
- Objects that show what life was like: sewing baskets, toys, etc.

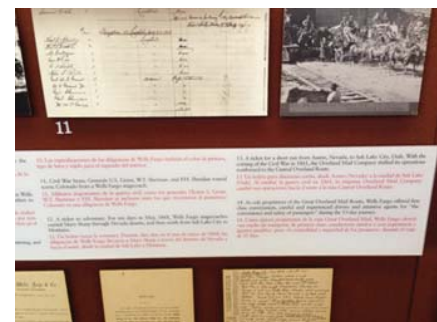


1855, Los Angeles Wells Fargo ad

Secondary sources are by someone who has already studied what you're studying. It is secondary because the person telling the history didn't live in that time. A secondary source would be a book written about a time or place in the past.

Some secondary sources:

- History books
- Magazine articles written about the time
- People's belief about what happened
- Text plates in museums containing information about history
- Illustration that were drawn about the past



Wells Fargo History Museum, Los Angeles, text plate

Reading a historic map



Look at the map below very carefully to answer the questions that follow.



Reading a historic map (cont.)



1. What type of map is this? (circle one)

Political Weather Natural Resources Transportation

Other _____

2. What can you find on this map? (circle all you see)

Compass Rose Name of Mapmaker Title Date Legend Scale Symbols

3. What is the date of the map?

4. What is the title of the map?

5. What latitude is Los Angeles close to?

6. What town is closest to 40 latitude, 122 longitude?

7. What do you think are three important things on this map?

8. Why do you think this map was created?

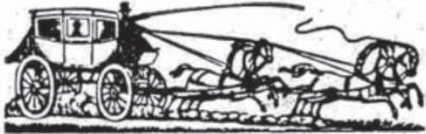
9. Find California's state capital:

Wells Fargo advertisement, 1867



Look at the advertisement below very carefully to answer the questions that follow.

**GREAT OVERLAND
MAIL ROUTE.**



**PACIFIC AND ATLANTIC STATES.
WELLS, FARGO & CO.**

SOLE PROPRIETORS.

FARE REDUCED ! TIME SHORTENED !

On and after the 1st day of April, 1867, passengers will be forwarded through at the following reduced rates, viz:

<i>Sacramento to Omaha</i>	<i>\$300.</i>
<i>Virginia City to Omaha</i>	<i>275.</i>
<i>Austin to Omaha</i>	<i>225.</i>
<i>Sacramento to Cheyenne</i>	<i>250.</i>
<i>Virginia City to Cheyenne</i>	<i>225.</i>
<i>Austin to Denver</i>	<i>175.</i>
<i>Salt Lake to Bannock, Montana</i>	<i>120.</i>
“ <i>Virginia</i>	<i>120.</i>
“ <i>Helena</i>	<i>145.</i>
“ <i>Fort Benton</i>	<i>175.</i>

ALL LEGAL TENDERS OR THEIR EQUIVALENT.

12

Time from Sacramento to Omaha, 15 Days.

First class conveyances, careful and experienced drivers and attentive agents are employed, and every possible arrangement has been made for the comfort and safety of passengers.

The route passes through the celebrated silver regions of Nevada, the valley of Great Salt Lake, the beautiful scenery of the Rocky Mountains and the GREAT PLAINS, and is the cheapest and most expeditious route to the Atlantic States.

Good meals at reasonable prices will be furnished passengers at convenient distances.

Passengers may lay over at any home station and renew their journey whenever there are vacant seats in stages, by notifying the local agent immediately on arrival.

At Morrow's Station, the cars of the Union Pacific Railroad Company will afford direct communication with Railroads at Omaha for all Eastern cities and towns. Wells, Fargo & Co., are also sole proprietors of connecting Stage Lines at Salt Lake City, for the Mining regions of Montana and Idaho, and at Denver with the mining regions of Colorado.

Express packages taken to any of the above named points at low rates

Tickets may be purchased at the offices of Wells, Fargo & Co., on the route.

Persons desiring to secure passage for their friends in the States, can do so by making application to the Agents of the Company. No seat secured until paid for.

Twenty-five (25) pounds of baggage allowed each passenger, but they will not be permitted to carry valuables as baggage or extra baggage

For further particulars enquire at any of the offices of the Company on the line, or of

WELLS, FARGO & CO.
Stage Department, San Francisco.
San Francisco, April 1st, 1867.

13

Wells Fargo advertisement, 1867



1. Using a map, locate the cities listed in this advertisement. How many states did Wells Fargo’s stagecoach network cover?

2. What symbol is used in this advertisement?

3. Who might read this advertisement?

4. What is the date on the advertisement? How many years after the Gold Rush is this?

5. If a Wells Fargo stagecoach took 12 days to travel 1,500 miles, then it traveled 125 miles per day. How far did it travel in one hour? How far would it have traveled in 3 weeks?

6. How much did it cost to travel from Sacramento to Omaha? Do you think it was expensive for that time?

7. What did Wells Fargo do to assure the “comfort and safety of passengers”?

8. At what station did the stagecoach connect with the railroad?

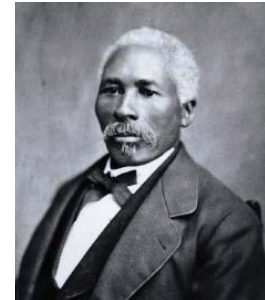
Diversity and Wells Fargo



African Americans and Wells Fargo

Wells Fargo & Company has enjoyed a long, productive relationship with the African American community in California. In 1852, when Wells Fargo was founded, there were 2,000 African Americans in all of California. Eight years later, that number had already doubled. Although African Americans averaged only about 2.5% of California's population during most of the nineteenth century, they played significant roles in the state's history.

During the Gold Rush, a number of African Americans, both slave and free, arrived in the Mother Lode country. Those who were still slaves often used their earnings from mining to buy their freedom and to bring family members from slave states to California. Those who were already free were able to seek their fortunes, yet not without bias and prejudice from other miners. African American miners needed the same services as others, and Wells Fargo was there to help them. Wells Fargo provided rapid, efficient shipment of gold, mail, and supplies. Wells Fargo also provided financial assistance in the form of personal loans, currency exchange, and reliable safekeeping of deposits.



Stagecoach driver
William Robison
Photo: The Haggin Museum,
Stockton, CA.

Wells Fargo's business dealings with the African American community were based on a philosophy of service to all customers regardless of race, color, creed, or economic condition. In 1888, for example, Wells Fargo's employee handbook stated:

The most polite and gentlemanly treatment of all customers, however insignificant their business, is insisted upon. Proper respect must be shown to all — let them be men, women, or children, rich or poor, White or Black — it must not be forgotten that the company is dependent on these same people for its business.

From the first, Wells Fargo counted African American employees among its ranks. African Americans functioned in almost every kind of position, from messenger to stagecoach driver. Among the messengers, London Luff, Wells Fargo's man in Sacramento, was an outstanding employee, as the Sacramento Journal of April 1857 once noted:

Wells Fargo & Co. — We have omitted for several days to give credit to Messrs. Wells & Co.'s express. Mr. Lundy Luff, the disseminator of useful knowledge, attached to the concern, is a jewel in promptness and politeness. Long may Mr. Luff wave!

