Mining Kit Teacher Manual

Contents

Exploring the Kit: Description and Instructions for Use.........................page 2

A Brief History of Mining in Colorado ..............................................page 3

Artifact Photos and Descriptions.....................................................page 5

Did You Know That...? Information Cards ........................................page 10

Ready, Set, Go! Activity Cards ........................................................page 12

Flash! Photograph Packet...............................................................page 17

Eureka! Instructions and Supplies for Board Game............................page 18

Stories and Songs: Colorado’s Mining Frontier..................................page 24

Additional Resources........................................................................page 35
Exploring the Kit

Help your students explore the artifacts, information, and activities packed inside this kit, and together you will dig into some very exciting history! This kit is for students of all ages, but it is designed to be of most interest to kids from fourth through eighth grades, the years that Colorado history is most often taught. Younger children may require more help and guidance with some of the components of the kit, but there is something here for everyone.

Case Components

1. **Teacher's Manual** - This guidebook contains information about each part of the kit. You will also find supplemental materials, including an overview of Colorado’s mining history, a list of the songs and stories on the cassette tape, a photograph and thorough description of all the artifacts, board game instructions, and bibliographies for teachers and students.

2. **Artifacts** – You will discover a set of intriguing artifacts related to Colorado mining inside the kit.

3. **Information Cards** – The information cards in the packet, *Did You Know That…?* are written to spark the varied interests of students. They cover a broad range of topics, from everyday life in mining towns, to the environment, to the impact of mining on the Ute Indians, and more. On each of the information cards is a question to challenge your students.

4. **Activity Cards** – Thirty activity cards are contained in the packet, *Ready, Set…Go!* Your students will learn 19th century games, build a model of the Leadville Ice Palace, design their own Victorian houses, and much more. Small teams work on some of the activities, while others are meant for the entire class, and others still for individual students. One color set is included in the kit, and a black and white set is intended to be Xeroxed and used by your students both while you have the kit and after it has been returned to us.

5. **Photograph Packet** – In the photo packet, *Flash!*, you will find images of miners, housing in mining towns, a letter from an early prospector to his wife in Indiana, a photo record of the coal mine disaster at Primero, Colorado, and more. The photographs help your students imagine the hardships and excitement of early mining life in Colorado.

6. **Board Game** – *EUREKA!* Leads your students through life in a mining town, and deep into a mine in search of gold. The person who is first to strike gold is not necessarily the winner, though. Some players may earn more money in the town than others do inside the mine.

7. **Cassette Tape** – Side A of the cassette tape contains two stories recounted by storyteller, Kay Negash. The first story is about Baby Doe Tabor, and the second tells the legend of “Silver Heels,” the dance hall girl. Side B consists of early mining songs in Colorado, performed by Sean Blackburn and friends.

8. **Additional Resources** – Find out more about Colorado’s mining history, and lead your students to other sources from our list of recommended books.
A Brief History of Mining in Colorado

It took little more than a glint of gold to spark the “Rush to Pike’s Peak” in 1858. By the following year, over 50,000 people defied untold hazards, expense, and hardship to race into an area they knew nothing about. About half stayed only long enough to realize how little gold was waiting to be picked up off the ground and panned out of the streams. The rest buckled down to serious mining.

In 1540, Francisco Vasquez de Coronado set out with 1,000 men in search of the Seven Cities of Cibola. Rumors of golden cities led his party across much of the Southwest and even as far north as present-day Kansas. Two years later his expedition returned to Mexico, unsuccessful in finding the fabled cities of gold. 225 years later Spanish explorers found traces of gold in the southwest. Their findings were not enough to spur the Spanish government to start a mine and the area was left in relative peace.

That peace ended in 1849 with the California gold rush, when thousands of gold-seekers traveled through the region. A group of Cherokee Indians were on their way to California when one of them, Lewis Ralston, discovered trace amounts of gold in Ralston Creek outside of present-day Denver. The find did not impress them and the party traveled on to the Pacific Coast, however they did send word back to family and friends in Georgia of Ralston’s discovery. In 1858 William Greene Russell and 104 other men decided to follow up on Ralston’s discovery. When the party did not immediately find gold most of the party packed up and returned to the east, the hardy few who remained were rewarded for their patience when they found $600 in gold at the confluence of the South Platte River and Cherry Creek.

Word of their success spread in across the nation and throughout the world, and in the Spring of 1859 people, mostly men, flooded into the Pikes Peak gold fields seeking their own fortunes. Boom towns came and went in the mountains of Colorado. Miners rushed in, bolstered by reports of success for the lucky few. And although hard work, skill, and perseverance were critical, plain luck had its place too. With the miners came merchants, newspaper publishers, lawyers, saloon keepers, doctors, artisans, gamblers, and even outlaws. There were plenty of people anxious to make their living at “mining the miners.”

Little regard was given to the environment or to native peoples as immigrant trails were pushed through the plains. The Ute Indians were moved aside with each new discovery of minerals on their lands; and in the end, most of it was wrenched from their possession. Hillsides were stripped of timber to build towns and shore up mines; black smoke belched from smelter smokestacks. Few thought of the repercussions. The goal was simply to get rich.

