



Teacher's Guide:

Social Studies

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9621 Reed Mine Road
Midland, NC 28107
(704) 721-4653 | reed@ncdcr.gov
[Facebook](#) | [Instagram](#) | [Twitter](#) | [YouTube](#)

Social Studies

Section I: Life of John Reed

Objective: Students learn about John Reed's life, from birth to death, and complete activities after completing the reading.

The Life of John Reed

John Reed, born Johannes Reith, was recorded by the Lutheran Church book in Salzburg as being born on 14 April 1759. He was the illegitimate son of Anna Elizabeth Reid and Johann Jakob Helmerich. When he was five, his mother married a widower named Adam Henrich Hahn.

Little is known about Reed's early life, but he either enlisted or was drafted into the Hessian militia from the Hessen-Cassel region in modern-day Germany. He served in Company 2 of the Garrison Regiment von Wissenbach and endured several months of grueling training before his regiment was mobilized to aid the British during the American Revolution.

Reed likely arrived in New York in June 1778, having travelled across the Atlantic with the second wave of Hessian troops who were intended to serve as replacements for the first wave that arrived in the Thirteen Colonies in October 1776. In November 1778, Reed's regiment sailed from New York to Georgia and assisted with the capture of Savannah in December 1778. Reed could have fought during the initial capture of Savannah; during the Siege of Savannah the following year, when Franco-American forces unsuccessfully attempted to retake the important port city; or could have arrived with later forces.

Reed remained with the British in Georgia until he deserted his post on 21 June 1782, from somewhere "outside of Savannah" and took his arms and equipment with him. It is unknown why Reed decided to desert that day or exactly why he decided to travel to North Carolina. Deserting was no small task, especially from the Savannah area. Members of the Tory militia, African Americans, and Native Americans were all employed to search the surrounding areas for deserters and to bring them back alive or dead. Not only that, many loyalists lived along any route Reed could have chosen. Had he been captured, the loyalists could have returned him to his commanding officer or decided to take matters into their own hands.

It is unknown what Reed did once he arrived in the Piedmont of North Carolina. There is reasonable speculation that he worked as a hired hand or farmer in a grist mill. There was a significant shortage of men to employ due to the wartime conditions. Additional evidence to support this theory is that Reed married Sarah Kiser, the daughter of the late owner, in late-1782 or 1783. The couple had nine children: Henry, born in 1783; Frances "Fanny," born in 1785; Conrad, born in 1787; John Jr., born in 1790; George, born in 1792; Elizabeth, born in 1794; Catherine, born in 1797; Mary "Polly," born in 1800; and Martha "Patsy," born in 1803.

The Reeds operated a subsistence farm, growing a little of everything in their fields to provide for their family and to sell at market. Their life together was typical of what other lower-class families until the dawn of the 19th century. In 1799 their son, Conrad, stumbled upon a 17-pound gold nugget in the creek near his family's cabin. Supposedly the Reeds didn't know what it was,

so they used it as a doorstep for a few years. Once during that time, Reed brought the nugget to a silversmith in Concord, North Carolina, but the man was unable to identify the nugget as gold.

In 1802, Reed brought the nugget with him on a supply run to Fayetteville, North Carolina, to show to a jeweler. The jeweler told Reed to leave the nugget with him and, while he was gone, the jeweler melted the nugget down to a bar of gold about nine inches long. When Reed returned, the jeweler offered to buy the gold for whatever price Reed named. Reed suggested \$3.50, a week's pay for a farmer at the time. The jeweler gladly paid. However, the nugget was worth at least 100 times what Reed asked. At the time, it was worth about \$3,600.00. Today, it would be worth \$415,140.00. Reed later discovered that he had been cheated by the jeweler. Oral tradition reveals he returned to Fayetteville and demanded more money and received an additional \$1,000, possibly with the help from one of his neighbors.

The following year, in 1803, Reed entered a partnership with three neighbors—Reverend James Love; Martin Phifer; and his brother-in-law, Fredrick Kiser. The plan was to search for gold on land supplied by Reed and the others would supply the equipment and enslaved labor to cover more ground. Profits were to be divided equally among the four men.

By 1824, haphazard digging had yielded around \$100,000 in gold. With his wealth, Reed managed to obtain the dubious honor of being one of the largest Antebellum slaveholders in North Carolina's Piedmont region. In 1804, he purchased three enslaved peoples—Charity, Dinah, and Sam. They were likely the first enslaved peoples he purchased. Some sources maintain he enslaved almost twenty enslaved peoples by his death.

In 1831, the first underground mining began at the Reed Mine. For unknown reasons, the original partnership was dissolved—possibly because of Love's death. After that, Reed allowed only his sons and sons-in-law to operate the mine until a legal dispute amongst the family resulted in the mine's closure for a decade.

In 1842, at age 82, John Reed became a citizen of the United States. Not long after that, on May 28, 1845, Reed passed away at the age of 86. In accordance to his will, the mine was sold at public auction. Over the years, Reed Gold Mine saw many different owners. In the 1890s, the land was sold to the Kelly family who operated the mine until 1912. In 1971, the Kelly family donated 70 acres of the mine to the State of North Carolina and sold the remaining 820 acres to the State of North Carolina. In 1977, Reed Gold Mine State Historic Site officially opened.

After reading "The Life of John Reed", choose one of the following activities to complete.

