

Teaching Traditional American History Program

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Ridgeway R-V
Lesson for Grade 9 Social Studies
History of the American West

Lesson Overview: Teacher lecture and student research about early mining in California using the “placer (pronounced ‘plass-er’) method” for mining gold, which is surface mining that does not involve tunneling. The student will gain concepts of what it was like for the early miners to pan for gold with simple tools in 1848 and 1849 in California.

The teacher may want to make cross curriculum connections to math (measure weight of “gold” panned, and determine its value according to a scale), and language arts (write a letter home, describing your gold-mining experiences).

Objectives: Performance Standards

Goal 1: Students will demonstrate within and integrate across all content areas the ability to:

- Goal 1.2. Conduct research to answer questions and evaluate information and ideas
- Goal 1.4. Use technological tools and other resources to locate, select and organize information

Knowledge Standards

In Social Studies, students in Missouri public schools will acquire a solid foundation, which includes knowledge of:

- S.S. 2. Continuity and change in the history of Missouri, the United States, and the world
- S.S. 4. Economic concepts and principles

Grade Level Expectations-Social Studies Grades 9-12

2a. Knowledge of continuity and change in the history of the United States; Concept C.3 Economic development in the United

States - Describe the historical development of the American economy, including:

- Impact of geographic factors
- Role of the frontier and agriculture
- Impact of technological change and urbanization on land, resources, society, politics and culture
- Changing relationships between government and the economy

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4 Knowledge of economic concepts; Concept D.4 Knowledge of economic consequences of decisions – U.S. History

- Determine the economic consequences of personal and public decisions

Materials:

1 aluminum pie pan for each student

Dirt, gravel, and rocks mixed together in a bucket, or other container

Water source

Bucket, or other large container for water

Optional, for math connection: food scale

Resources (see References at the end of the lesson)

Class Time: 2-3 class periods of 45 minutes each. Depending on class size, and whether the assessment is done in Social Studies or Language Arts class, the activity may take longer.

Teacher Input:

- Lecture from the following notes taken from the book California Gold; The Beginning of Mining in the Far West, Rodman W. Paul, listed in resources, along with any personal knowledge the teacher may want to discuss.
- The teacher may provide students with a copy of this outline, or ask students to take their own notes during the lecture. The notes will be valuable for use in the assessment.
- LECTURE NOTES

I. Introduction

A. The Mother Lode Counties

1. Nevada
2. Yuba
3. Seirra

B. Cities

1. Nevada City
2. Grass Valley
3. Auburn
4. Placerville
5. Jackson
6. Sonora
7. Columbia
8. Coloma

C. California was the first western state to undertake precious metal mining on a large scale.

D. The 1848 Gold Rush substituted “prospectors” in place of the “frontiersmen” and “pioneer farmers” in Frederick Turner’s steps of expansion.

1. Fur traders
2. Frontiersmen
3. Pioneer farmers with limited agricultural skills
4. Farmers with economic and development skills
5. City or town builders
6. Mining industries

II. Chapter One – The Setting

A. By the end of the war with Mexico there were treaty problems

1. Daniel Webster wanted treaty renegotiated with Mexico
2. It was defeated by a Senate vote
3. Gold was discovered at the time the California Territory was being transferred to the U.S., which would change America's perspective of California.
 - a. Previously, California was sparsely settled, and then only on the coast line
 - b. There was a small population of whites and a large population of American Indians
 - c. Neither group did anything to improve the land
 - d. The Indians were considered culturally in poverty, with no political organization, and lived with the minimum of existence
4. From the time of Spanish exploration by Cabrillo in 1542 at San Diego, and the colonization between 1769 and 1820, there were still only about 3,000 white people
5. The Spanish gathered in groups at missions, presidios and pueblos from San Diego to San Francisco Bay
6. Most settlements were within a day's ride of the coast line, nothing inland
7. The missions represented the church and state, and tried to convert the Indians' idleness to Christian usefulness
 - a. Raising gardens and orchards
 - b. Developing irrigation systems
 - c. Raising herds of horses and cattle

- B. Transformation of land usage
 - 1. In 1822 land hungry Mexicans began to turn upper California into ranches
 - 2. The missions were broken up and land restructured for manufacturing goods and cattle trade
 - 3. Transformed from a pastoral environment into an agricultural environment
- C. From the Straits of Carquinez, north to the Sacramento River and south to the San Joaquin River Valley great mineral wealth lay hidden
- D. From the Sierra Nevadas to Southern California the backward, sleepy heritage of the Mexican culture began to change