The same could be said for another African American employee of Wells Fargo, stage driver William M. Robison of Stockton. He was born a slave in Virginia and freed while fighting in the Seminole Indian War of 1836. Robison arrived in California in early 1847 and settled in Stockton. He was a stage driver for several companies which carried Wells Fargo's express on the run from Stockton to the mines of the Mother Lode. Robison worked for Wells Fargo's Express for more than forty years. Always active in civic affairs, he was elected as a delegate from San Joaquin County to the 1856 State Convention of Colored Citizens in Sacramento.

Luff and Robison were among the first in a long line of African Americans who helped Wells Fargo become a premier express and banking institution.

Diversity and Wells Fargo (cont.)



Chinese Americans and Wells Fargo

Wells Fargo & Company has a long history of dynamic relationships with various Asian communities of the American West. Outstanding among those relationships have been the company's business dealings with the Chinese community.

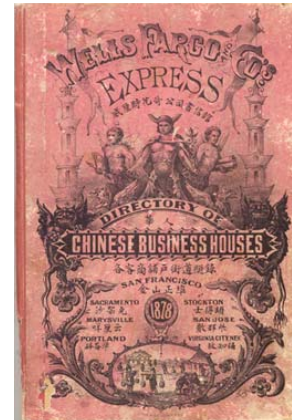
During California's Gold Rush, large numbers of Chinese flocked to the Golden Mountain or Gum Shan as the Chinese called California. From fewer than 100 persons in 1848, the Chinese community grew to become nearly 10% of the state's population — the second largest ethnic group in the state by 1860.

As the Chinese population grew, Wells Fargo opened its first office in San Francisco and located it very near the city's Chinatown. This coincidence was fortunate both for Wells Fargo and for the Chinese community. The Chinese needed what Wells Fargo could provide: rapid, reliable transportation of mail, reputable safekeeping of valuables, especially gold, and trustworthy communication of business information. Wells Fargo made these services available, and the Chinese community was quick to use them.

Wells Fargo's volume of business with the Chinese community soon became great enough that the company began publishing directories of Chinese businesses in major cities for its agents to use in conducting business. The company even compiled an English/Chinese "Phrase Book" to help both agents and customers in their business dealings. Wells Fargo also employed Chinese personnel at key offices to provide translation services for its customers.

When Wells Fargo expanded into international banking, it began to establish correspondent relationships with financial institutions in China, especially in Shanghai and Hong Kong. Today, the bank continues such ties, particularly through an alliance or cooperative agreement with the Hong Kong and Shanghai Banking Corporation. The agreement allows Wells Fargo customers to have ready access to more than 1500 offices of the Hong Kong and Shanghai Bank in over 50 countries.

Wells Fargo continues to employ Chinese Americans in great numbers. Today, more than 10% of its employees are Chinese Americans.



1878, Directory of Chinese Businesses

Diversity and Wells Fargo (cont.)



Latinos and Wells Fargo

Wells Fargo & Company has served and employed Latinos ever since its founding in 1852. The company's business was located predominately in the American West but also had agencies in Mexico and widespread representation elsewhere in Latin America.

In California, Wells Fargo began advertising its services in Spanish shortly after the company was founded. For example, an advertisement in the Los Angeles Star on January 4, 1855 announced that:

“el espreso [de Wells Fargo y Cie] saldrá el Viernes, Enero 5 de 1855. Especie, bultos, cartas & c.se recibirán hasta las 11 de la mañana y se espacharán para todos los puntos de California, Oregon y los Estados Atlanticos.”



Express agent
Jose G. Estudillo

Translation:

“The Express will depart on Friday, January 5th, 1855. Specie, packages, letters, & c., will be received until 11 in the morning, and will be shipped to all points in California, Oregon and the Atlantic States.”

Much of Wells Fargo's success in the Latino community was due to the efforts of Latino agents like Don Jose G. Estudillo in San Diego, Jose C. Ortega in San Luis Obispo, and Ygnacio Villegas in Soledad.

South of the U.S. border, Wells Fargo's greatest presence was in Mexico. Beginning in 1860,

Wells Fargo served Mexico's west coast ports and gradually expanded until it had over 300 offices throughout the country. At the high point of its growth there, more than 98% of the company's employees were Mexican. In 1914, though, the Mexican Revolution virtually ended Wells Fargo's presence there. During the 1920s the company began a travel agency and operated a hotel called Rancho Telva at Taxco, Mexico.

Wells Fargo also had agents and representatives in other Latin American countries, such as Panama, El Salvador, and Cuba during the early twentieth century. Today the company maintains correspondent banking ties with many of these same countries as well as others in Central and South America.

Today, Wells Fargo continues to provide extensive services and products to the rapidly growing Latino community. All of the bank's 12,000+ ATMs are equipped to process transactions in Spanish, and many banking stores have staff members who speak Spanish fluently to serve their Latino customers. Wells Fargo employs more than 36,000 Latinos, 13% of its workforce.

Diversity and Wells Fargo (cont.)



Women and Wells Fargo

Many of the pioneers who established Wells Fargo's outstanding reputation in the American West during the nineteenth century were women. Acting as Wells Fargo agents in large cities and small towns, women helped to develop the West by promoting and operating small businesses, libraries, schools, and communication systems.

At large Wells Fargo offices, women agents had a full-time job handling money, gold, valuable documents, and merchandise. At smaller offices, women often ran their own businesses in addition to the Wells Fargo agency. They operated hotels, pharmacies, livery stables, and general stores. They were postmasters, telegraphers, doctors, dressmakers, even musicians and actresses.



Express agent Cassie Hill

More than 160 women were Wells Fargo agents during the nineteenth century. Among them are the following:

Julia Jones — agent at Mariposa and county superintendent of schools

Lucy Miller — sister of Julia Jones, agent at Mariposa and postmaster

Bessie Boldon — agent at Monson and professional photographer

Cassie Hill — agent at Roseville, telegrapher and railroad office manager

Kittie McCabe — agent at Knight's Ferry and general store owner

Tilla Patterson — agent at Winchester and town librarian

Delia Rawson — stagecoach driver, popular singer and orange grower

When Wells Fargo withdrew from the express business in the early twentieth century and concentrated on its banking operations, women continued to play vital roles in the growth and prosperity of the company. In the "back office" they were accountants, clerks, and data processors. In the "front office" they were cashiers, head tellers, and managers of various departments, including the Women's Banking Department.

When the role and status of women changed dramatically in the late twentieth century, Wells Fargo's employees reflected that change. Today, women comprise 60% of the company's workforce, and about 50% of its officers, managers, and professionals.