1. Research your family's history. Create a family tree to show your findings.
2. Choose a group who settled in your county and research their history. Write a report including information such as answers to questions like, "What brought them to North Carolina?," "What did they do?," and "How did they influence their area?"

Social Studies

Section II: Reed Gold Mine Vocabulary

Objective: Students will learn key Reed Gold Mine and gold mining vocabulary words and complete assignments to aid in understanding the definitions.

Reed Gold Mine Vocabulary

- ❖ **Acre** – a unit of measurement for land.
- ❖ **Adit** – a horizontal entrance/exit of an underground mine.
- ❖ **Amalgamation** – the process of combining mercury and gold in order to take the gold out of its ore.
- ❖ **Assay** – the use of a chemical solution to identify the amount of metal or ore.
- ❖ **Bechtler Mint** – the name of the first gold only mint started in North Carolina. It was a local family run mint that turned the locally mined gold into coins and ingots. The predecessor to the Charlotte Mint.
- ❖ **Chilean Mill** – a mill for crushing quartz, by rotating two stone wheels in a circle. Used to extract gold from white quartz.
- ❖ **Cornish** – term used to describe immigrants that moved to America from Cornwall, England to work in the newly created gold mines.
- ❖ **Excavation** – to dig a hole or channel in the ground.
- ❖ **Gold** – a precious yellow metal with the atomic symbol of AU. Was the main precious metal mined at Reed Gold Mine.
- ❖ **Immigrants** – a person who leaves the country they were born in to live permanently in a different country.
- ❖ **Investments** – the process of investing money in either a business to venture in order to make money.
- ❖ **Jaw Crusher** – an adjustable machine for crushing quartz to various sizes in order to prepare the quartz to be used at the Stamp Mill.
- ❖ **Kibble** – a large cast iron bucket used to lower miners in and out of shaft as well as bringing the quartz that mined to the surface.
- ❖ **Little Meadow Creek** – the location where Conrad Reed found the first gold nugget in America while fishing.
- ❖ **Lode Mining** – the term used to describe mining that took place below the surface of the ground. Also known as underground mining.
- ❖ **Miner** – the term used to describe the workers that worked in gold mine as well as other mines.

- ❖ **Nugget** – a small lump of gold.
- ❖ **Ore** – a naturally occurring solid material from which a metal or valuable mineral can be profitably extracted.
- ❖ **Panning** – the action that involved washing gravel or dirt in a pan to separate out the gold.
- ❖ **Pick** – a tool used to break loose formation of rocks by striking it with the end of the pick, normally rocks that have the chance to have gold in them.
- ❖ **Placer Mining** – the term used to describe mining that took place above the surface of the ground normally using pans, shovels and various rockers. Also known as aboveground mining.
- ❖ **Prospecting** – the action of searching mineral deposits to find valuable metals or gems.
- ❖ **Quartz** – a hard white or colorless rock that gold is found inside.
- ❖ **Reed Gold Mine** – a North Carolina State Historic Site where the first documented discovery of gold occurred in America.
- ❖ **Rural** – having to do with the country; rustic
- ❖ **Shaft** – a vertical entrance/exit into an underground mine.
- ❖ **Stamp Mill** – a large machine for pounding pieces of ore into a fine gravel to separate gold.
- ❖ **Stope** – in underground mining, the area from which the ore is removed.
- ❖ **Veins** – a thin, sheet-like igneous intrusion or mineral filling in a fracture or crevice in a country rock.

Reed Gold Mine Vocabulary Quiz

1. What element does amalgamation use in its process?
 - Argon
 - Mercury
 - Helium
 - Bromine

2. What is a kibble?
 - A cast iron bucket
 - A sturdy rope
 - A strong shovel
 - A lazy miner.

3. Which of the following could you crush ore or quartz in?
 - Stamp Mill
 - A kibble
 - Ore Cart
 - A mill

4. John Reed was an _____ from Germany.
 - Ancestor
 - Immigrant
 - Artist
 - Teacher

5. In 1799, the first documented discovery of gold was found where?
 - Kershaw
 - Gold Hill
 - Lucky Strike
 - Reed Gold Mine

6. The first form of mining to take place at Reed Gold Mine was _____ also known as aboveground mining.
 - Jaw crushing
 - Lode mining
 - Placer mining
 - Rocking

7. Which of the following mean a vertical entrance and exit of a mine?
 - Adit

- Drift
 - Shaft
 - Crosscut
8. Gold was found in a rock called _____.
- Quartz
 - Greenstone
 - Gravel
 - Argillite
9. The term was used to describe the immigrants that came from England to work in the gold mines.
- French
 - Londoners
 - Yorkers
 - Cornish
10. What is a small lump of gold called?
- Picker
 - Nugget
 - Spec
 - Flake

Reed Gold Mine Vocabulary Quiz Answer Key

1. What element does amalgamation use in its process?
 - Argon
 - Mercury
 - Helium
 - Bromine
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- Argillite
- Greenstone
- Gravel
- Quartz

