**Colorado’s Mining Regions and Population Changes**

**Conceptual Overview**

**Main Learning Objectives**-In the first activity, students will learn where Colorado’s mining region is located.
-In the second activity, students will learn how the population in Colorado’s mining towns changed over time. They can work in a small group to research population data for one mining town at three different time periods and then compare the data they find with the data from another group’s town to look for patterns.

-In the third activity, students will consider how mining affected the growth of supply towns in Colorado.

***Activity One Colorado’s Mining Regions:***

**Learning Target**-Students will be able to use geographic measurement tools on a map to make predictions and answer questions about the geography of Colorado.

***Activity Two Population Change in a Mining Town:***

**Learning Target**-Students will be able to compare population changes in Colorado mining towns and determine the causes of those changes.

***Activity Three Population Change in a Supply Town:***

**Learning Target**-Students will be able to understand how supply towns supported the growth of mining camps.

**Colorado Standards addressed**

***Activity One:***

4th History Standard 1.1.b.

4th Geography Standards 2.1.a, 2.1.b.4th Math Standard 4.1.a.

5th History Standard 1.1.a

5th Geography Standards 2.1.a, 2.1.b.
5th Math Standard 1.1.d, 1.2.a.

***Activity Two:***

4th History Standard 1.1.b.

4th Geography Standards 2.1.a., 2.1.b., 2.1.c, 2.1.d, 2.2.a, 2.2.c.

4th Economic Standards 3.1.a, 3.1.b, 3.1.c.

4th Math Standard 4.1.a.
5th History Standard 1.1.a.
5th Geography Standards 2.1.a., 2.1.b., 2.1.c.

5th Math Standard 1.1.d, 1.2.a.

***Activity Three:***

4th History Standards 1.1.a, 1.1.b, 1.1.c, 1.1.d., 1.2.a., 1.2.b.

4th Geography Standards 2.1.a., 2.1.b., 2.1.c, 2.1.d. 2.2a., 2.2.c., 2.2.d.

4th Economics Standards 3.1.b, 3.1.c., 3.2.d.

4th Math Standard 4.1.a.

5th History Standards 1.1.a., 1.1.c, 1.1.d, 1.2.a.

5th Geography Standards 2.1.a, 2.1.b, 2.1.c., 2.2.a, 2.2.b, 2.2.c, 2.2.d., 2.2.e.

5th Math Standard 1.1.d, 1.2.a.

**Essential Concepts**

-By students comparing the male and female populations over time, they will discover that first arrivers to a mining camp were mainly men who were single or married. It was not for a while that miners sent for their families to join them in the mining camps. When women and children arrived, life in the mining camps began to change. Women and children did not mine for gold but helped by doing other jobs in the town. Many women started their own businesses of doing laundry and cooking food for the miners while the children helped with chores at home and went to school to learn reading and math in a tent or a one room schoolhouse if someone was available to teach them.

-Students will also discover by looking at the population data that mining towns increased and decreased dramatically based on the length of the mining boom. They will have the opportunity in these activities to think through the reasons why this happened and understand the domino effect when the gold supply dried up.

-Finally, students will look at population data for supply towns and have the opportunity to understand how mining affected the growth of Colorado beyond the mining region. Without the railroad, the mining towns had to be supplied by packhorses, mules, and wagons that were loaded in the much needed supply towns.

**Resources for Teachers on Colorado’s Mining History**

<http://hewit.unco.edu/dohist/mining/themes.htm> (starting point, photo primary sources)

<https://en.wikipedia.org/wiki/History_of_Colorado> (historical overview)

<https://en.wikipedia.org/wiki/Timeline_of_Colorado_history> (scroll down to 1850’s)

<https://westernmininghistory.com/articles/11/page1/> (Colorado Gold Rush)

<http://www.georgetowncolorado.com/history.htm> (history of Georgetown)

<http://aspenhistory.org/> (history of Aspen. Go to History Timeline>Mining Boom)

<http://www.cliffshade.com/colorado/geo_overview.htm> (detailed overview of Colorado’s geology)

<http://en.wikipedia.org/wiki/Colorado_Mineral_Belt> (brief discussion of mineral belt)

<http://coloradogeologicalsurvey.org/mineral-resources/general/history/> more info on minerals)

<http://www.goldrushnuggets.com/pipegoru.html> (more info & pics of nuggets)

<https://www.legendsofamerica.com/co-pikespeakgoldrush/> (good pics)

**Notes and Suggestions To Teachers**

**Activity One: Colorado’s Mining Region**

-**Supplies:** computers for students, teacher computer and projector, pencils, copies of Activity Sheet MP-1 for Students (one per partner), colored pencils.