In the 1860’s gold was the mineral that most miners searched for but that shifted in the 1870’s as silver became king. 82 million dollars in silver was mined in Colorado during the 1870s and 80s. During that time the face of mining changed. During the 1860s majority of the mining that took place was by an individual miner working his claim by the 1880s mines were owned by corporations who hired large amounts of men and bought expensive equipment to dig the ore from the earth.
The Silver Era came to a close in 1893 when the U.S. Congress repealed the Sherman Silver Purchasing Act. By repealing the Act, Congress changed the backing of U.S. currency from silver to gold. The price of silver dropped dramatically and the mining of it became unprofitable.

The turn of the century saw an increase in labor conflicts and the development of unions, such as the Western Federation of Miners. Strikes in Cripple Creek, Leadville, and elsewhere climaxed with the 1914 strikes of coal miners at Ludlow in southern Colorado near Trinidad. Almost one hundred people were killed when the governor called in the state militia to put down the strikes. Reform did eventually follow.

Through the 20th century, various materials such as molybdenum, tungsten, vanadium, and uranium played an important role in Colorado, though nothing could match the tremendous 19th century booms of gold and silver. Still, mining continues as a way of life for many in Colorado today.
### Did you know that…? INFORMATION CARDS

<table>
<thead>
<tr>
<th>Number</th>
<th>Title</th>
<th>Topic</th>
<th>Answer to Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>A Force to Be Reckoned With</td>
<td>Geology of Colorado</td>
<td>From 30.35 miles</td>
</tr>
<tr>
<td>2</td>
<td>A Hard Mountain to Climb</td>
<td>African-American Miners</td>
<td>1815</td>
</tr>
<tr>
<td>3</td>
<td>A Woman of Conscience/ The Skiing Preacher</td>
<td>Josephine Roche Biography</td>
<td>She was assistant secretary of the treasury.</td>
</tr>
<tr>
<td>4</td>
<td>Against All Odds/By the Sweat of Her Brow</td>
<td>Biography Card: Chin Lin Sou/Clara Brown</td>
<td>To release from slavery/ The Chinese Exclusion Act was passed by Congress in 1882. It kept Chinese workers from entering the US for ten years. It was reviewed in 1892 and 1902, and it was made permanent in 1904. The law was rescinded in 1943.</td>
</tr>
<tr>
<td>5</td>
<td>Between a Rock and a Hard Place</td>
<td>Conditions in Mines</td>
<td>A burro is a small donkey, and a mule is a cross between a horse and a donkey.</td>
</tr>
<tr>
<td>7</td>
<td>Feast or Famine</td>
<td>Food in Mining Towns</td>
<td>Answers will vary</td>
</tr>
<tr>
<td>8</td>
<td>Fighting Against Time</td>
<td>Architecture and Historic Preservation</td>
<td>Gingerbread</td>
</tr>
<tr>
<td>9</td>
<td>Fit as a Fiddle</td>
<td>Medicine</td>
<td>Penicillin was discovered in 1928 by British scientist, Alexander Fleming. He noticed mold growing in a laboratory dish containing common bacteria, and then saw that the bacteria around the mold had been killed. By the late 1930s, scientists found a way to extract and purify large amounts of penicillin.</td>
</tr>
<tr>
<td>10</td>
<td>For What its Worth</td>
<td>Assaying</td>
<td>Gold. It was worth $20.67 an ounce, and silver was worth $1.35 an ounce.</td>
</tr>
<tr>
<td>11</td>
<td>Full Steam Ahead</td>
<td>Trip Out West</td>
<td>500 miles as the crow flies, but 750 miles on the routes they took.</td>
</tr>
<tr>
<td>12</td>
<td>Getting to the Gold</td>
<td>Smelting</td>
<td>961.93 degrees Celsius</td>
</tr>
<tr>
<td>13</td>
<td>Go For the Gold!</td>
<td>Gold Rush</td>
<td>Yes, compasses were invented in China by at least 1088, and arrived in Europe 100 years later.</td>
</tr>
<tr>
<td>Page</td>
<td>Title</td>
<td>Subject</td>
<td>Date</td>
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<td>------</td>
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<td>--------------------------------------------</td>
<td>------------</td>
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<tr>
<td>14</td>
<td>Hanging on Every Word</td>
<td>Communication in Mining Towns</td>
<td>1876</td>
</tr>
<tr>
<td>15</td>
<td>Here Today and Gone Tomorrow</td>
<td>Go-Backers</td>
<td>Trick</td>
</tr>
<tr>
<td>16</td>
<td>Hitting Paydirt</td>
<td>Types of Mining</td>
<td>Uranium is most dangerous.</td>
</tr>
<tr>
<td>17</td>
<td>Home is Where the Heart Is</td>
<td>Ute Indians and Impact of Mining</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(Photo Credit: Denver Public Library, Western History Dept. for image on front of card)</td>
<td>They live in two reservations in the southwestern corner of the state. These are the Ute Mountain Ute reservation, and the Southern Ute reservation.</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>It Costs a Pretty Penny</td>
<td>Money and Economics</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>A fine example would be worth $125; an extra fine example, $550; and an uncirculated bill, $1,600.</td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>It's a Dirty Job</td>
<td>Environmental Impact of Mining</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Acute arsenic poisoning results in nausea, vomiting, burning of the mouth, severe abdominal pain, and death within a few hours.</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>It's Crystal Clear</td>
<td>Leadville Ice Palace</td>
<td>5,000 tons of water</td>
</tr>
<tr>
<td>21</td>
<td>Kick Up Your Heels</td>
<td>Entertainment in Mining Towns</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>The Victorian Era was named after Queen Victoria of England, who ruled from 1837 to 1901.</td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>Knock on Wood</td>