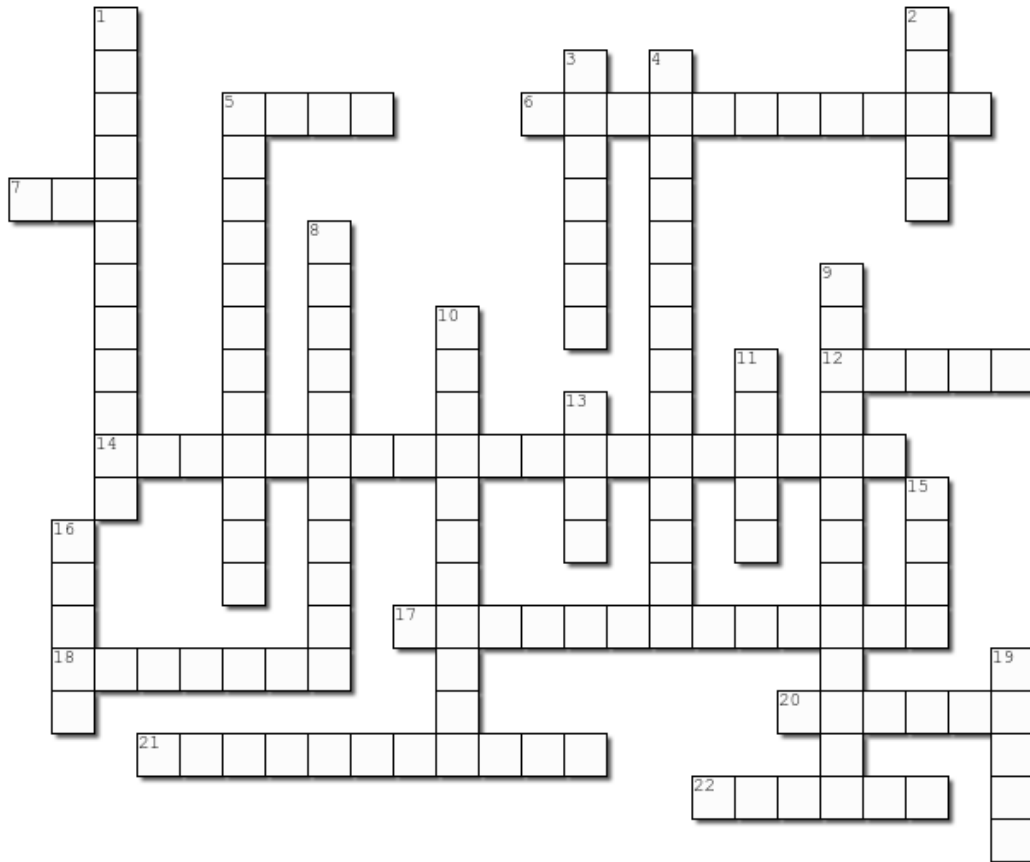
9. Which of the following terms was used to describe the immigrants that came from England to work in the gold mines?

- French
- Cornish
- Yorkers
- Londoners

10. What is a small lump of gold called?

- Picker
- Nugget
- Spec
- Flake

Reed Gold Mine Vocabulary Crossword



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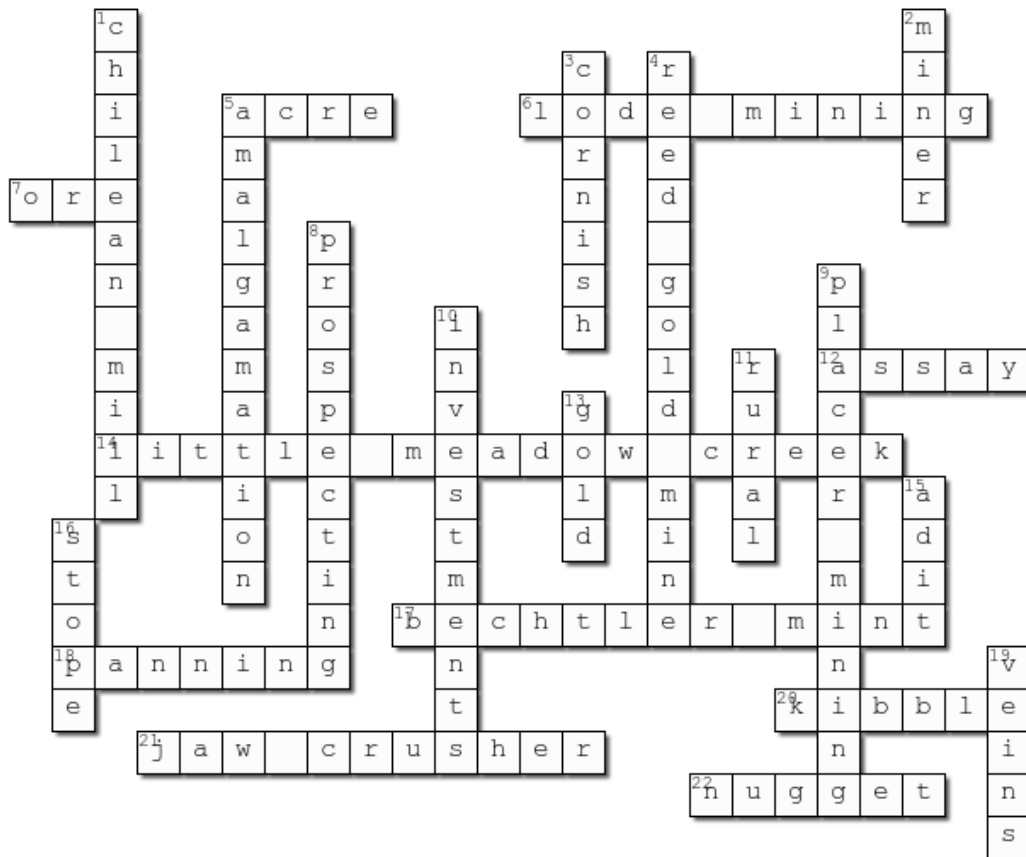
Across