Gold Rush vocabulary



Word	Meaning
Argonaut	Gold seekers of 1848 – 49 who were named after the Argo, the ship on which Jason sailed in his search from the Golden Fleece, according to the Greek mythology (Argo + nautus, a Latin word meaning sailor).
Boot	Front and back leather containers, resembling the toe of a boot, which were attached to the body of a stagecoach to hold treasure boxes and luggage.
Currency	Any form of money that is in public circulation, for example, paper bills and coins.
Emigrant	A person who has departed from a country to settle elsewhere.
Entrepreneur	A person who organizes and manages a business or businesses, taking on financial risk to do so.
Eureka	Greek for “I have found it!” The word later became California’s official motto.
Express company	A company that provides the service of receiving and delivering mail, parcels and money. FedEx and UPS are examples of present day express companies.
Forty-niners	Nickname for pioneers who arrived in California in 1849.
Hydraulic mining	A system of mining in which the force of a jet of water is used to wash down a bank of gold-bearing gravel or earth.
Income	Money made through the sale of goods or services, or from other sources.
Morse code	A code consisting of variously spaced dots and dashes, or long and short sounds, used for transmitting messages by audible or visual signals.
Nugget	A lump of precious metal such as gold; gold dust is made of fine particles, not lumps.
Panning	A method for finding gold by using a metal pan in the water to separate gold from sand and gravel.
Poke	A small leather bag used to hold gold dust and gold nuggets.
Pony Express	A rapid postal and express system that operated across the western U.S. in 1860 – 1861 by relays of horses and riders.
Pyrite	A common mineral that consists of iron and sulfur. Pyrite was frequently mistaken for gold and gained the nickname Fool’s Gold.
Stagecoach	A coach or vehicle that travels long distances in segments or “stages.” A stagecoach should not be called a wagon, buggy, cart, or carriage.
Staking a claim	The way a gold miner claimed land and water areas that might contain gold. The claim was marked with wooden or metal stakes, or even with piles of rocks.
Telegraph	A system for communication over long distances by electric transmission over wires.
Thoroughbraces	Suspension system on the stagecoach. Leather shock absorbers located underneath a stagecoach to make the ride more comfortable.
Treasure box	A wooden container with iron bands and padlock used to hold bags of gold nuggets and gold dust.
Troy ounce	The name of the unit of measurement used to weigh out four precious metals: gold, silver, platinum, and palladium.

Gold Rush vocabulary



Find the word that would best fit the meaning of the following sentences

1. What you might say when you find your missing sneaker _____
2. Where you would put the luggage in the stagecoach _____
3. The scientific name for fool's gold _____
4. The first long-distance communication _____
5. What gold was usually transported in _____
6. A simple method of mining for gold _____
7. Another method of mining for gold that uses water _____
8. A mode of transportation used by Wells Fargo _____
9. The unit of measurement used when weighing gold _____

Now write your own sentences for these words

1. Morse code _____
2. Nugget _____
3. Pony Express _____
4. Poke _____
5. Emigrant _____

Gold Rush questions



The following is a list of questions and answers concerning the history of California and the Gold Rush. It is intended as a classroom aid for the study of California history.

- Have students research the answers to the questions, then go over the answer sheet with them. Or use any of the following ideas others teachers have shared with us:
 - Assign one or more answers to each student and then have the student compose the question without knowing what it is.
 - Select four of the questions, place them on the blackboard, and then ask the students to read all the answers to find the proper match for each question.
 - Highlight or circle difficult vocabulary words in the questions and answers, ask students to find the meaning of the word in the dictionary and use the words in sentences of their own.
 - Use some of the questions as the basis for a follow-up visit to the Museum so that small study groups of students can have exposure to the exhibits that were not covered during the formal tour.
 - Use the questions and answers before the formal tour as preparation for their visit to the Museum.



Miners in 1850

We would like to know how you use the following questions and answers in your classroom. Please write us or talk to your docent during your tour. Thank you!

Gold Rush questions (cont.)



1. What event sparked the Gold Rush? When and where did that event happen? Have other Gold Rushes occurred elsewhere since then?



Miners in 1850

2. Thousands of argonauts from around the world rushed to California in 1848 and 1849. Name ten U.S. states and ten foreign countries from which the argonauts came.

3. What were the principal means of transportation and the major routes people used to reach California during the Gold Rush?

4. Thousands of people arrived in San Francisco during 1849, but they hurried away to Gold Rush country. What were those gold seekers called? What modern sports team has the same name? Why do you think such a name was chosen for the team?

5. Hangtown, California was a busy commercial center in the Gold Rush country. How did Hangtown receive its name? What is its name today? In what county is it located?

6. What did it mean to “jump a claim”? Why do you think it was considered a serious crime in Gold Rush country? How was such a crime usually punished?

7. Many miners purchased their food, clothing and supplies in Sacramento. What geographical features made Sacramento an ideal supply center? When did Sacramento become the capital of California?

Gold Rush questions (cont.)



8. A gold mining pan was an important tool in the early days of the Gold Rush. Where was such a pan used and how? What was a “rocker” or “cradle” and how was it used? Why was it named a “rocker”?



Miners in 1850

9. Instead of gold, miners often found iron pyrite in the diggings. What was iron pyrite called in popular speech? How did iron pyrite receive that name? How much was iron pyrite worth? How much was gold worth in the early days of the gold rush?

10. Hydraulic mining was a far more efficient method for gold extraction than panning. What effects did hydraulic mining have on the landscape and daily life of California? Approximately how long did hydraulic mining continue in California? Why did it cease?



Miners camping near a tent in 1850

11. What is assaying? Is it still being done today? How much is gold worth per troy ounce today?

Gold Rush questions (cont.)



12. In the early days of the Gold Rush, eggs cost \$12.00 a dozen and lemons cost \$3.00 each. Why were eggs and lemons so expensive? What economic theory helps explain these high prices?

13. By the late 1850s, the rivers and streams of Northern California began producing less and less placer gold, so the miners turned to hydraulic and hard rock mining. How was the life of a placer miner different from that of a hydraulic miner? How were their lives similar?

14. After 1859, California miners were able to send messages and money back home by means of the “singing wires.” What were the “singing wires” and why were they given that name?

15. For many years, Californians did not trust paper money and preferred to use gold coins to pay for goods and services. Why did Californians prefer gold coins?

Answer key to questions



1. The Gold Rush was sparked by James Marshall's discovery of gold in January 1848 at Sutter's Mill near Coloma, California. Other Gold Rushes have occurred since then in Alaska, Canada, Australia, and South Africa.
2. During the Gold Rush people came to California from all of the thirty states that made up the United States at that time, and from many foreign countries. Among them were China, Australia, Canada, Mexico, Chile, England, South Africa, Switzerland, Italy, and Germany.
3. The early pioneers came to California by foot, by horse, by wagon, and by ship. By foot, horse, or wagon, travelers crossed the United States using one or a combination of several trails, including the California Trail, Oregon Trail, Santa Fe Trail, Old Spanish Trail, and Gila River Trail. By sailing ship, the journey around Cape Horn lasted 6 to 9 months. An alternative route that took 1 to 2 months went across the Isthmus of Panama. The Panama alternative, while faster, was quite expensive and there was a risk of contracting malaria and other tropical diseases.
4. The gold-seekers of 1849 were called '49ers (Forty-niners). The NFL football team in San Francisco was named the '49ers in honor of the thousands of people who traveled to California and San Francisco in 1849.
5. Hangtown received its name because of the numerous hangings that occurred there. As the town grew larger, however, people asked that the town change its name to a nicer one, so in 1854 it became Placerville.
6. "Jumping a claim" meant that someone stole an area that a miner had claimed was his to mine. It was considered very serious because the jumper stole a miner's expected fortune. Sometimes the penalty was death by hanging – a "less expensive" penalty than holding someone in jail.
7. Sacramento was a major supply center because of its great location, near the Mother Lode and near the point where the Sacramento and American Rivers cross paths, and because it had ready access to the San Francisco Bay and the Pacific Ocean. Sacramento became the official state capital in 1854, four years after California became a state. Before that, California's capital had moved from one place to another: first, San Jose (1850 – 1851); next Vallejo (1852 – 1853); and Benicia (1853 – 1854).
8. A gold pan was used by miners in the streams and rivers of the Mother Lode. A miner looked for shallow places where gold dust, flakes and nuggets might be trapped. Then, the miner scooped up water, sand and gravel, and turning the pan slightly, caused a small wave to wash away non-gold-bearing sediment. He repeated this several times until the heavier gold settled to the bottom of the pan. Gold panning was rather inefficient so miners soon turned to other tools for gold extraction. One such tool was called the "rocker" (so-called for its movement) or "cradle" (from its appearance and possible use with babies). A miner shoveled gold-bearing soil into the "rocker", poured water on top and rocked the mixture. Mud exited the sluice and gold was caught in the riffles of the rocker.