<td>Superstitions</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Answers will vary. Some examples are: kiss a frog, and you will get warts. Do not walk under ladders. Find a penny and pick it up, and all day long you’ll have good luck.</td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>Laying Down the Law</td>
<td>Law and Order</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Judge Lynch refers to vigilantism, where individuals took the law into their own hands and hanged the accused.</td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>Like a Fish Out of Water</td>
<td>Chinese Miners</td>
<td>10 cents per half ounce</td>
</tr>
<tr>
<td>25</td>
<td>On the Tip of Your Tongue</td>
<td>Mining Vocabulary</td>
<td>Cornish pasties</td>
</tr>
<tr>
<td>26</td>
<td>Rough and Tumble Towns</td>
<td>Mining Town Life</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Answers will vary.</td>
<td></td>
</tr>
<tr>
<td>27</td>
<td>Standing Their Ground</td>
<td>Women and Mining</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>A milling company crushes the ore into smaller pieces to make the minerals easier to extract.</td>
<td></td>
</tr>
<tr>
<td>28</td>
<td>When Push Comes to Shove</td>
<td>Labor and Strikes</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>This meant they would not be able to do any mining work throughout the West.</td>
<td></td>
</tr>
<tr>
<td>29</td>
<td>Worth its Weight in Gold</td>
<td>Spanish Search for Gold</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>The Spanish word for gold is oro, and the word for silver is plata.</td>
<td></td>
</tr>
<tr>
<td>TITLE</td>
<td>Activity</td>
<td></td>
<td></td>
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<tr>
<td>-------------------------------</td>
<td>--------------------------------------------------------------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A Gold Mine of Information</td>
<td>Do a crossword puzzle</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A Hard Act to Follow</td>
<td>Perform for your class</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adopt a Building</td>
<td>Learning about old buildings</td>
<td></td>
<td></td>
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<tr>
<td>As the Crow Flies</td>
<td>Test your skills at map-reading &amp; orienteering</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Built to Last</td>
<td>Search for materials in your home that were mined</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crystal Magic</td>
<td>Make your own crystals</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Did You Get the Message?</td>
<td>Build &amp; use a simple telegraph</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Don’t Eat the Gingerbread</td>
<td>Decorate a Victorian house</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Don’t Talk With Your Mouth Full</td>
<td>Learn proper etiquette from the mid-19th century</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dropping Weight Like Crazy</td>
<td>Put your math &amp; logic skills to the test</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Get to the Point!</td>
<td>Create a poster protesting the hardships of mining</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Going Around in Circles</td>
<td>Play with words and sequencing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hanging in the Balance</td>
<td>Make a scale or balance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hold That Pose</td>
<td>Become a miner &amp; create your self portrait</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I Dig Poetry</td>
<td>Write poems</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I’ll Call My Broker</td>
<td>Experiment with the stock exchange</td>
<td></td>
<td></td>
</tr>
<tr>
<td>It’s In the Pan</td>
<td>Pan for gold</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Let’s Eat</td>
<td>Cook mining foods</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Let’s Play it Again</td>
<td>Play children’s games from early mining towns</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Name That Mine</td>
<td>Do a word search</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Once Upon a Time</td>
<td>Finish a story</td>
<td></td>
<td></td>
</tr>
<tr>
<td>One Cool Palace</td>
<td>Make a model of the Leadville Ice Palace</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Play It By Ear</td>
<td>Learn mining songs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Raise the Roof</td>
<td>Make a Victorian house model</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Take a Stand</td>
<td>Decide where you stand on mining issues</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The More the Merrier</td>
<td>A word search with a twist</td>
<td></td>
<td></td>
</tr>
<tr>
<td>This Town is Booming!</td>
<td>Make a mural of a mine and a mining town</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time Travelers</td>
<td>Create a timeline of exciting historic events</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Toe to Toe</td>
<td>Play out a miner’s strike</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Who is That Masked Man?</td>
<td>Put on a masquerade ball</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Answer Key
There are six activity cards that require the specific answers provided below.

A Gold Mine of Information – Do a crossword puzzle

<table>
<thead>
<tr>
<th>Across</th>
<th>Down</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Dynamite</td>
<td>1. Doe</td>
</tr>
<tr>
<td>5. Smelter</td>
<td>2. Telegraph</td>
</tr>
<tr>
<td>11. Leadville</td>
<td>6. Molybdenum</td>
</tr>
<tr>
<td>12. Ghost</td>
<td>8. Coal</td>
</tr>
<tr>
<td>13. Chinese</td>
<td>10. Water</td>
</tr>
<tr>
<td>18. Roche</td>
<td>14. Burro</td>
</tr>
<tr>
<td>19. Oro</td>
<td>15. Pick</td>
</tr>
<tr>
<td></td>
<td>17. Ute</td>
</tr>
</tbody>
</table>