- 5. a unit of measurement for land.
- 6. the term used to describe mining that took place below the surface of the ground. Also known as underground mining.
- 7. a naturally occurring solid material from which a metal or valuable mineral can be profitably extracted.
- 12. the use of a chemical solution to identify the amount of metal or ore.
- 14. the location where Conrad Reed found the first gold nugget in America while fishing.
- 17. the name of the first gold only mint started in North Carolina. It was a local family run mint that turned the locally mined
- 18. the action that involved washing gravel or dirt in a pan to separate out the gold.
- 20. a large cast iron bucket used to lower miners in and out of shaft as well as bringing the quartz that mined to the surface.
- 21. an adjustable machine for crushing quartz to various sizes in order to prepare the quartz to be used at the Stamp Mill.
- 22. a small lump of gold.

Down

- 1. a mill for crushing quartz, by rotating two stone wheels in a circle. Used to extract gold from white quartz.
- 2. the term used to describe the workers that worked in gold mine as well as other mines.
- 3. term used to describe immigrants that moved to America from Cornwall, England to work in the newly created gold mines.
- 4. a North Carolina State Historic Site where the first documented discovery of gold occurred in America.
- 5. the process of combining mercury and gold in order to take the gold out of its ore.
- 8. the action of searching mineral deposits to find valuable metals or gems.
- 9. the term used to describe mining that took place above the surface of the ground normally using pans, shovels and various roc
- 10. the process of investing money in either a business to venture in order to make money.
- 11. having to do with the country; rustic
- 13. a precious yellow metal with the atomic symbol of AU. Was the main precious metal mined at Reed Gold Mine.
- 15. a horizontal entrance/exit of an underground mine.
- 16. in underground mining, the area from which the ore is removed.
- 19. a thin, sheet-like igneous intrusion or mineral filling in a fracture or crevice in a country rock.

Reed Gold Mine Vocabulary Crossword Answer Key



Created using the Crossword Maker on TheTeachersCorner.net

Across

5. a unit of measurement for land. (**acre**)
6. the term used to describe mining that took place below the surface of the ground. Also known as underground mining. (**lode mining**)
7. a naturally occurring solid material from which a metal or valuable mineral can be profitably extracted. (**ore**)
12. the use of a chemical solution to identify the amount of metal or ore. (**assay**)
14. the location where Conrad Reed found the first gold nugget in America while fishing. (**little meadow creek**)
17. the name of the first gold only mint started in North Carolina. It was a local family run mint that turned the locally mined (**bechtler mint**)
18. the action that involved washing gravel or dirt in a pan to separate out the gold. (**panning**)
20. a large cast iron bucket used to lower miners in and out of shaft as well as bringing the quartz that mined to the surface. (**kibble**)
21. an adjustable machine for crushing quartz to various sizes in order to prepare the quartz to be used at the Stamp Mill. (**jaw crusher**)
22. a small lump of gold. (**nugget**)

Down

1. a mill for crushing quartz, by rotating two stone wheels in a circle. Used to extract gold from white quartz. (**chilean mill**)
2. the term used to describe the workers that worked in gold mine as well as other mines. (**mlner**)
3. term used to describe immigrants that moved to America from Cornwall, England to work in the newly created gold mines. (**cornish**)
4. a North Carolina State Historic Site where the first documented discovery of gold occurred in America. (**reed gold mine**)
5. the process of combing mercury and gold in order to take the gold out of its ore. (**amalgamation**)
8. the action of searching mineral deposits to find valuable metals or gems. (**prospecting**)
9. the term used to describe mining that took place above the surface of the ground normally using pans, shovels and various roc (**placer mining**)
10. the process of investing money in either a business to venture in order to make money. (**Investments**)
11. having to do with the country; rustic (**rural**)
13. a precious yellow metal with the atomic symbol of AU. Was the main precious metal mined at Reed Gold Mine. (**gold**)
15. a horizontal entrance/exit of an underground mine. (**adit**)
16. in underground mining, the area from which the ore is removed. (**stope**)
19. a thin, sheet-like igneous intrusion or mineral filling in a fracture or crevice in a country rock. (**vetns**)

Social Studies

Section III: Timeline of Reed Gold Mine

Objective: Students view a timeline of Reed Gold Mine's history and create their own timelines.

Reed Gold Mine Timeline

- 1778 John Reed Comes to the Colonies to fight for the British as a German mercenary during the American Revolutionary War.
- 1787 John Reed receives from the state of North Carolina a land grant of 70 acres on Meadow Creek.
- 1799 Reed's son, Conrad, finds a large, shiny yellow rock in Little Meadow Creek.
- 1802 A jeweler in Fayetteville determines that Conrad's yellow rock is really 17 pounds of almost pure gold.
- 1803 John Reed joins three other men Frederick Kiser, Rev. James Love, and Martin Phifer, Jr. forming a mining partnership to search of gold in Little Meadow Creek. Peter, an enslaved man of Reed's partner Rev. Love, discovers the largest nugget ever found at Reed. The nugget weighed approximately 28 pounds
- 1804 The United States Mint in Philadelphia processes \$11,000 in Cabarrus County gold.
- 1806 William Thornton, physician, inventor, and designer of the United States Capitol, purchases on credit 35,000 acres of land near the Reed and establishes the North Carolina Gold Mine Company.
- 1820 Gold is discovered in other counties adjoining Cabarrus.
- 1824 Reed Gold Mine becomes one of the state's three major gold mines, having unearthed an estimated \$100,000 worth of gold.
- 1827 The North Carolina state legislature charters the North Carolina Gold Mining Company.
- 1829 The stamp mill, a wood and iron structure used for crushing ore, makes its appearance in North Carolina.
- 1831 Christopher Bechtler and his son Augustus begin the minting of gold coins in Rutherford County. John Reed's grandson, Isaac Crayton sinks the first shaft at Reed.
- 1834 A legal dispute begins between the sons and sons-in-law of John Reed over a 13-pound nugget, resulting in a court order for the closing of Reed Gold Mine.
- 1835 Congress votes to establish a branch of the Federal Mint at Charlotte.
- 1837 The Charlotte mint opens for business.
- 1842 John Reed becomes a U.S. citizen at the age of 82.
- 1854 The Reed Gold and Copper Mining Company fails, and many other mining corporations are either ruined or in financial difficulty.
- 1855 The sheriff of Cabarrus County auctions the Reed Gold Mine.