Answer key to questions (cont.)



9. Iron pyrite was called Fool's Gold because it fooled or deceived miners, who confused it for real gold because of its similar appearance. Iron pyrite had (and still has) little or no value, but gold was worth at least \$16 per troy ounce in the early days of the Gold Rush. A troy ounce is heavier than a regular (avoirdupois) ounce, but there are only 12 ounces in a troy pound rather than the 16 ounces of a regular (avoirdupois) pound.
10. Hydraulic mining had disastrous effects on the landscape of northern California. First, it created great destruction on the land that can still be seen today, such as Malakoff Diggins State Historic Park, where a giant hole in the ground is all that is left where mountains were washed away. Second, it caused massive flooding downstream as far as Sacramento where the mining debris began to fill the river bottoms. Third, it destroyed the productivity of farms in the Sacramento Valley where acidic silt covered the fields of the valley. Farmers spoke out against hydraulic mining and it was eventually outlawed in 1884. The gold-seekers of 1849 were called '49ers (Forty-niners). The NFL football team in San Francisco was named the '49ers in honor of the thousands of people who traveled to California and San Francisco in 1849.
11. Assaying was a rather complicated process for determining the presence and purity of gold. The gold was tested for purity and weighed. Then, it was melted down and formed into gold bars or made into coins. Assaying is still done today with the help of highly sophisticated instruments and skilled technicians. The website goldprice.org will show you gold's current value per troy ounce.
12. In the early days of the Gold Rush, goods like eggs and lemons were generally in short supply because they had to be shipped to California from other parts of the country, which was expensive to do. Since the population was growing rapidly and there wasn't a large enough supply of goods for everyone that wanted to buy them prices went up. The relationship between the quantity of goods available and the demand for those goods is called the "law of supply and demand."
13. Placer miners were usually independent entrepreneurs who kept the reward of their labors. Hydraulic and hard rock miners often worked for mining companies, which established work hours and paid miners a salary of \$4, considered a day's earnings from placer mining. The risk of getting injured was much greater for hydraulic/hard rock miners than for placer miners. All miners, however, kept alive the hope of becoming rich one day. Some became very wealthy, but far more lived a harsh life and only made enough income just to get by.
14. The telegraph was called the "singing wires" because telegraph wires hummed when electrical charges were sent through them to send messages by Morse code. The code invented by Samuel Morse consisted of dots and dashes, which were combined to form letters of the alphabet. A sender key sent the code over wires to a receiving sounder. Because it provided fast communication, the telegraph helped isolated communities in California connect to the rest of the country.
15. Californians preferred U.S. gold coins because they did not doubt their value. They distrusted paper currency because they knew that, unlike gold coins, paper currency had no value in and of itself. Rather, the value of paper currency depended on whether or not the bank or government which printed it had the money to back it up.

Gold Rush place names



If you look at a map of California's Gold Rush country, you will notice many colorful names that tell us much about life among the miners in those days. Below are listed some California mining camps, some of which do not appear on maps anymore.

Wisconsin Flat	Freeze Out	Helltown
Poker Flat	Lone Star District	Grizzly Flats
Scotchman's	Pair O' Dice	Forest Home
Creek Paris	Murderer's Bar	Camp Beautiful
Kentucky Bar	Dutch Gulch	Rose Corral
Drunken Gulch	Spanish Flat	Paradise Hill
Buckeye Flat	Violin City	Church Flat
Fleatown	Chilean Bar	Meadow Lake
Swiss Bar	Jenny Lind Flat	Strawberry Valley
New York Hill	Hangtown	Bachelor Flat
Brandy City	Loafer's Hollow	Christmas Hill
Liberty District	Mountain View	Mineral Waters
Italian Gulch	Hurdy Gurdy Creek	Sunshine Flat

Look at the list of Gold Rush Place Names to answer the following questions.

Example: List two mining camps with musical instruments in their names: 1. Fiddler's Gulch 2. Violin City

1. List three mining camps with states in their names:

1.) _____ 2.) _____ 3.) _____

2. List three mining camps with foreign countries in their names:

1.) _____ 2.) _____ 3.) _____

3. Some names describe problems in the mining camps. List three mining camp names that might have had problems:

1.) _____ 2.) _____ 3.) _____

4. Which mining camp would you like to live in? Why?

5. Where wouldn't you live? Why?

Gold Rush reading list



Student reading list

- *The Great American Gold Rush*, by Rhoda Blumberg
- *The Gold Rush of 1849: Staking a Claim in California*, by Arthur Blake and Pamela Dailey
- *Children of the Wild West*, by Russell Freedman
- *Rough and Ready Prospectors*, by A. S. Gintzler
- *Buried Treasures of California*, by W. C. Jameson
- *The Gold Rush*, by Liza Ketchum
- *Gold Rush! The Young Prospector's Guide to Striking it Rich*, by James Klein
- *Striking it Rich: The Story of the California Gold Rush*, by Stephen Krensky

Teacher/Parent reading list

- *The World Rushed In: The California Gold Rush Experience*, by J. S. Holliday
- *Blacks in the Gold Rush*, by Rudolph M. Lapp
- *They Saw the Elephant, Women in the California Gold Rush*, by Jo Ann Levy
- *Strangers from a Different Shore*, by Ronald Takaki
- *Roughing It*, by Mark Twain

Historical accounts of stagecoach travel



Read the historical accounts below and answer the questions that follow.

Stage traveler Rebecca Yokum's account is from *Los Banos Enterprise* newspaper (June 30, 1968)

Stage traveler Mark Twain's account is from *Riding the Overland Stage* (1861)



1900-1915, historic photo of the stagecoach that is on display at Wells Fargo History Museum, Los Angeles. Photo: Lexington Public Library Kentucky Room

Starting out

Mark Twain and his brother discovered that passengers were limited to only 25 pounds of baggage. After shedding much of their luggage, the travelers were on their way across the plains of Kansas.

“Our coach was a swinging and swaying cage ... [a] cradle on wheels. It was drawn by six handsome horses, and by the side of the driver sat the ‘conductor,’...it was his business to take charge and care of the mails, baggage, express matter, and passengers. We three were the only passengers this trip. We sat on the back seat, inside. About all the rest of the coach was full of mail bags — for we had three days’ delayed mail with us.”

– Mark Twain

“It was 1860 when Mother wrote that we were coming. Our tickets were bought several days in advance and called for our trip to begin in Springfield, Missouri, and end at Santa Clara, California.

“The top of the stage was covered with men sitting back to back. Inside the coach were still more men. There were three wide seats and one of these had been reserved for mother and us children. On the high seat in front sat the conductor and the driver...The stage was so crowded that mother had to hold him [her brother] on her lap ... Everything on the stage was so shiny and new that we felt we were in a palace.”

– Rebecca Yokum

Travel Conditions

“We soon found that the stage made no stops whatever except to change horses. It ran continuously day and night. About every fourteen miles there was a stage station...The moment we rolled into the station the tired horses were dragged away and fresh ones put in their places. Speed seemed to be the only thing the stage people desired. As soon as the horses were securely fastened to the stage, away we would go on the run...Of course we didn't sleep any the first night.”