III. Chapter Two – New Age Begins

- A. The great valley was remote from the ocean and Mexican civilization
 - 1. Indians were occupants and considered ferocious
 - 2. John Sutter, a Swiss nationalist, sailed across San Francisco and San Pablo Bay up the Sacramento River and built a fort at New Helvetia with Hawaiians, white outcasts and half breed Indians
 - 3. Along with their agricultural development they built a grist mill and distillery
 - 4. The small boom in the 1840's brought other ethnic groups into the area
 - a. Germans into the Feather Valley
 - b. French into the Bear River, south of Yuba
 - 5. Ranches developed in the San Joaquin Valley, where the present day city of Stockton

was founded by a German named Charles Weber

6. Europeans and Americans filtering into the rich coastal valleys of
 - a. San Francisco Bay (called Yerba Buena)
 - b. Santa Clara
 - c. Napa
 - d. Sonoma
 - e. San Jose
 - f. Santa Cruz
7. Before 1845 fewer than 700 men without Spanish or Indian blood lived in California
8. By 1848 14,000 were white, 7,500 were Spanish and 6,500 were foreigners from other countries (South America, Germany, Switzerland, England, Ireland and France)

- B. The American version of Spanish ranching was
 1. They didn't have any local markets for their products
 2. They lacked transportation
 3. There was a lumber shortage, so they set up a lumber mill at the base of the Sierra Nevada Mountains
 - a. To establish a way to move the lumber to the mills they set up deep tailraces (channels for water)
 - b. These diversions of the river and the forming of dams exposed the gold deposits

IV. Chapter Three – The Great Migration

- A. In 1848 through 1850's the make-up of California's population came from
 1. Hawaiian Islands
 2. Oregon

3. Mexico
 4. South America
 5. Immigrants from the Eastern part of the USA
- B. How they arrived in California
1. Traveled around the Cape of Horn
 - a. Most expensive of travel
 - b. Took the longest time to get to California, four to eight months
 - c. Cramped quarters and bad food and conditions
 2. Traveled through the Isthmus of Panama
 - a. The quickest way to travel
 - b. Took 30 to 35 days
 - c. Exposed to mosquitoes, constant raining conditions and rugged conditions along the Chagres River
 - d. Cost was \$350 for first class and \$170 for steerage
 - e. Generally overcrowded conditions
 3. Traveled overland through the Great Plains and Rockies
 - a. Generally traveled through Texas, Arkansas or Missouri
 - b. Took longer, had to begin at certain times of the season
 - c. Least expensive
 - d. Because of geographic location (inland), it was difficult to get to the seaports to travel via the Cape or Isthmus
 - e. Easier to take family and personal belongings, because of cost
 - f. The most boring, except when going through Indian territory
 - g. At end of travels, most travelers were physically worn out

4. Traveled from Asia to the San Francisco Bay
 - a. Cramped conditions
 - b. Mostly Chinese, some Japanese
 - c. Travel usually paid for by someone else and workers became 'indentured' for a period of time
 - d. Generally the Orientals stayed together in a group because of their physical appearance and language
5. The 'Argonauts' were all classes of people
 - a. Country boys
 - b. Clerks
 - c. Westerners
 - d. Foreigners
 - e. All seeking to get rich in "El Dorado"

V. Chapter Four – Fundamental and Teachers

- A. Most of the gold was in the interior provinces, areas where the Spanish did not colonize
 1. Small amounts of gold had been discovered in southern California by the Spanish, but not in sufficient quality or quantity to warrant a "rush"
 2. Frenchmen discovered the gold while cutting lumber for Sutter
 3. Most of the gold was in an area in the foothills on the western flank of the Sierra Nevada Mountains, at a point where the Sacramento River Valley joined the coastal range
 4. At the close of 1848 most miners were working the west slope of the Sierras from the Feather River on the north to the Tuolumne River on the south, approximately 150 miles north to south
 5. The "Mother Lode" which most were not working was developed during the "Cordilleran Revolution", when rocks were folded and

crowded together and formed veins or broad ribbons in fissures on the rocks

6. The gold veins were torn away through years of moving water and grinding action
7. This action caused the deposits to be found in rivers, mixed with sand, gravel and stones; they were called “placer gold”

B. Number of people mining

1. In the first years from 1848 there were not enough people mining to exploit the vast area of minerals
 - a. In 1848 there were 5k
 - b. In 1849 there were 40k
 - c. In 1850 there were 50k
 - d. By 1852 there were 120k