- 1861 The Charlotte mint closes because of disruptive effects of the Civil War.
- 1895 Oliver Kelly, Warren Kelly and Dr. Justin Lisle purchase Reed Gold Mine.
- 1912 The last underground excavations take place at the Reed Mine.
- 1915 Much work is done in the Carolina mines, and the largest amount of gold is found since 1887.
- 1942 The federal government orders that gold mining be suspended to divert production to national defense during World War II.
- 1966 The Reed is designated a Registered National Historic Landmark.
- 1971 North Carolina acquires the Reed property from the Kelly family.
- 1977 On April 23, Reed Gold Mine State Historic Site opens to the public

Reed Gold Mine Timeline Quiz

1. Who originally discovered the gold on the Reed's property?
 - John Reed
 - Conrad Reed
 - Rev. James Love
2. How much did the first gold nugget weigh?
 - 17 ounces
 - 17 pounds
 - 23 pounds
3. All of the following except _____ were partners with John Reed.
 - Frederick Kiser
 - William Thornton
 - Martin Phifer
4. Who established the North Carolina Gold Mine Company?
 - William Thornton
 - Christopher Bechtler
 - Rev. James Love
5. How many years elapsed between the opening and closing of the Charlotte mint?
 - 36 years
 - 24 years
 - 76 years
6. Why did the federal government stop gold mining in 1942?
 - There was very little gold left to mine.
 - The government wanted to be in control of all gold production in the United States
 - The United States wanted to decrease gold production in order to increase production of supplies needed for World War II.
7. In which year did the State of North Carolina acquire Reed Gold Mine?
 - 1971
 - 1778
 - 1835

8. How many years after John Reed came as a German mercenary, did he die?
- 46 years
 - 67 years
 - 36 years
9. In what year was the first shaft dug at the Reed?
- 1824
 - 1799
 - 1831
10. The jeweler that determined Conrad's rock was gold was located in what town?
- Charlotte
 - Raleigh
 - Fayetteville
11. In 1834, the Reed was closed because of a dispute over a ____ pound nugget.
- 18
 - 28
 - 13
12. Christopher Bechtler and his son began minting gold coins in this county in 1831
- Cabarrus
 - Rutherford
 - Mecklenburg
13. A wood and iron structure that is used for crushing ore is called a _____.
- Pick
 - Stamp mill
 - Nugget
14. An enslaved man named _____ found the largest nugget ever discovered at Reed in 1803.
- John
 - Conrad
 - Peter
15. Warren Kelly, Oliver Kelly and Dr. Justin Lisle purchased the Reed in this year.
- 1799
 - 1977
 - 1895

Reed Gold Mine Timeline Quiz Answer Key

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Timeline Activities

Choose one of the following activities:

1. Choose a key era from the Reed Gold Mine Time line and describe what your life and lifestyle would have been during it. Be sure to include at least 3 of the following:
 - a. Economy
 - b. Schools and Education
 - c. Social Activities
 - d. Entertainment
 - e. Important People
 - f. Key historical events of the period

2. Research changes in one of the following areas due to mining:
 - a. Population
 - b. Environment
 - c. Landform
 - d. Industry

Social Studies

Section IV: Mapping Activities

Objective: Students learn where gold was discovered in North Carolina.