– Rebecca Yokum

Historical accounts of stagecoach travel (*cont.*)



“...we would all lie down in a pile at the forward end of the stage, nearly in a sitting posture, and in a second we would shoot to the other end and stand on our heads. And we would sprawl and kick, too, and ward off ends and corners of mail-bags that came lumbering over us and about us; and as the dust rose from the tumult, we would all sneeze in chorus, and the majority of us would grumble, and probably say some hasty thing, like: ‘Take your elbow out of my ribs! Can’t you quit crowding?’”

– Mark Twain

“The [river] water was high and the stage couldn’t get across. The stage drove up to the river bank, and we all got out. A great mass of drift wood had been washed down by the flood. We had to walk across the stream on this drift wood. On the opposite bank another stage was waiting for us.”

– Rebecca Yokum

The stage station

“The buildings consisted of barns, stable-room for twelve or fifteen horses, and a hut for an eating room for passengers...In place of a window there was a square hole about large enough for a man to crawl through, but this had no glass in it. There was no flooring, but the ground was packed hard. There was no stove, but the fire-place served all needful purposes. There were no shelves, no cupboards, no closets. In a corner stood an open sack of flour, and nestling against its base were a couple of...coffee-pots, a tin teapot, a little bag of salt, and a side of bacon.”

– Mark Twain

“...we had to buy our meals at the stage stations. But I would just like to see you eat what they served. Beans! Black bread! Often mother would pay a dollar for bread only to find that it was spoiled... Usually they would bring it [food] right to the stage and hand it to us. There were only a very few times that we got to eat at a table.”

– Rebecca Yokum



1867, drawing of a stage station.

Historical accounts of stagecoach travel (*cont.*)



Sights and sounds

“I never knew there were so many buffaloes in the world. We saw thousands and thousands of them. In going through one herd they were so thick in front of us that the stage horses had to slow down and...walk.

“Somewhere after we got into California we were...going through mountains. The road was very narrow and every few minutes the conductor would play a little tune on a bugle to warn any other travelers that the stage was coming. The long notes on his bugle, echoing through the mountains sounded very romantic.”

– Rebecca Yokum

Journey's end

“...sometime after we got into California we reached a town called San Jose. I know it was half past seven in the evening on the third day of May, 1860. It was dark and cold. The lamp inside the coach was lit and the curtains all fastened down to make it as warm as possible. We were again in a Concord coach and were sitting four in a seat. The coach was crowded.

“My little brother was sitting in my mother's lap. She had held him the entire twenty-one days of our trip. The only sleep we had was what we could catch while the stage coaches traveled along with the horses on the run. For three weeks, we had no change of clothing. We were little short of dead!”

– Rebecca Yokum

Historical accounts of stagecoach travel



Does the journey that Rebecca describes sound comfortable to you? Why or why not?

What were some of the dangers that Rebecca's family faced on their journey?

Contrast her experience to traveling by car or plane. What is similar? What is different?

Imagine that you're packing for a journey by car today. What might you take with you? Now imagine that you're packing for a journey by stagecoach in 1860. What would you take?

Write a diary entry as if you were traveling to California by stagecoach

How fast did the stagecoach travel?



Use this formula to calculate the answers to the following questions:



$$\text{Time} = \frac{\text{Distance}}{\text{Speed}}$$

1. How long would it take the stagecoach to travel 2,800 miles from St. Joseph, MO, to Sacramento, CA, if traveling at 5 miles per hour?

2. Your answer to question 1 is the number of hours it would take. About how many days would this be?

3. Cars today can travel on the freeway at 65 miles per hour. How long would it take to travel 2,800 miles from St. Joseph, MO, to Sacramento, CA by car?

4. About how many days is this?

5. About how many more days did it take to travel to Sacramento by stagecoach than by car?

Traveling by stagecoach



In 1877, *The Omaha Herald* provided these tips for stagecoach travelers. Use them to help you decide what to pack for your trip in the activity that follows.

Hints for stagecoach travelers

- Never ride in cold weather with tight boots or shoes. Wear loose overshoes and gloves two or three sizes too large.
- Be sure and take two heavy blankets with you. You will need them.
- When the driver asks you to get off and walk, do it without grumbling.
- If a team runs away, sit still and take your chances. If you jump, nine times out of ten you will be hurt.
- Don't growl at food stations. Stage companies generally provide the best they can.
- Don't smoke a strong pipe inside, especially early in the morning. Spit on the leeward side of the coach.
- Don't swear nor lop over on your neighbor when sleeping.
- Never attempt to fire a gun or pistol on the road. It may scare the horses.
- Don't discuss politics or religion or point out places on the road where horrible murders have been committed, especially if delicate women are among the passengers.
- Don't grease your hair before starting or dust will stick there. Tie a silk handkerchief around your neck to keep out dust and prevent sunburn.
- Don't imagine for a second that you are going on a picnic. Expect annoyance, discomfort, and some hardships. If you are disappointed, thank heaven.

Packing for your journey



Each passenger on a Wells Fargo Stagecoach was allowed to bring 25 lbs of luggage free of charge. This activity may be used as an activity for the entire class, groups of students, or individually.

Materials

- “Trunk”: Use a box, backpack, or duffle bag to represent a 19th century trunk
- Collection of things to pack: Clothes, books, pictures of family and friends, tools for mining, toys, brush, comb, toothbrush, etc.
- Bathroom or package scale

Procedures

1. Before packing your “trunk”, have the class read the “Hints for Stage Travelers” on the previous page. Use this information as well as the questions below to start a discussion about what they would pack.
 - What do you pack when you go on a trip or visit family and friends?
 - What do your parents pack that the whole family will need?
 - What would you need if you were planning to look for gold?

List their ideas on the chalkboard or a large piece of paper

2. Seat the students in a circle. Place the scale in the center and put the “trunk” on the scale. Note the weight of the “trunk.”
3. Bring out the items the class said they might pack and put them in the “trunk.”
4. See how much the “trunk” weighs. Is it over or under 25 lbs.? If it is over 25 lbs. discuss what will have to be removed. Discuss what is necessary for the journey and what is sentimental. Explore why certain items were included and if they are necessary.
5. As you pack your “trunk” remind students that they will be traveling for a long time and will be a long way from their friends and family. Also, explain that you wouldn’t know the kind of goods you could buy in California. At the same time explain that most things were more expensive in California.

My diary of a stagecoach trip



Imagine you are on board a stagecoach going from Phoenix to Prescott, and are keeping a diary of each day's events along the way. Your trip will take 6 days and nights. In the space below, make five brief entries into your diary, telling how you and your fellow passengers are obeying, or not obeying, the rules outlined in "Hints for stagecoach travelers."

Entry 1:

Entry 2:

Entry 3:

Entry 4:

Entry 5:

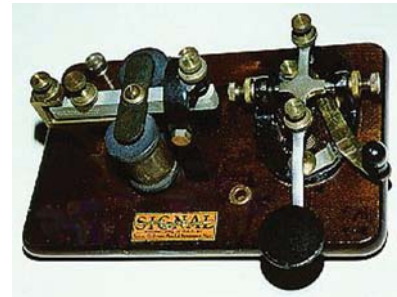
Building a telegraph



In this activity you will learn about simple circuits, electricity, and historical facts about the telegraph. Arguably, the telegraph may be considered the first true advancement for communication as we know it. Let's make it a science project!