-Since this is the first Activity, you may choose to have students have partners but also go through the Steps and Tasks with them by modeling and helping them to problem solve each Step and Task as a whole group so they get the feel for how the map works.

-If students are working with another partner independently, they can take turns manipulating the tools online with the map and recording answers. One student could be the Scribe to fill out the Task Sheet and the other the Tech Person using the online tools and then they could switch roles halfway through the Task Sheet.

-Before using the Measurement Tool, model clicking on two points on the map as a whole group and find the mileage together. Be aware that mileage answers will vary due to how well they manipulate the Measurement Tool. Assist students as needed as they learn to use this tool.

-At the end of the measurement tasks, have a few groups share out with the whole group what their measurement predictions and actual answers were. Use this time to discuss what a reasonable prediction would be. For example, on the map the features are to scale and appear smaller than they actually are. It is not a reasonable prediction that the length of the mineral belt would be 15 mines long when it reaches across the state of Colorado and most students know that Denver to Colorado Springs is at least 60 miles. Too, looking at the scale can help make predictions.

-**Enrichment ideas**: Have students experiment with the other measurements and make up some problems for another partner group to solve. For example, have them calculate the mileage of the Colorado borders from North to South and then East to West and multiply them together to get the area of Colorado: 104,355 sq. miles, approximately 278 miles x 377 miles per this map. (Square mileage of a state is determined by the U.S. Census Bureau and can vary between years due to change in land mass, glacier, and water movement. The 2010 Census found Colorado to be 104,185 sq. miles)

-**Differentiation ideas**: Be deliberate in partnering students by putting different academic levels together so that peer help is available.

**Activity Two: Population Change in a Mining Town**

**-Supplies:** computers for students, teacher computer and projector, pencils, copies of Activity Sheet MP-2 for Students (one per partner).

-Student’s will be historical detectives while examining two primary source photos. One is a miner’s log cabin and located away from town and the other is a mining town. They will compare the natural resources in both pictures and answer questions about the differences in the two photos. Allow students to discuss together what their ideas are about reasons for these differences. Share out from groups their findings.

-Students will also navigate more deeply the online map by adding and taking off layers in the Layers List. They will use this geographical tool to find data about population changes in the years 1880, 1900, 1930 and then compare the data to answer questions.

-Assign student partners a county to collect population data on. Make sure to familiarize yourself with the counties and layering list before class. Some students may find this task challenging so help students as needed.

-**Enrichment Ideas:** To challenge students have them figure out the percentage of males and females during each time period. They also could make an advertisement for a business that would be in a mining town, write a letter home from a miner to his family describing his surroundings, the work he does every day, the food he eats, and his feelings about what he is doing. Also, students could make a graph (line, plot, bar, pie chart) using the population data and create questions from the graph that other students can answer.

-**Differentiation ideas:** Be deliberate in partnering students, allow verbal answers and to talk it out as students are looking at the primary source photos, give help with the map and calculations as needed.

**Activity Three: Population change in a Supply Town**

**-Supplies:** computers for students, teacher computer and projector, pencils, copies of Activity Sheet MP-3 for Students (one per partner), possibly 11 x 14 construction paper for a business sign for a Supply Town and colored pencils or markers.

-In this Activity, students will examine another primary source photo of the inside of a miner’s cabin and then make a T-chart listing possible supplies a miner might need. They will break them up into two categories; items a miner could make themselves at their mining town/camp, and items they would need to purchase that would come from a Supply Town. The photo is used to stimulate ideas and to see how simple the inside of a miner’s cabin looked was.

-Determine if you will need a whole group or just partner discussion to think through the differences between a Supply Town and a Mining Town and the need for both. Provide help navigating the map as needed when students gather population data on their Supply Town.

-Remind students that when they are determining how long it might take the various forms of transportation to go from the Supply Town to the Mining Town based on the mileage measurement tool that their answers should be reasonable. They can take into account possible steepness of the journey, weather, reliability of the transportation, etc…They should recognize if someone was taking supplies by mule/horse from the Supply Town to the Mining Town that it would take longer than if there was a narrow gauge railroad.