Built to Last - Search for materials in your home that were mined

The following is a list of items that your students might find in the construction of their homes:

- House foundation (concrete): limestone, clay, shale, gypsum, and aggregate mining
- Gutters (galvanized steel): iron and zinc mining
- Roofing (asphalt shingles): silicate minerals from mining
- Exterior walls (brick): clay mining
  (stone): stone mining
- Interior walls (drywall): gypsum mining
- Windows (glass): trona, silica, sand, and feldspar mining
- Nails and screws: iron and zinc mining
- Fireplace (steel box inside): iron mining
- Electrical wiring: copper or bauxite mining
- Bathrooms (porcelain): clay mining
- Insulation (fiberglass): silica, feldspar, and trona mining
- Plumbing fixtures (brass): copper and zinc mining
  (stainless steel): iron, nickel, and chrome mining
- Door knobs, locks, and hinges (brass or steel): copper, zinc, and iron mining
- Sewer piping (clay or iron pipe): clay or iron mining
- Water piping (iron or copper): iron or copper mining
**Did You Get the Message? - Build & use a simple telegraph**

<table>
<thead>
<tr>
<th>Letter</th>
<th>Morse Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>dah-dit</td>
</tr>
<tr>
<td>O</td>
<td>dah-dah-dah</td>
</tr>
<tr>
<td>L</td>
<td>di-dah-di-dit</td>
</tr>
<tr>
<td>U</td>
<td>di-di-dah</td>
</tr>
<tr>
<td>C</td>
<td>dah-di-dah-dit</td>
</tr>
<tr>
<td>K</td>
<td>dah-di-dah</td>
</tr>
<tr>
<td>S</td>
<td>di-di-dit</td>
</tr>
<tr>
<td>E</td>
<td>dit</td>
</tr>
<tr>
<td>N</td>
<td>dah-dit</td>
</tr>
<tr>
<td>D</td>
<td>dah-di-dit</td>
</tr>
<tr>
<td>M</td>
<td>dah-dah</td>
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<tr>
<td>O</td>
<td>dah-dah-dah</td>
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<tr>
<td>N</td>
<td>dah-dit</td>
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<tr>
<td>E</td>
<td>dit</td>
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<tr>
<td>Y</td>
<td>dah-di-dah-dah</td>
</tr>
<tr>
<td>P</td>
<td>di-dah-dah-dit</td>
</tr>
<tr>
<td>I</td>
<td>di-dit</td>
</tr>
<tr>
<td>K</td>
<td>dah-di-dah</td>
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<td>E</td>
<td>dit</td>
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<td>S</td>
<td>di-di-dit</td>
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<td>P</td>
<td>di-dah-dah-dit</td>
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<td>dah-di-dah</td>
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<td>R</td>
<td>di-dah-dit</td>
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<td>B</td>
<td>dah-di-di-dit</td>
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<td>di-di-dah</td>
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<td>S</td>
<td>di-di-dit</td>
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<td>T</td>
<td>dah</td>
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<td>P</td>
<td>di-dah-dah-dit</td>
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<tr>
<td>A</td>
<td>di-day</td>
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<td>Y</td>
<td>dah-di-dah-dah</td>
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<td>D</td>
<td>dah-di-dit</td>
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<tr>
<td>I</td>
<td>di-dit</td>
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<tr>
<td>R</td>
<td>di-dah-dit</td>
</tr>
<tr>
<td>T</td>
<td>dah</td>
</tr>
</tbody>
</table>
Time Travelers - Create a timeline of exciting historic events

1859 – French tightrope walker, Charles Blondin, crosses Niagara Falls on a tightrope.
1860 – Abraham Lincoln is elected President of the United States.
1861 – The Civil War begins.
1863 – The French take over Mexico City and set up Archduke Maximilian as emperor.
1864 – A peaceful village of Cheyenne and Arapaho Indians is massacred at Sand Creek.
1865 - Lewis Carroll writes Alice in Wonderland.
1866 – Alfred Noble invents dynamite.
1867 – Russia sells Alaska to the U.S. for $7,200,000.00
1868 – The Suez Canal opens in Egypt.
1869 – Indian leaders Mahatma Ghandi is born.
1871 – Chicago is devastated by what is known as the Great Fire.
1872 – The Brooklyn Bridge opens.
1873 – The Brunot Agreement takes the San Juan Mountains from the Utes.
1874 – Britain annexes the Fiji Islands in the South Pacific.
1875 – Physician and philosopher Albert Schweitzer is born.
1876 – Colorado becomes a state and Alexander Graham Bell invents the telephone.
1877 – Edison invents the phonograph.
1878 – The Colorado Central Railroad is completed to Central City.
1879 – Zulu chiefs wage war on the British in Africa.
1880 – France annexes Tahiti in the South Pacific.
1881 – The Tabor Grand Opera House opens in Denver.
1882 – The U.S. bans Chinese immigrants for ten years.
1883 – William F. Cody (Buffalo Bill) organizes his Wild West Show.
1884 – Mark Twain writes Huckleberry Finn.
1885 – Vincent Van Gogh paints The Potato Eaters.
1886 – Robert Louis Stevenson writes Dr. Jekyll and Mr. Hyde.
1887 – Chinese general and president, Chiang Kai Shek is born.
1888 – Nikola A. Tesla constructs the electric motor.
1889 – Adolf Hitler is born.
Name That Mine - Do a word search

The More the Merrier - A word search with a twist
Flash! Photograph Packet

1. Views of the **Leadville Ice Palace**
   - Information Card: *It’s Crystal Clear*
   - Activity Card: *One Cool Palace.*
   - Allow students to further explore this subject by writing a paper or giving a presentation about the Ice Palace.