Background

In May 24, 1844, Samuel F.B. Morse sent the first telegraph message through a wire between Baltimore and Washington DC, marking the beginning of communication as we know it today. The telegraph itself works using a very simple electronic circuit; the difficulty came in the construction of the wires needed to transport the signal. After gold was discovered in California and the need for fast, long distance communication became apparent, a transcontinental line was completed in 1861. Three years later, Louis McLane, a Wells Fargo General Manager and telegraph company director, arranged Wells Fargo money to be sent electronically using the telegraph.



A telegraph key

The circuitry of a telegraph is quite simple. The basic set up is nothing more than an electrical circuit that has a switch along its path (usually a “tap key”). A sound or light signal is emitted when a circuit is triggered. You and your class can build your own telegraph and learn about properties of an electrical current, while working hands on with the historical fundamentals of modern day communication.

Materials: (estimated cost: \$12 – \$15)

1. 6 Volt lantern battery
2. Low voltage, piezo buzzer
3. Low voltage LED (Light Emitting Diode) or flashlight bulb and holder (optional)
4. Balsa wood for a base
5. 1"x 1" piece of conducting metal (copper strip works great)
6. 18-gauge solid wire
7. 4 paperclips
8. Wire cutters or scissors
9. Glue

Building a telegraph (cont.)



Electricity principles

Electrical current can be explained as a flow of electrons moving through a conductive material. The source of electrons for this experiment will come from the battery, while wires will serve as the conductive material. When an electrical device, such as a light bulb, is connected properly between this flow of electrons, the bulb will glow. A straight connection such as this creates a flow that is called a “series”, or a “circuit.”

For this project we will need to control the flow of electricity, allowing only pulses of electricity to run through the circuit. The flow of electricity will be controlled by the addition of a switch in the series. The switch will allow us to make or break the path that the electrons use to flow through the circuit. This is what the key in the original telegraph did.

Electrical circuits are usually diagramed and explained with an illustration known as a “schematic.” Schematic diagrams use symbols representing electrical devices and connections to clarify and map out a circuit. A schematic of this project can be found in the following page (Fig. 1)

Procedures (use Fig. 2 to aid in construction)

Please note: Wires are labeled W1 – W4, and connections are represented by dots.

1. Check and test all your components.
 - A. Check your buzzer and or lights, and note polarity.
 - B. Positive (+) is usually red, and negative (-) is usually black. If your components don't work, try to switch the polarity.
2. Make or find a base for your electrical circuit. Balsa wood can be used. It is readily found in hobby or hardware stores. Then plan and lay out your circuit on the base.
3. The switch will consist of a simple touch relay connection using paperclips and an optional piece of metal.
 - A. Cut a piece of wire approximately 10 inches long (W1), and strip both ends of the wire (expose metal that is insulated by the plastic about 1/2 inch).
 - B. On each end, coil the stripped sections of the wire around paperclips (see Fig. 1).
 - C. One will connect to the battery; the other will be our switch. The switch will work when you tap the loose paperclip with a metal contact on the base of the unit.
4. Plan where you would like your devices to be fixed onto the base; it is important to keep the device's polarity in mind. If you plan on using a thin metal plate, make a paperclip connection on one end of W2, clip that end to the metal plate, then connect the other end to your first device (W2, to the light bulb, or the buzzer).

Building a telegraph (cont.)

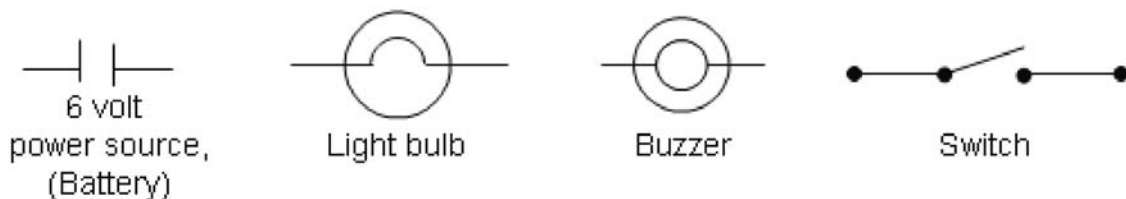


5. Once you are certain where and how your components will be laid out, glue or fix them on the base, and make all the connections.
 - A. Cut a wire approximately 5 inches in length and make a paperclip connector on one end. This end will be connected to the other end of the battery (W4). Connect the other end of this wire into your final device.
 - B. If you are only using one device, this will be your final connection. If you are connecting two devices, make your final connection with a small piece of wire connecting the two remaining connections (W3). When your circuit is fully connected, tap the switch and if everything is properly connected, it should work. (See illustrations and schematics).
6. Two units can be connected and used just like the original invention. Build two units, connect each of the first and last connections of devices (marked with an * in Fig. 2). Cut the wires to any length desired, just keep in mind that the longer the wires, the sooner the batteries will be drained. If polarity is correct, you can send messages through the wires.

Make sure an adult aids or supervises with the connection of the circuits and stripping of wires.

Schematic diagram — Fig. 1

A) Each device is represented by a symbol:



B) Connections are represented by dots
Wires are represented by lines



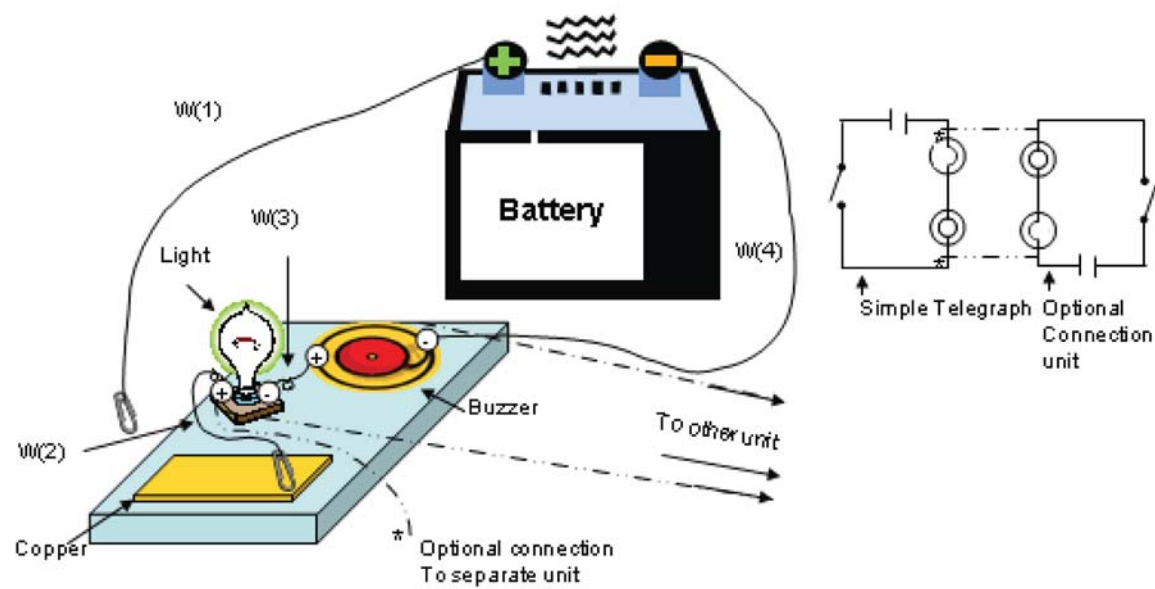
C) This is an example of a basic circuit and its corresponding schematic



Building a telegraph (cont.)