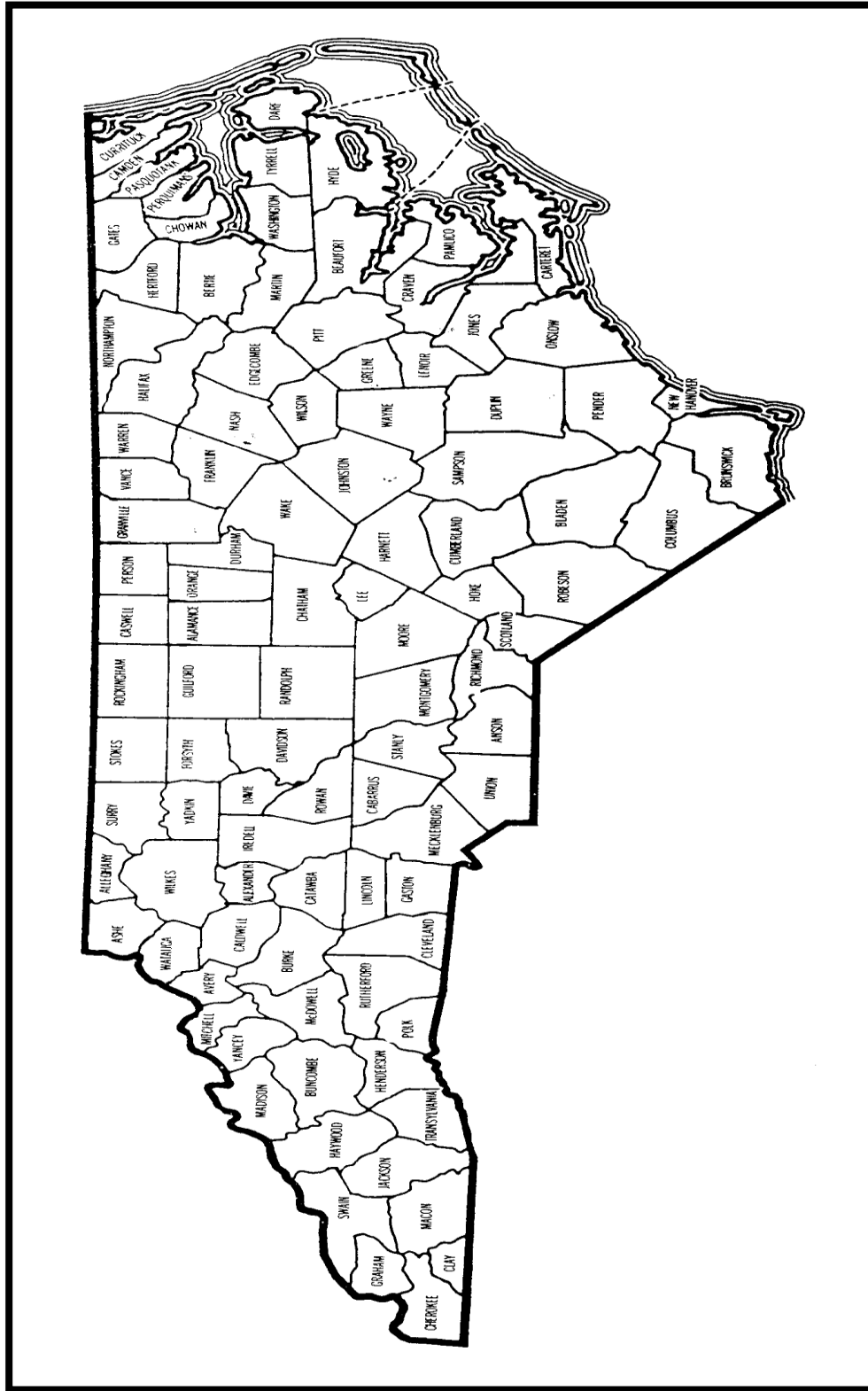
North Carolina Gold Map Activity

1. Using the provided county map of North Carolina, locate and color your county in green.
2. Gold has been found in almost of all of North Carolina counties. Locate each major mining county in the following list and color those counties on the map in red.

Ashe	Burke	Cabarrus	Catawba	Cherokee
Davidson	Davie	Gaston	Guilford	Franklin
Halifax	Henderson	Jackson	Lincoln	Macon
McDowell	Mecklenburg	Montgomery	Nash	Person
Polk	Randolph	Rowan	Rutherford	Stanly
Union	Yadkin	Wake	Warren	

3. Using various resources, identify and list the other kinds of mining done in these areas.

North Carolina County Map



Social Studies

Section V: Group and Individual Projects

Objective: Students delve deeper into mining history by completing either a group or individual project.

Group Projects

Have students split into small groups and choose one of the five following project sections. After researching their chosen section, have the groups present their findings to the rest of the class.

1. Economy:
 - a. Have a discussion amongst your group about how and if you used gold in the last 24 hours.
 - b. Using the internet, encyclopedia, and other sources, research the past and present uses of gold. Why did the uses of gold change or expand?
 - c. Research the properties of gold to see if that is why the uses of gold evolved over time.
 - d. Teach the class how gold has changed throughout the years and why the uses of gold have changed.

2. Types of Mining:
 - a. Research the two forms of mining (Focus on Gold Mining)
 - i. Placer Mining (Above Ground)
 - ii. Lode Mining (Below Ground)
 - b. Find the difference and similarities (if there is any) between the two different types of mining.
 - c. Research the various tools and techniques used in each form and where each form was mostly used.
 - d. Teach the class the difference between the two forms of mining. Discuss the different tools used and the different techniques associated with each type.

3. Technology:
 - a. Read “Squeezing Gold from a rock” to get a basic understanding about the evolution of machinery in regards to mining.
 - b. Using other sources, find out more about the arrastra, the chilean mill, and the stamp mill.
 - c. Research the similarities and differences between each of the different types of machinery.
 - d. Give a brief history lesson of each machine to the rest of the class. Focus on when each machine was introduced and why when the next machine was created they would switch to using it.

4. Dangers of Mining:
 - a. Research the dangers involved with mining in the times of John Read. Focus on the more common dangers faced by miners at the time like cave-ins, bad timbering, and blasting practices.