2. Woman sitting in front of her cabin near Creede, Colorado.
   - Information Cards: *Standing Their Ground and Rough and Tumble Towns.*
   - Discuss her style of dress and hairstyle. What was hygiene like at this time? Would it be hard to keep clean? What would it have felt like to dress that way in the mountains in the summer and winter? If she were married, what might this woman have done during the day while her husband was off mining? If she were not married, what might she have done for a living? How many rooms do you think this cabin would have? What do you think the big barrel in front of the house was for?

3. Early miners who sparked the gold rush
   - Information Card: *You Win Some, You Lose Some.*
   - You might ask your students to pretend that one of the men on this page is their father or brother, and write a letter to him.

4. The **Horace A. W. Tabor** family
   - Information Card: *Boom and Bust.*
   - Have your students describe what they think it would have felt like to be one of the Tabor children, both when their parents were wealthy and when they lost everything.

   - Information card *Between a Rock and a Hard Place.*
   - What businesses can you see in this photograph? Would you have liked to be a burro in the mining towns?

6. A coal miner’s house and a hard rock miner’s house
   - Information Cards: *When Push Comes to Shove and Rough and Tumble Towns.*
   - How do you think life was different for coal mining families and hard rock mining families?

   - Information Card: *Rough and Tumble Towns.*
   - Have your students look for as many details in these photos as possible, and make a long list of them on the board.

8. **David Fletcher Spain** and family
   - Information Card: *Go for the Gold! And Here Today and Gone Tomorrow.*

9. Letter from miner, **David F. Spain**, to his wife, Ella, in Indiana.
   - Read the letter aloud to your students and have them write a response to it.
Eureka! BOARD GAME

Careful! You might catch mining fever! Experience the hazards and fortunes of mining life in an early Colorado mountain town and search for gold deep inside a mine.

Two to four players start out from the town bank, and as they make their way around the board and through the town, they do their best to build up their reserves. Once in the mine, the race is on for the gold! Remember, the winner is not necessarily the first person to find the gold. Some may earn more points in town than the others do mining.

RULES & INSTRUCTIONS

1. Each player chooses to be one of the following miners:
   - Fuzzy
   - Ezra
   - Oscar
   - Purvis

2. All players start at the bank and are given 40 points and their mail pouch before play begins. Point cards are valued at 10, 20, 30, and 50 should be arranged near the bank.

3. The die is rolled by each player, and the person with the highest number goes first.

4. Players win and lose points throughout the game. These should be taken from or returned to the bank as required.

5. Each player must move around the entire outside of the board one time before entering the mine.

6. When players land on MAIL POUCH, they must take a letter or telegram from their pouch without looking at it first. They then read it out loud.

7. After players have circled the board one time, they must enter the mine. A roll of any number will allow them inside.

8. If someone lands on a space that expels him or her from the mine and gives instructions to “Return to this spot on your next turn,” the player may not roll again on the next turn. The player must simply return to the mine for that turn.

9. Players must roll the exact number to get the gold at the bottom of the mine. In other words, if a player is three spaces from the gold, a three must be rolled – not any other number.

10. The first player to reach the gold earns 50 points, and yells EUREKA! The second earns 40 points; the third earns 30 points, and the fourth earns 20 points.

11. The game is over only when everyone has reached the gold. At that point all players tally their points and the person with the most points wins.
Stories and Songs: Colorado’s Mining Frontier
Information and Lyrics

Side A – Stories
The two stories on this tape are told by professional storyteller, Kay Nash. The first is her account of the life of Baby Doe Tabor, and the second is her story of Silver Heels, the dance hall girl.

Side B – Songs
The following mining songs from the 1800s are performed by Sean Blackburn, with help from Johnny Neill and Alan Miller. We thank them and producer, Liz Masterson and Western Serenade Music for their great talent and contributions to this tape. The source for most of our songs is The Songs of the Gold Rush, edited by Richard A. Dwyer and Richard E. Lingenfelter, University of California Press, 1964.