C. Nationalities of the Miners

1. Many early miners were inexperienced in mining techniques
2. Most experienced miners were from European countries
 - a. Cornwall in England
 - b. Southern Germany
 - c. Serbians and Hungarians
 - d. South Americans from
 - i. Peru
 - ii. Chile
 - iii. Bolivia
 - iv. Brazil
 - e. Americans were mostly from Pennsylvania, West Virginia and the Mississippi valley, large coal mining areas
 - f. Most beginning American miners were inexperienced due to the fact they were from other professions, wanted in the

mining business cheaply, and quick; as a result they used the “panning method”

- VI. Chapter Five – From Adventurers to a Business: Mining 1848 to 1851
- A. Placer mining was the primary method of extracting gold between 1848 and 1851
 - B. The result of damming up the streams and rivers to move lumber down from the western side of the Sierras changed the nature of water flow
 - C. The simplest way of extracting gold was “panning” or using a flat-bottomed pan with gently sloping sides, made of iron or tin
 - 1. Based on the weight of the gold, a volume of gold would outweigh equal volumes of rock or earth
 - 2. Streams would drop their mineral to the bottom instead of carrying it in suspension
 - 3. The “panner” would fill his pan with dirt and water, knead the two, whisk it around and around until only the gold would settle on the bottom or become exposed
 - D. Difficulties with the process
 - 1. It was slow and unsuitable to large operations
 - 2. It was a one man operation
 - 3. Amount of gold found was limited from daylight to dark
 - 4. It was monotonous and physically tough on the body, bent over in cold water
 - E. Other methods developed
 - 1. Rocker or cradle method, long used in Georgia and North Carolina
 - a. An oblong box without a top and mounted on rockers, several feet in length and placed in a sloping position.

- b. At the end was a board or screen which adjusted up and down
- c. At its head was a sieve or hopper with cradle cleats or nails at intervals to catch the gold
- d. Dirt was shoveled into the cradle and filled with water rocking back and forth
- e. It would allow smaller particles of gold to slip through
- f. Men could join together for the work and share the wealth
- g. Had to be placed where water flow was consistent

Activities:

Activity 1: At the end of the lecture, students will “pan for gold”.

1. Take the students outside near a faucet, use a hose, or provide some other source of water in a large bucket or container.
2. Give each student an aluminum foil pan.
3. Using a cup put a cupful of the sand, dirt, and rock mixture into each student’s pan.
4. Allow each student to dip his or her pan into the water.
5. Direct each student to shift the water and mixture around, gradually pouring out the water and soil. The largest and heaviest rocks will remain.
6. The deposit of heavy rocks remaining represents gold.
7. Optional math connection: Weigh the remains of each student’s panning. Establish a scale, such as .5 oz. of “gold” = \$1.00 value, and determine the value of each student’s “find”.

Activity 2: Students will research the sites listed and find the answers to the following questions:

Q. Even though placer mining did not involve tunneling, environmentalists consider it very destructive. Why?

A. Large amounts of silt were added to previously clear running streams, which harmed the environment.

Q. Why did the placer miners use streambeds to search for gold?

A. Gold deposits were found in alluvial deposits – deposits of sand and gravel representing streambeds. The material was loose, and was moved by stream flow from an original source, such as a vein.

Q. What advantage was there to using a rocker, rather than a sluice-box?

A. A rocker could be used when the depth of the stream was too shallow to use a sluice-box.

Q. Press reports were important for triggering migration to the gold fields. What claims did those reports make?

A. Press reports claimed that everyone would become rich. The only way they could fail was if they were simply too lazy to pick up the gold that was lying around on the ground.

Q. How was the migration of the Argonauts different from traditional migration up to that point?

A. Most Argonauts, or first gold seekers in California, thought they would easily find gold. Thus, they left their families behind, thinking that within a year or so, they would return home wealthy. Traditionally, migration in America to that point, had been families moving for the purpose of recreating an existing way of life, or moving to establish a new and better way of life in the new place.

Name _____

Date _____

Use the Internet, and research the listed web sites to find the answer to the following questions.

<http://www.absoluteastronomy.com>

<http://www.collections.ic.gc.ca/cariboo/mining/placer.htm>

<http://www.duke.edu/~agf2/history391/migration.html>

1. Even though placer mining did not involve tunneling, environmentalists consider it very destructive. Why?

2. Why did the placer miners use streambeds to search for gold?

3. What advantage was there to using a rocker, rather than a sluice-box?

4. Press reports were important for triggering migration to the gold fields. What fantastic claims did those reports make?