- b. Research how safety practices have changed in the time of John Reed to today. What are the differences in the safety standards?
 - c. Teach the class how safety standards have changed throughout time and discuss new safety devices used today in modern mining.
5. Transportation:
- a. Discuss amongst your group some of the following points
 - i. In order to mine for gold, the owners of the mines had to get machinery from larger cities that were often many miles away.
 - ii. After the gold was mined, the miners had to transport the gold to the cities for it could be assayed and sold.
 - b. Discuss what you think was the main forms of transportation at the time.
 - c. Research the following
 - i. How machinery and gold was transported to and from Reed and other gold mines?
 - ii. What the road conditions were at the time.
 - iii. Did the creation and expansion of the railroads effect mining in any way and what those effects were.
 - d. After researching the above questions present your findings to the rest of your class. Teach them the early ways of transporting gold and machinery to where they need to be and how the introduction of the railways effected that transportation.
6. Communication:
- a. Discuss the following in your group:
 - i. Like transportation, communication was quite different in the past. For instance, the Chilean mill dates back to ancient times, but it was not heard about in the Reed Gold Mine area until much later. Also, people in Europe knew how to mine underground for gold long before this process was discovered at Reed. These and many other instances make a person wonder, "Why did they have to rediscover this knowledge?".
 - b. Brainstorm possible problems with communicating during that time.
 - c. Research the different types of communication that existed during the 1800s when Reed Gold Mine operated.
 - d. Read the "The Kelly Family and Reed Gold Mine." Excerpt on the next page. With your group discuss how communication could have affected the Kelly's during their involvement with the mine.
 - e. Present your findings with the rest of your class. Describe the early forms of communication used at Reed Gold Mine and how communication has evolved over time. Also describe how modern communication could have helped the Kelly Family better operate Reed Gold Mine.

Squeezing Gold from A Rock

In 1825, Matthias Barringer from Montgomery County, North Carolina, was panning for gold in the creek that ran through his farm. Along the lower part of the creek, he found many small gold nuggets, but as he followed the creek upstream there were none. He realized that at some point the gold must have washed out of the rocks on the bank of the creek. As he walked along the stream, he spotted some white quartz rock and broke it open with a pick. To his surprise, he found lots of gold in the quartz. With that discovery, the era of lode mining, or underground mining, began.

After Barringer's discovery, a method to extract the gold from the quartz rock needed to be developed. Pieces of quartz that had large amounts of gold could be struck with a hammer until the rock broke and the gold could be picked up. But the small specks of gold in the quartz often remained. Was it possible to get more gold if you crushed more quartz?

The miners needed a way to crush the quartz after it came out of the mine. The first invention was the arrastra, a platform of granite cobblestones that an ox or a horse could pull a large granite stone across. The "dragstone", being larger and heavier than the quartz, would crush the quartz into a powder. Arrastras were slow and not very efficient.

The miners then borrowed an ancient grinding stone idea, the Chilean Mill that originally was used to grind grain and crush olives in ancient times. The Chilean Mills were made of granite were hard enough to crush the quartz. Mercury was added to the base stone and the upright wheel- stones to grinding the ore. North Carolina gold miners already knew that gold is attracted to mercury the same way iron is attracted to a magnet, so as the Chilean Mills crushed the quartz rock the mercury attracted the gold. That allowed much more gold to be recovered.

The process was still too slow, so after the 1849 California gold rush, miners invented the "modern" stamp mill. Large steam or water powered stamps, which were like giant hammers, would fall onto the ore, and crushed it into powder. The cast iron stamps weighed over 700 pounds each. The noisy cast-iron machine worked much faster than the earlier stone crushing mills but actually left more gold behind in the powdered rock.

The Kelly Family and Reed Gold Mine

Oliver S. Kelly was born on December 23, 1824 in Green Township, Ohio. At the age of 28, Kelly left his Midwestern home and headed west, hoping like so many others to strike it rich in California's gold fields.

He learned plenty about mining, and became a prosperous businessman, but returned to Springfield, Ohio to start the O.S. Kelly Company and enter the political arena. He became a member of the Springfield City Council for six years and mayor for two.

Oliver's oldest son, O. Warren Kelly, was born in Springfield in 1851. When he was 18, Warren left to study German in Europe. He later entered a partnership with his father in a Colorado silver smelting plant.

In late-1894, Oliver and Warren Kelly, along with Dr. Justin Lisle, visited Reed Gold Mine on a shopping expedition. All three were looking for a gold mine to buy, and on January 10, 1895, they purchased Reed Gold Mine.

On December 6, 1898, Warren ordered a ten-stamp stamp mill to be constructed at the foot of Middle Hill near a deep part of Little Meadow Creek. The mill was probably delivered around January of 1899 and was in use by spring. Early attempts to exploit the area failed.

In 1899, Warren bought Dr. Lisle's share of the Reed and sent his eldest son, Armin, to be the next superintendent. Armin arrived in March of 1899 and began directing several underground mining ventures. He had discovered a small stringer vein above the 90-foot level of a shaft in an old stope. The ore in the area reportedly boasted an assay value of more than \$20,000 per ton. But during the next year, very little gold was produced at the Reed. Armin returned home to Springfield by 1900. Armin went back to Reed for visits now and then, and found his father sinking Engine Shaft to a depth of about 150 feet. Warren wasn't having any luck either, however, and Reed Gold Mine officially ceased underground operations in 1912.

Almost 23 years later, the Kelly family hired Frank Cox to reopen the mine and work several veins on the surface of Upper Hill. Little was found and operations soon ceased once again. During height of the Great Depression, the Kellys allowed anyone to pan freely along the creek if profits from any large nuggets were shared with the family.

In 1971, after owning the mine for three-quarters of a century, the Kelly family donated their historic mining acreage and sold the remaining portion of their property to the state of North Carolina. Reed Gold Mine became a state historic site in 1976 and remains the only underground gold mine open to the public in North Carolina.