Schematic diagram — Fig. 2



Using Morse Code



International Morse Code

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



1898, express agent using a telegraph

Can you decode this message? The / divides the letters.

—• —•/•—••/••/— —/—•• •

• —/—•••/— — —/•—/•—•/—•• —/••••/•

•••/—/•—/— —•/•/—•—•/— — —/•—/—•—•/•••

Write your own message in Morse code below.

Micro-hydraulic mining



In this activity you will learn how sedimentary rocks are formed, learn about the process of erosion, and get a chance to try out hydraulic mining – a type of man-made erosion and mining method used during the Gold Rush.

Background

Beginning in the 1850's, hydraulic miners shot streams of high pressure water through iron nozzles at the sides of gravel hills. One such operation known as the Malakoff Diggings in Nevada County used 16 billion gallons of water annually. This was an effective and innovative method of mining, but it also proved to be destructive and disastrous. Debris from the mining eventually silted up California rivers, and in 1884, a federal judge ordered it to be stopped.



1866, hydraulic mining

You can create your own hill and recreate this mining process using micro-hydraulic mining. This project can be done individually, in groups, or as a presentation.

Materials

1. Potting Soil
2. Plastic or Paper Cups
3. Food trays, bowls, and water.
4. Spray bottles
5. **Optional;** gravel, brass nuts, bolts or washers.

Step-by-step instructions

1. In a large bin, mix soil, water, and optional gravel (not too much, or the soil won't bond). Add just enough water to saturate the soil, wet enough to shape, but not enough to pour. Label cups or molds and fill them with the moist soil.

This soil represents the sediment that is found at the bottom of a river. This is where gold washed down from the mountain can be deposited.

2. **Making a sedimentary rock:** Press down on the soil, compacting the mold. As you pack the soil, the excess water will be squeezed out; this water should be thrown out. After the initial press,

Micro-hydraulic mining (cont.)



use paper towels to press down the soil, this will absorb any excess water. Let the soil dry for a couple of days, compacting it once or twice a day. This demonstrates the process of compaction. Compaction is a vital step in the formation of sedimentary rocks. As sediment accumulates, its own weight causes deeper buried materials to compact and harden.

Hydraulic mining in California was done primarily on ancient river deposits that became sedimentary rocks long after the water stopped running. The hardness of a sedimentary rock is determined by how much compaction it has undergone along with the composition of sediments. Mining companies surveyed for potential deposits and mined in areas with sedimentary rocks derived from river sediments.

3. **Exposing the hill:** After the soil has hardened, carefully remove the soil from the mold cup onto a plastic tray. Use a thin tool to separate the soil from the cup, or carefully cut the cup as if removing a plant from a plastic tray.

In nature, tectonic activity such as faulting uplifts and exposes buried and hardened sedimentary rock. This process takes thousands of years; it is thought that most of the streams that deposited the sediments that were later hydraulically mined flowed over 40 million years ago.

4. **Hydraulic mining:** Now you are ready to do some hydraulic mining. Use the strongest setting on the spray bottle to squirt the mold with water. It won't be long until your hill begins to erode. The water run-off should be taken into consideration in your set up. Tilting the tray into a bowl works great. Also take note of the run-off. It will be dirty, and full of sediment, just like in the gold fields of California.

Massive operations of hydraulic mining eventually filled California rivers and streams with so much sediment that it affected the environment.

What did you observe? What problems do you think may have led to the banning of hydraulic mining?

Optional

Be creative with your mold! You can place small pieces of brass nuts and bolts to represent gold nuggets hidden in your mold. Using sand or other small particles, you can create layers in your mold to represent strata. Be creative and have fun being a hydraulic miner!

Appendix

Pre-tour activity ideas

Listed below are suggestions for Pre- and Post-tour classroom activities. These activities were designed to help you and your students meet the California History-Social Science Standards.

- Museum etiquette — What is a museum and the expected behavior when visiting one?
- Outline the story of Henry Wells and William Fargo.
- Make a timeline of California from the present back to 1848.
- Draw a map of California, locating Los Angeles, San Diego, San Francisco, San Jose, Sacramento, and your city.
- Describe California's physical, social, cultural and political situation before the Gold Rush.
- Write a paragraph on how to use a Gold Pan.
- Make up phrases like, "Seeing the Elephant" to describe adventure and danger.
- Tell the story of John Sutter and James Marshall to your class.
- Give brief reports, with illustrations, about early California Pioneers, e.g., Sam Brannan, John C. Fremont, Dame Shirley, Kit Carson, Bidy Mason, Phinneas Banning.

Appendix

Post-tour activity ideas

Have students do the “Post-tour questions” worksheet on the following page.

- Describe the differences and similarities of a Concord stagecoach and today’s cars.
- Illustrate a brochure which would show gold miners what equipment they would need and how to use it.
- Create the name of a mining camp and describe how it got that name.
- Write a letter to a friend describing your trip on the stagecoach.
- Discuss what services miners needed in the mining camps. Design a mining camp and include stores and offices for necessary services.
- At the beginning of the school year students write a letter to a partner. Deliver the letters when the class is studying Gold Rush California.
- Try your hand at Western art by creating an illustration of a scene you would find in Gold Rush California.
- Draw a map of the Gold Rush Country, locating Sacramento, Sutter’s Fort, Sutter’s Mill, and Hangtown (Placerville).
- Make a list of ten foreign countries and ten U.S. states from which people came to California during the Gold Rush.
- Write a convincing argument that explains why going to California to search for gold is a good idea.
- Name and illustrate four routes to California in 1848 – 49.
- List five ways California changed as a result of the Gold Rush.

Appendix

Post-tour questions

Use what you learned during your museum tour to help you answer the questions below.

1. Wells Fargo & Co. was both a bank and an express company. What banking and express services did Wells Fargo & Co. provide?

2. The Concord stagecoach was a fast method of transportation. What was its average speed (miles per hour)? Going at this speed, how far could it travel in one day? What is the average speed of a car and how far can it go in one day? What about a train? An airplane?

3. A stagecoach ticket for a 1,500 mile trip from Missouri to California cost approximately one year's salary in the 1850s. How much did a ticket cost? How does that cost compare with modern airfares? How much extra did passengers pay for their meals?

4. Travelers on a Concord stagecoach were allowed to carry only twenty-five pounds of luggage. Where was their luggage stored? Where was their gold stored? Up to how many people could ride on a Concord stagecoach?

5. The Concord stagecoach had thick, leather straps that made it rock like a cradle. What were these leather straps called? What is their equivalent in a car?

6. The shotgun messenger played an important role on a stagecoach journey. Name three functions of the shotgun guard during a stagecoach journey.

7. Stagecoach drivers were well-paid, highly skilled professionals. How many horses would they usually command? How often were the horses changed for a fresh team? Where were the horses housed, fed and groomed?

8. A Wells Fargo office provided many services to Gold Rush communities. What were some of those services and why were they an important part of daily life in those communities?