5. How was the migration of the Argonauts different from traditional migration up to that point?

Questions for Review: The following questions can be discussed orally.

- R. Where is placer gold found?
- A. Placer gold is found on the surface of the earth, often in water.
- Q. What kinds of tools were used to recover gold in this manner?
- A. Picks, shovels, pans, and rocker cradles were used to recover gold in this manner.
- Q. What difficulties might one encounter when searching for gold in this way?
- A. Weather, remote surroundings, slow success, hard physical or living conditions, tiring, and discomfort in the cold water are some of the difficulties one might encounter when panning for gold.
- Q. If you were traveling to the gold fields from the Eastern United States, how would you choose to get there, and why?
- A. Accept any of the following ways, as long as appropriate reasons are given:
 - a. Around the Cape of Good Horn-although expensive and lengthy, there are fewer dangers, or obstacles to safe arrival
 - b. Across the Isthmus of Panama-the quickest way, taking only about a month, which offsets the constant rain and exposure to mosquitoes; cost is affordable at \$170-\$350
 - c. Across the Great Plains-cheapest way, so I can take my entire family; could take more personal belongings
- Q. What were the backgrounds/nationalities of most of those who were searching for gold?
- A. Many experienced miners came from European countries like England, Germany, Serbia, and Hungary, South American countries like Peru, Chile, Bolivia, and

Brazil. Many inexperienced miners came from the eastern part of the United States, like Pennsylvania, West Virginia, and the Mississippi Valley. These people may have been farmers, businessmen, professional people, etc.

Closure: Ask students to think about what they have learned from the lecture, their research, and the experience of panning for gold, and respond orally to the following, by placing themselves in the position of a miner.

- What kinds of experiences might you have in traveling to the gold fields?
- How might you feel when you arrived?
- What might motivate you to decide to search for gold?
- What method would you use to try to find gold?
- What might you do if you spent all of your resources and did not find gold?
- What would you do if you found gold?
- In what years were the majority of people traveling to California to search for gold?

Assessment:

Name _____

Date _____

In 1848 you were a farmer in West Virginia, living with your wife and two children. You decided to go west to seek your fortune in the gold mines of California. It is now late 1849, and you are living in California and panning for gold daily. Write a letter to your family detailing your experiences in the year and a half since you left home.

Refer to your lecture notes for important details. Your letter should be written in correct letter format, with your return address, greeting, body, closing and signature. It should include the following:

- What method of travel you used, and one way the geography affected your trip
- How long it took you to get to California
- What you encountered on your arrival (what, or who did you see?)
- At least two experiences you had along the way (something that happened, who you met, etc.)
- An explanation of your method of trying to find gold
- One or two of your daily experiences in searching for gold
- What success, if any, you have had so far
- What your current, or future plans are for your family
- An indication of your feelings should be included at some point in the letter

MODEL ASSESSMENT KEY

Placerville, California
December 23, 1849

Dear Mary,

I arrived in California in mid-November, and now that it's getting close to Christmas, I'm thinking fondly of you and the family. It has been a struggle out here, and lonely without you. I hope to return home as soon as I strike it rich. We can use the money to pay off the farm.

In talking to some of the other miners who came by boat, by the Cape of Good Horn, I learned that their journey was long and expensive. Others came across the Isthmus of Panama, which was cheaper, but the insects caused a lot of disease. So, it looks like my travel across the Great Plains, although difficult because of having to get to the Sierra Mountains before October, worked out better than for some others. It turned out to be all right to leave in late summer, because we made it in time.

Along the way, there was a prairie fire around Chimney Rock in the Nebraska Territory. Thank heavens it was just after we had just passed through. We saw the smoke as we traveled westward. Another difficulty we had, was fording the Colorado River after it had been swollen from a rainstorm. Other than that, the trip seemed long, boring, and uneventful. It was better on horseback, though, than to have a cumbersome wagon.

When our wagon train arrived, we saw lots of other people from back east, and foreign countries. Tent cities (tents serving as towns) were everywhere. Supplies were expensive, and took most of the cash that I brought with me. The basic food supplies I bought were canned beans, hard tack, flour, and coffee. I also bought a pick, shovel, a "gold" pan, rope, hammer, nails, saw, ax,

and a tent. I also had to buy a mule to carry all the supplies. Fortunately, I already had a rifle and handgun, so I didn't have to buy those.