Individual Projects

Have students choose one of the following two project sections. After researching their chosen section, have the students present their findings to the rest of the class.

1. North Carolina Nicknames:

a. Share this fact:

North Carolina early on earned a reputation as an economically slow state, for which it was called the Rop Van Winkle State. That reputation persisted, even after gold was discovered. At the time people expected very little to come from North Carolina. Still by 1828, North Carolina earned another nickname: the Golden State.

b. Have the students research other nicknames associated with North Carolina and discuss the various Nicknames discovered as a group.

c. Let the students create their own nickname based on their experiences living in North Carolina and have the students share their created nicknames.

2. Gold Mints:

a. Share the following facts with the students:

- i. Before 1831 all coins made from North Carolina gold were minted at the United States Mint in Philadelphia
- ii. In 1831 Christopher Bechtler and his son Augustus began the minting of gold coins in Rutherford County.
- iii. In 1837 the Charlotte branch mint opened for business.
- iv. In 1838 the Charlotte branch mint began making gold eagle coins.

b. Have the kids read a brief history about both the Betchler and Charlotte Mints in the sections found below.

c. Let the students design their own coin and let them present them to the class.

d. Have the students write a newspaper article detailing the opening day of the Charlotte Branch Mint in 1837.

The Bechtler Mint

In the early 1800s, gold and silver money were difficult to come by in North Carolina and other southern states. North Carolina was the country's biggest gold producer until 1848, but the only official place to make coins was the federal mint in Philadelphia, Pennsylvania. No local mint meant very few coins were available locally. It also meant a long and dangerous trip north for southern miners to sell their gold. A German immigrant named Christopher Bechtler soon provided an alternative.

Christopher Bechtler was born in the Grand Duchy of Baden in Germany around 1782. He immigrated to America with his son, Augustus, and nephew, also named Christopher, in 1829. The family eventually settled in Rutherfordton, North Carolina. Bechtler started as a jeweler and watchmaker but began minting coins in 1831.

The Bechtler Mint made coins in three values—the \$5 “half-eagle;” the \$2.50 “quarter-eagle;” and the first American gold dollars. Bechtler also designed and made all his coining equipment himself. He developed a reputation for honesty, and his coins were highly prized because of their accurate weight and gold content.

Throughout the 1830s, North Carolinians tried to convince the federal government to establish a branch of the federal mint somewhere in the South. They were successful in 1837, when the federal branch mint opened in Charlotte, North Carolina. It provided some competition for the Bechtler Mint, but the Bechtlers continued to be successful, and by 1840 they had coined over two million dollars in gold.

Christopher Bechtler died in 1842, passing the business to his son, Augustus. When Augustus died in 1844, his cousin Christopher took over the mint and continued to make coins until 1852. Even after the Bechtler Mint closed, Bechtler coins continued to circulate and were accepted as currency for many years. The Bechtler Mint in Rutherfordton, North Carolina, was one of only a few private mints ever operated in the United States.

The Charlotte Mint

In the early days of gold mining in America, the only place gold could be made into coins was at the federal mint in Philadelphia, Pennsylvania. Since the southern states were producing all the gold being coined, miners had to make a long trip north to sell their gold to the mint. No southern mint also meant no real standard form of money in the South. North Carolina began trying to persuade the U.S. government to build a branch mint in Charlotte. In 1835, Congress passed a bill to establish branch mints in Charlotte, North Carolina; Dahlonega, Georgia; and New Orleans, Louisiana. The Charlotte Mint was the first to be constructed.

The very first deposit received at the Charlotte branch mint was a gold bar worth \$1,974.08, which belonged to Ervin & Elms, a dry goods firm. The mint purchased gold from miners or mining companies, refined it, and mixed the gold with other metals to make alloys. The alloyed gold was shaped into ingots, and then rolled out and stamped into blank coins called planchets. The planchets were tested to be sure they were the correct weight, and then they were stamped with a pattern in a coining press and given a ridged edge.

Coins minted in Charlotte had a “C” on the reverse of the coin, by the eagle’s foot and came in three denominations the \$5 “half-eagle;” the \$2.50 “quarter-eagle;” and the \$1 “dollar coin.” For a fee, miners could also bring gold to the mint to be assayed, tested to find out the projected amount of gold per ton in the ore.

In 1861 North Carolina entered the Confederacy and the new government took control of the Charlotte mint. The mint closed the following year and was used only as space for the Confederate naval yard. The building was also used as a hospital during the Civil War. When the war ended in 1865, Federal troops arrived in Charlotte and took over the mint to be their own headquarters. The Confederate War Department seal was later found in a vault at the mint.

The Charlotte Mint reopened in 1868, but only as an assay office. It never again produced coins, but the mint did buy local gold and made ingots to be sent to the mint in Philadelphia. The assay office was finally closed permanently in 1913. By that time, the Charlotte mint had produced \$5,059,180 in gold coins and the assay office had done business valued at \$10,163,660.

The mint had even been used as temporary workspace by Thomas Edison in 1901, when he came to North Carolina to experiment with extracting gold from rock using electromagnetics. Following Edison’s experiment, the Charlotte Mint sat empty until 1930, when it was scheduled to be destroyed. Thanks to the efforts of Mary Myers Dwelle, the building was saved. It was subsequently restored and moved to its present location and now houses the Mint Museum of Art.