1. The Cherry Creek Emigrant’s Song was mentioned in the June 18, 1859 issue of the Rocky Mountain News. It was adapted from a forty-niner song called The Californian.
2. The Rocky Mountain News (April 11, 1860) is also our source for Pop Comes the Rhino. In the mid 1800s rhino was slang for money.
3. The Lousy Miner – When you listen to this song, be aware that the miner is not only a failure at his job, but also infested with lice, a common problem at the time.
4. A Hit at the Times was written by A. O. McGrew, and presented to his friends in Denver on Christmas 1858. He wrote the words to the tune of Root Hog, or Die.
5. Colorado Home – This song is a miner’s version of Home on the Range.
6. Song of the Times appeared in the only issue of the Cherry Creek Pioneer, April 23, 1859.
7. Song – 1880 was composed by Scott Judy and “Doc” Hammond in 1880 in Whitepine, Colorado. We do not know the original tune to this song.
8. War in Camp was written by J.A. Stone, to the tune of Woodman Spare That Tree.
9. Song for the Pike’s Peaker was reprinted from the Leavenworth Dispatch in The Rocky Mountain Gold Reporter and Mountain City Herald in the September 10, 1859 issue. Mountain City was a gold camp in the area that would become Central City.
10. The Last Good-bye is a melancholy tune set to the tune of Lily Bell.
11. Dynamite Song is included in the book Casey Jones and Other Ballads of the Mining West, by Duncan Emrich, 1942. The author said the song was given to him by “Red” Parsons at the Windsor Hotel in Denver. “Red” said he first learned the song while working on the Moffat Tunnel.
12. The Gold Seeker’s Song first appeared in Hannibal, Missouri, where many miners started out for the West.
13. Colorado’s Glories

We have provided the lyrics to many of the songs below for use by you and your students.
Cherry Creek Emigrant’s Song

We expect hard times, we expect hard fare,
Sometimes sleep in the open air,
We’ll lay on the ground and sleep very sound,
Except when Indians are howling around.

Chorus:
Then ho boys ho, to Cherry Creek we’ll go.
There’s plenty of gold
In the West, we’re told,
In the new Eldorado.

We’ll rock our cradles around Pike’s Peak
In search of the dust, and for nuggets seek;
If Indians ask us why we’re there,
We’ll tell them we’re made as free as the air.

Chorus:
Then ho boys ho, to Cherry Creek we’ll go, etc.

The gold is there, ‘most anywhere.
You can take it out rich with an iron crowbar,
And where it is thick; with a shovel and a pick
You can pick it out in lumps as big as bricks.

Chorus:
Then ho boys ho, to Cherry Creek we’ll go, etc.

At Cherry Creek if the dirt don’t pay,
We can strike our tents most any day.
We know we are bound to strike a streak
Of very rich quartz among the mountain peaks.

Chorus:
Then ho boys ho, to Cherry Creek we’ll go, etc.

Oh dear girls, now don’t you cry,
We are coming back by and by;
Don’t you fret nor shed a tear,
Be very patient wait about one year.

Chorus:
Then ho boys ho, to Cherry Creek we’ll go, etc.
Pop Comes the Rhino

Hurrah! My boys, pick up your traps,
And let us start to mine, O,
We’ll work like Turks, and then-perhaps-
Pop comes the Rhino.

We’ll dig away in these old hills,
Among the rocks and pine, O,
And work with cheerful cheers until –
Pop comes the Rhino.

We’ll think of Kate, and Moll, and Dill,
The girls we left behind, O,
Who promised they would wait until –
Pop comes the Rhino.

And when we each have made our pile.
We’ll have a high old time, O,
We’ll take it slow and easy, while –
Pop comes the Rhino.

We’ll take the girls to all the shows,
O crack, won’t we shine tho’
At balls, where always from the beaux –
Pop goes the Rhino.

And when we’ve had enough of fun.
We’ll settle down so fine, O,
And tell our wives “now go it how” –
Pop goes the Rhino.

Hurrah boys, bring on your picks,
And do not waste your time, O,
For only by the hardest licks –
Pop comes the Rhino.
A Hit at the Times

Way out upon the Platte, near Pike’s Peak we were told
There by a little digging, we could get a pile of gold,
So we bundled up our duds, resolved at least to try
And tempted Madame Fortune, root hog, or die.

So we traveled across the country, and we got upon the ground,
But cold weather was ahead, the first thing we found.
We built our shanties on the ground, resolved in spring to try,
To gather up the dust and slugs, root hog, or die.

Speculation is the fashion even at this early stage,
And corner lots and big hotels appear to be the rage,
The emigration’s bound to come, and to greet them we will try,
Big pig, little pig, root hog, or die.

Let shouts resound, the cup pass ‘round, we all came for gold,
The politicians are all gas, the speculators sold,
The “scads” are all we want, and to get them we will try.
Big pig, little pig, root hog, or die.

Surveyors now are at their work, laying off the towns,
And some will be of low degree, and some of high renown.
They don’t care a jot nor tittle who do buy
The corner lots, or any lots, root hog, or die.

The doctors are among us, you can find them where you will,
They say their trade it is to cure, I say it is to kill;
They’ll dose you, and they’ll physic you, until they make you sigh,
And their powders and their lotions make you root hog, or die.

The next in turn comes lawyers, a precious set are they;
In the public dairy they drink the milk, their clients drink whey.
A cunning set these fellows are; they’ll sap you ‘till you’re dry,
And never leave you ‘till you have to root hog, or die.

A Preacher now is all we want, to make us all do good;
But at present, there’s no lack of spiritual food.
The kind that I refer to, who will make you laugh or cry,
And its real name is Taos, root hog, or die.

I have finished now my song, or, if you please, my ditty;
And that it was not shorter, is about the only pity.
And now that I have had my say, don’t say I’ve told a lie;
For the subject I have touched, will make us root hog, or die.
There’s a crowd in every village, and every town astir
Who are going to gather up the gold;
There’s a sound in every cottage, and a ring in every ear,
“For Pike’s Peak” is the land for young and old.