Appendix

Answer key

1. Wells Fargo provided fast, reliable banking, mail, and express service between San Francisco and the Gold Rush country. In mining towns, Wells Fargo agents bought the gold dust discovered by the miners and sent it to San Francisco. The dust was then melted down and formed into gold bars and coins.
2. The Concord stagecoach traveled, on average, five miles an hour. Because the coach was used twenty-four hours a day, it was able to cover almost 120 miles a day. A 1,500 mile trip from Missouri to Sacramento, California took only 15 days. Today, even with interstate highways and modern technology, the same trip by automobile still takes about 28 hours non-stop at 55 miles per hour. By train the trip takes several days, but an airplane can cover the distance in a few hours.
3. A stagecoach ticket from Omaha, Nebraska to Sacramento, California cost \$300. One-way airfare for a similar trip today can cost almost as much, depending on the class of airfare chosen. Stagecoach passengers might pay one dollar for each meal. Often the food was downright unpalatable, poorly cooked, and rudely served.
4. Luggage was stored in the back boot of the stagecoach. Treasure boxes containing valuables such as bags of gold dust or gold bars were stored in the front boot. Wells Fargo did not allow passengers to check treasure as luggage: "Each adult passenger is allowed 25 pounds of baggage free. But neither Gold Dust, Bullion, Coin, Bank or Treasure Notes will be carried under the designation of baggage." Often coaches held as many as eighteen to twenty persons, including the driver and shotgun guard.
5. Quarter-inch strips of leather were arranged together to form a suspension system called thoroughbraces. The thoroughbraces were shock absorbers that made riding a stagecoach feel like being on "a ship sailing through the desert" or traveling in "a cradle on wheels", as Mark Twain once described his own experience.
6. The shotgun guard protected passengers, treasure, and baggage from attacks by robbers, wild animals, and unhappy Native Americans. The guard was sometimes required to assist the drivers and passengers in emergencies such as equipment breakdown or serious illness. The brothers Morgan and Wyatt Earp were famous Wells Fargo shotgun guards, or "messengers," as they were called.
7. The "whip" commanded four or six horses depending on the number of passengers and the amount of baggage being carried. An empty Concord stagecoach weighed 2,200 pounds so the strongest, healthiest horses were needed in order to move at a speed of five miles an hour. The horses were housed, fed, groomed, and changed at "swing" stations situated about every twelve miles along the route and at "home" stations located every 45 miles or so.
8. In Gold Rush mining towns, Wells Fargo offices were often associated with other businesses such as general stores and hotels. Wells Fargo offices gradually became significant social and economic centers in the Mother Lode. Not only could a miner have his funds transferred back home, but he could also pick up and send his mail, check on the exact time of day, read a newspaper, send a telegraph message (after 1853) and hear all the latest news (and gossip!). Wells Fargo offices provided essential sources of information and communication as well as banking and express services, thereby fostering the social and cultural life of Mother Lode communities.

L.A.: a Bystander in California's First Boom

By Steve Wiegand

Sacramento Bee Staff Writer

Published January 18, 1998

With all due respect, James Marshall didn't start California's first gold rush. Francisco Lopez did, while looking for wild onions. And it wasn't at Coloma. It was at San Feliciano Canon, about eight miles from present-day Newhall in Southern California.

Of course, it wasn't much of a gold rush. And in the 1840s and 1850s, Southern California wasn't much of a place. While the northern half of the state sizzled with activity, the southern half slumbered. In 1854, for example, the population of the "city" of Los Angeles was about 4,000. The city of Downieville in the Sierra was home to 6,000.

Or, as novelist/historian Irving Stone put it: "Northern California was a lean, hard-bitten mountain man . . . male, rugged, disciplined, carrying the seed of a new generation. Southern California was a lush, red-lipped sensual female . . . sunning herself in a patio surrounded by bougainvillea."

The biggest reason for the disparity, at risk of overstating the obvious, was gold. Northern California had it, Southern California didn't — at least not much of it.

It's true the first gold strike of note in the state came in March 1842. The aforementioned Lopez and a companion were digging for wild onions when Lopez noticed what appeared to be gold particles clinging to the roots. By May, more than a hundred miners had descended on the site, and by the end of 1843, more than \$50,000 in gold had been taken from the area. But it was hard digging, and the area lacked water. By 1846, the site had been abandoned.

A lack of gold wasn't the only reason Southern California lagged behind. Lack of water was a widespread problem. Unlike San Francisco, which enjoyed a splendid harbor at its doorstep, Los Angeles' harbor was 16 miles away from the town. And a handful of powerful rancho owners controlled so much land that there was no place for settlers to settle.

The ranch owners made handsome livings selling their cattle to miners in the north. But the money did not trickle down. In 1850, wrote historian Kevin Starr, "the (L.A.) county had 8,329 inhabitants, half of which were Indians and most of whom were illiterate. There were no schools, or libraries — and no newspapers."

The city had neither foundry nor forge and had to send to San Francisco for well-drilling equipment. It took longer for mail to get from San Francisco to Los Angeles than it did from San Francisco to New York.

And while businesses boomed and busted in the north, Los Angeles' biggest financial venture occurred when the local residents wagered a total of \$50,000 on a local horse in a race — and lost to an Australian entry.

It was, however, a lively place for those who liked it rough. In fact, Los Angeles was fully as mean and tough a cow town as Dodge City, Tombstone or the other mythic hell-for-leather towns of the West. In 1850, for example, the city averaged a murder a day.

L.A., a Bystander in California's First Boom (*cont.*)

One appalled Eastern visitor, observing a man being pulled from the jail and lynched, asked why the mayor didn't step in and stop it. Because, he was told, the mayor was leading the lynch mob.

Further south, San Diego enjoyed a splendid natural harbor, but was cut off by fierce deserts to the east, Mexico to the south and a lack of local initiative.

And so Southern California slept through the Gold Rush and waited its turn. By the 1870s, the mild climate, cheap land and the arrival of competing, and therefore cheap, intercontinental train routes combined to start the area's own version of a gold rush. The discovery of massive deposits of silver in the mountains bordering the Mojave Desert didn't hurt.

By 1888, the population of Los Angeles had topped 100,000. Downieville would never be its rival again.

Suggested reading

Picture books

- *Nine to California* by Sonia Levitin — Amanda travels by stagecoach, from Missouri to California, with her four siblings and mother to join her father.
- *Stagecoach Sal* by Deborah Hopkinson

Fiction

- *Jo and the Bandit* by Willo Davis Roberts — En route to stay with her uncle in Texas in the late 1860s, twelve-year-old Jo experiences a stagecoach robbery and becomes involved with a reluctant young outlaw aiming to change his ways.
- *By the Great Horn Spoon!* by Sid Fleishman — Jack and his aunt's butler stow away aboard a ship bound for California and the promise of gold.
- *Seeds of Hope* by Kristiana Gregory — A fictional diary account of fourteen-year-old Susanna Fairchild's life in 1849, when her father succumbs to gold fever on the way to establish his medical practice in Oregon after losing his wife and money on their steamship journey from New York.
- *The Journal of Wong Ming-Chung* by Laurence Yep — A young Chinese boy nicknamed Runt records his experiences in a journal as he travels from southern China to California in 1852 to join his uncle during the Gold Rush.

Nonfiction

- *Outrageous Women of the American Frontier* by Mary Rodd Furbee
- *Stagecoach: The Ride of the Century* by Richard Mansir — Includes diary excerpts from children.

Curriculum guide evaluation

We hope this guide was helpful in enhancing your 4th grade curriculum. Please help us meet your needs by answering the questions below. We appreciate your opinions and suggestions.

1. Which activities were the most helpful?

2. Which activities were the least helpful?

3. Does the Curriculum Guide contain too much or too little information?

4. How did you use the activities? As they are presented or did you adjust them to meet your needs or teaching style?

5. Do you have any ideas or suggestions for the Museum or other teachers?

Please mail this evaluation to:

Wells Fargo History Museum
333 S. Grand Avenue, Plaza Level
Los Angeles, CA 90071