I had to find a site to work. Most of the river streams were being panned. I learned that the Chinese were very successful, so I looked for a place to pan close to them.

All the other miners are very suspicious and jealous of any new miner. Everyday, when I stand in the cold water, and my back is hurting from bending over all day, I sometimes think that farming wasn't that bad after all. The meals of beans and hardtack don't compare to your fried chicken. I have no fresh vegetables, and have diarrhea often. It takes all the energy I have to get up every day and pan for gold, but if I could just strike it, it will all be worth it.

I have not been successful yet. All the gold I have found, I have to reinvest in food and other supplies, and the cost is higher every time I go in the camp town.

I had thought about sending for you and the family, but the conditions are too difficult and dangerous. I will try to stay at least one more year. Maybe I'll hit it lucky. If I do, we'll be rich when I come home. If not, when I come home, we'll pick up from where we were when I left.

I keep thinking this was the right decision, even though it's difficult and so far there have not been many rewards. I'm not sure how I feel about this – I miss you and the kids, and I miss home, but I don't want to miss this opportunity.

Your husband,
Robert

ASSESSMENT RUBRIC

Name _____

Date _____

Your letter contained the following:

CONTENT	3 pts	2 pts	1 pt	0 pts
1. Letter format	3	2	1	0
2. Method of travel	3	2	1	0
3. How geography affected your trip	3	2	1	0
4. How long it took	3	2	1	0
5. What happened along the way	3	2	1	0
6. What you found upon arrival	3	2	1	0
7. Method of mining	3	2	1	0
8. Daily experiences	3	2	1	0
9. Success, if any	3	2	1	0
10. Current, or future plans	3	2	1	0
11. Your feelings	3	2	1	0

SCORING GUIDE

The circled number represents your score for that entry. Below is a description of requirements for each number of points.

3 pts=You included full, accurate, and interesting information

2 pts=You included information that was incomplete, and/or not always accurate

1 pt=Your information was inadequate and/or often inaccurate

0 pts=You did not include the information

Teacher Comments: _____

Your Score: _____

Extension and/or remediation:

Extension: View any of the following videos.

- *The Forty-Niners and the California Gold Rush*. Stamford, Conn.: AAABC Video Publishing, Inc. 1994. 50 mins.
ISBN: 1569490619
Closed-captioned for the hearing impaired. Produced in cooperation with the Gene Autry Western Heritage Museum. "A Brazos production." Narrated by Kris Kristofferson. There is nothing like the power of gold. When hard working carpenter James Marshall spotted "something shiny" in the American River on January 24, 1848, he felt the power. Soon, so did the rest of the country.
- *The Gold Rush and the 49'ers*. New York: BFA Educational Media, 1992. 1 videodisc (ca. 20 min.)
Discusses the impact of the discovery of gold in California in 1848. Shows the routes of prospectors, the establishment of new towns, and the accomplishments of the gold rush pioneers.
- *The Rush for Gold*. Terre Haute, Ind.: Columbia House Video Library, 1993. 1 videocassette (48 min.)
Describes the 1849 California gold rush, the miners, how they reached California, and describes the gold mining process.
- *The Story of the Gold Rush*. Princeton, J.J.: Films for the Humanities & Sciences, 996. 1 videocassette (ca. 51 min.)
Narrator, John Lithgow. Discusses how the California gold rush got started, how miners traveled to California, inventive ways many people became rich during the gold rush. The clash of international cultures, and the roles of women, African Americans and Native Americans. Also explains the long-term impact of the gold rush on California and on the United States.

Remediation:

- Groups of 3-5 students each select a topic (such as traveling to California, finding gold, etc.) and present a role-play
- Teacher select good examples of the assessment letters, and read them to the class (or have students read their own).

References:

Books:

1. Paul, Rodman W., California Gold: The Beginning of Mining in the Far West, University of Nebraska Press: Lincoln, 1947.
2. Paul, Rodman W., Mining Frontiers of the Far West, 1848-1880, Holt, Rinehart and Winston: New York, 1963.
3. Harris, Benjamin Butler, The Gila Trail: The Texas Argonauts and the California Gold Rush, Edited, annotated by Richard Dillon, University of Oklahoma Press: Norman, 1960.

URLs:

1. <http://www.absoluteastronomy.com>
2. <http://www.collections.ic.gc.ca/cariboo/mining/placer.htm>
3. <http://www.duke.edu/~agf2/history391/migration.html>