Chorus:
’Tis the life and dream of the many,
“For Pike’s Peak,” “Pike’s Peak,” the land of brave and bold.
Many ways we have wandered and now we are told,
“For Pike’s Peak” is the place to get gold.

There’s a young and lovely maiden, scarce sixteen summers old
Whose thoughts o’er the distant prairie roam,
Where the idol of her vision is digging for the gold –
“For Pike’s Peak” is the place to make your home.

Chorus:
’Tis the life and dream of the many, etc.

“For thee well,” says the farmer to his loving child and wife;
“Be merry till the day we meet again,
For we’ll farm then no longer, but lead a happy life –
“For Pike’s Peak’ is the place to get the tin.”

Chorus:
’Tis the life and dream of the many, etc.

“I am tired!” Says the merchant, “Of selling goods for years,
When a fortune can be made in half the time.”
So he takes a barrel of whiskey, besides a switzer cheese,
“For Pike’s Peak” is the place of his design.

Chorus:
’Tis the life and dreams of the many, etc.
We came to Tamichi in 1880
Looking for mineral all the hills o’er,
We traveled the valleys and climbed the steep mountains
Till our feet were all blistered, our legs were all sore.

We packed from the wagons the crooked trail over;
We held a big meeting and voted free roads;
But Boone and Davis they downed Judge Tucker,
Now all the boys will have to pay toll.

We lived on sow-belly, baked beans and coffee;
We done our own cooking and washed our own clothes;
We polished the drill like any old time,
And put on the rocks our good honest blows.

The mail to our camp it came on the jack-train;
Jolly Tom Allen, the chief engineer,
He carried our chuck for chick and the miners,
And to the Windsor brought moonshine and beer.

We drank at Ed Dyart’s, the solid old duffer.
We’d wink and say, “Ed, mark her down on the slate,
When we strike we’ll pay and you can rub it.”
He’d smile and say, “Boys, you are all too late.”

There is Thomas O’Riley, who lives in Creede City,
A jolly old bummer, you can bet your last cent;
For punishing booze, he can beat any baby;
They say that for women, Old Tom’s heaven sent.

Judge and Ben, they live in the Buckhorn,
They struck a big thing in their own Sleepy Pet;
They were solid for Hancock ’til they heard from Indiana.
“We’ve struck it!” says Judge, “Won’t you take something wet?”

Oh, yes, there’s another; you can count him a winner;
’Tis said that they struck while boring for oil;
He runs the Strawberry and works on the Free Road;
It’s nobody else but our own Andy Boil.

Goodbye, old pards, we’re going to leave you;
The blanket’s rolled up, and the pick’s laid away;
We are going home to eat Christmas turkey,
We’ll meet you again, when the snow melts away.

Repeat first and last verses.
War in Camp

First Miner
Partner, leave that grub,
Touch not a single bean;
For that we’ve got to play the rub,
As you have acted mean!

I bought the mining tools,
And likewise blankets found;
Like many other fools
Took up our mining ground!

Second Miner
You did not buy the tools,
Nor anything in camp;
But did like other fools,
Steal them! You thieving scamp!

Our camp is very wide,
And each will take an end,
What grub we’ve got divide –
Then neither of us lend.

First Miner
We ought to be ashamed
For acting as we do;
If I by accident got lamed,
What could I hope from you?

Second Miner
Well let us act like men,
And live within our means;
But don’t you never try again
To stop my eating beans!

Repeat last verse together.
Song for the Pike’s Peaker

Ho! For Pike’s Peak, where gold is found;
The shining dust is in the ground.
Where sands sparkle with precious ore,
The creeks are full, What need we more?

Ho! Ho! For the mountains ages old,
That lift their heads so grand and bold;
Their foreheads up in the air so high,
They seem to press against the sky.

Ho! For their crests so gray and rough,
Their bosoms are surely rich enough,
With brilliant gold, more than all
E’er dug or seen since Adam’s fall.

Ho! For the rivers and the rills,
Whose source is in these mighty hills
And sands are gold and costly stones;
Ho! For those lofty mountain cones.

Gold buys influence, honor, and station,
Rules the powers of the nation
In all it branches, and asserts
Sovereign sway as its deserts.

Gets the Senator and his vote,
Gives the editor his keynote,
Rule the parson, makes him speak
Lightly of sin done through the week.

It buys the judge, dictates the law,
Saves the wretch from the Hangman’s claw,
Makes the ruffian an abject slave,
To rob, to murder, or to save.

Ho! And away and our wagons fill,
With precious metal from the hill,
Get this wand of mighty power,
The Pike’s Peaker’s golden dower.

Ho! Let’s away ere break of day
Until the mountains stay our way
And with sluice, shovel, and pick,
Fill our coffers mighty quick.

Ho! For Pike’s Peak, where gold is found;
The shining dust is in the ground.
The Last Good-bye

In my ear their words are ringing,
Though I see their forms no more,
Still to hope I’m fondly clinging,
On this wild and golden shore.
Dreams of home, whene’er I slumber,
Carry me to friends so dear;
Morning comes, and with it hunger,
Mingled with transient fear.

Chorus:
Oh, never, no, no, never,
Shall I, till the day I die,
Once forget those friends so clever,
Bidding me the last good-bye!

When the miner, cold and weary,
To his camp returns at night,
All around looks cold and dreary,
Gold has vanished from his sight!
When at home his name is spoken,
Does some loved one weep or sigh?
Or, are vows so sacred broken,
Given with the last good-bye!

Chorus:
Oh, never, no, no, never, etc.
‘Neath an oak beside the mountain,
Stands a miner’s lonely grave,
Near a cool and sparkling fountain,
Far beyond life’s troubled wave;
Now his friends are sadly weeping,
“Can it be he’s dead and gone?”
Yes, in death he now lies sleeping,
Sleeping gently and alone.

Chorus:
Oh, never, no, no, never, etc.

Though I love the mountains dearly,
Where the savage wild, doth roam,
Better still and more sincerely
Do I love my good old home!
When I’m roaming through the canyons,
‘Mong the fir trees, dark and high,
Brings to mind my old companion
Bidding me the last good-bye!

Chorus:
Oh, never, no, no, never, etc.
Dynamite Song

We’re the hardrock men
And we work underground,
We don’t want sissies
Or foremen around.
We work all day,
And we work all night,
And we live on powder and DYNAMITE!

Chorus:
Then slam it with a singlejack,
And turn it around!
We’re the hardrock men
And we work underground!
Work underground in the candle light,
And we live on power
And DYNAMITE!

Old Johnny Deen
Used lots of dynamite;
He crimps all his caps
With a single bite.
But he got some new teeth
From a dentist one day –
And the first cap he bit
Blew his whole head away!

Chorus:
Then slam it with a singlejack, etc.

Then pull out the steel
From the hole in the rock!
And put in the spoon
And heave out the muck!
Fill ‘er up with powder
And tamp her down tight,
And break down the face
With DYNAMITE!

Chorus:
Then slam it with a singlejack, etc.

Oh, sometimes she shoots
When you don’t want her to,
And then she won’t shoot
Spite of what you do!
And that’s why dynamite
Is just like a mule –
And the man who says it ain’t
He’s a goddamned fool!

Chorus:
Then slam it with a singlejack, etc.
Repeat chorus.
The Gold Seeker’s Song

So take you up the oxen, boys, and harness the mules;
Pack away the provisions and bring along the tools;
Bring the pick and shovel, and a pan that will not leak;
And we’ll start out for the gold mines. Hurrah for old Pike’s Peak!

Then farewell to sweethearts, and farewell to wives,
And farewell to children, the joy of our lives;
We’re bound for the Far West, the yellow dust to seek,
And as we march along we’ll shout, “Hurrah for Pike’s Peak!”

Then crack your whips, my jolly boys, we’ll leave our homes behind,
And many lovely scenes that we’ll often call to mind,
But we’ll keep a merry heart, and we’ll steer for Cherry Creek;
For we’re bound to hunt the yellow dust – Hurrah for Pike’s Peak!

We’ll cross the bold Missouri, and we’ll steer for the west,
And we will take the road that we think is the very best;
We’ll travel, o’er the plains, to where the wind is blowing bleak,
And the sandy wastes shall echo with – “Hurrah for Pike’s Peak!”

We’ll sit around the campfire when all our work is done,
And sing our songs, and crack our jokes, and have our share of fun;
And when we’re tired of jokes and songs, our blankets we will seek,
To dream of friends, and home, and gold. Hurrah for Pike’s Peak!

Then ho! For the mountains, where the yellow dust is found,
Where grizzly bear, and buffalo, and antelope abound;
We’ll gather up the dust that lies along the golden creek,
And make our “pile”, and start for home. Hurrah for old Pike’s Peak!

Repeat first verse
Additional Resources

Books

Spanish Search for Gold and the Seven Cities of Cibola
Nusbaum, Aileen. *The Seven Cities of Cibola*. New York: G.P. Putnam’s Sons, 1926. (later editions maybe listed under title of *Zuni Indian Tales* by the same author.)

Mining in Colorado and the West

Women and Minorities in Mining and the West

**Children in Mining and Labor Disputes**


**Life as a Miner**


**Minerals of Mining**


**Websites**

*historycolroado.org*
- Biographies of Chin Lin Sou, Barney Ford, Aunt Clara Brown, Baby Doe and Horace Tabor. All were involved in Colorado mining.

*pbs.org/thewest/people/a_c/coronado.htm*
- Biography of Coronado

*imahero.com/readingprogram/explcoronado.html*
- Reading comprehension questions to go with Nardo’s book listed above.

*tsha.utexas.edu/handbook/online/articles/CC/upcpt.html*
- Coronado’s expedition

*desertusa.com/mag98/sep/papr/coronado.htm*
- Information on Coronado

*members.tripod.com/~GaryFelix/index5D.htm*
- Information on the men who accompanied Coronado.

*win.tue.nl/~engles/discovery/coronado.html*
- Biography on Coronado and links to other websites

*bewit.unco.edu/dobist/*
- Kids guide to Colorado History. Be sure to visit Colorado miners for many great photos!

*geocities.com/Heartland/Falls/2000/index.html*
- Fictional story of the Pikes Peak Gold Rush

*westernmininghistory.com*
- Good information on Colorado mining towns.