-**Enrichment Ideas**- The business poster design or sketch can be used as a challenge activity. Also, you could extend the measurement activity in Task #4 to include distances between other Supply Towns and Mining Towns. You could also offer a challenge for students to find by clicking on the red circles the names of the railroad lines coming to the Supple Towns.

**-Differentiation ideas:** Be deliberate in partnering students, allow verbal answers and to talk it out as students are looking at the primary source photo, give help with the map activities and calculations as needed.

**Click Path to reach Mining and Population Changes**

On the Teacher’s Economy page, you will find a Conceptual Review of the lessons, Student Resources, and Internet Mapping Activities. <https://www.unco.edu/hss/geography-gis/mapco/teacher-resources/economy.aspx>

**ADDITIONAL RESOURCES FOR BEGINNING OF MINING & GROWTH LESSONS**

**STEM HOOK FOR START OF MINING LESSONS: (Math and Social Studies)**

-Students will learn to mine with chocolate chip cookies using flat and round toothpicks, and paperclips to help illustrate the mining process and its’ challenges.

-45 min. grades 3rd-8th

-See links below for supplies, cookie mining worksheets, and lesson plans

<https://musselmanscience.wordpress.com/2013/09/24/mining-for-chocoate-chips-a-model-for-stem-integration/>

<http://misssimpson.com/earth/choc-chip-mining-activity.pdf>

<https://populationeducation.org/sites/default/files/mining-for-chocolate.pdf>

**Primary Sources of the Colorado Gold Rush for Students as History Detectives:**

**Miner’s campsite:**

[**http://www.unco.edu/hewit/doing-history/colorado-miners/food-clothing-shelter/food.aspx**](http://www.unco.edu/hewit/doing-history/colorado-miners/food-clothing-shelter/food.aspx)

**Miner’s cabin outside:**

[**http://www.unco.edu/hewit/doing-history/colorado-miners/food-clothing-shelter/shelter.aspx**](http://www.unco.edu/hewit/doing-history/colorado-miners/food-clothing-shelter/shelter.aspx)

**Miner’s cabin inside:**

[**http://www.unco.edu/hewit/doing-history/colorado-miners/food-clothing-shelter/interiors.aspx**](http://www.unco.edu/hewit/doing-history/colorado-miners/food-clothing-shelter/interiors.aspx)

**Clothing:**

[**http://www.unco.edu/hewit/doing-history/colorado-miners/food-clothing-shelter/interiors.aspx**](http://www.unco.edu/hewit/doing-history/colorado-miners/food-clothing-shelter/interiors.aspx)

**Families and Children:**

[**http://www.unco.edu/hewit/doing-history/colorado-miners/food-clothing-shelter/interiors.aspx**](http://www.unco.edu/hewit/doing-history/colorado-miners/food-clothing-shelter/interiors.aspx)

**Classroom:**

[**http://www.unco.edu/hewit/doing-history/colorado-miners/families-children-schools/classrooms.aspx**](http://www.unco.edu/hewit/doing-history/colorado-miners/families-children-schools/classrooms.aspx)

**School:**

[**http://www.unco.edu/hewit/doing-history/colorado-miners/families-children-schools/schools.aspx**](http://www.unco.edu/hewit/doing-history/colorado-miners/families-children-schools/schools.aspx)

**Routes to Pikes Peak Gold Regions:**

[**https://artsourceinternational.com/shop/old-map-reproductions/routes-to-the-pikes-peak-gold-regions/**](https://artsourceinternational.com/shop/old-map-reproductions/routes-to-the-pikes-peak-gold-regions/)

**Digging Deeper Colorado’s Mining Regions and Population Changes:**

**A Historical Background Essay**

**Vocabulary for Historical Background:**

**-Teachers can use the historical background essay to help start to build background knowledge for their students.** The teacher can write the vocabulary words below on the board or chart paper and go through them with students before or after reading the historical background. The teacher can make it into a quick game by having students in teams try to match the definition read out loud to the vocabulary word listed. Other vocabulary can be found at:
<http://www.michaellamarr.com/grvocab.html>

<https://myvocabulary.com/word-list/mining-vocabulary/>

<https://www.goldbugpark.org/visitor-info/gold-mining-terms-glossary/>

<https://sites.google.com/site/coloradogoldexperience/home/miners-terminology>

***Vocabulary***

**Colorado Territory:** what the Colorado area was called before it became a unified state.

**Fifty-Niners:** what miners were called who left their homes to find gold in Colorado in the year that gold was found along the South Platte River.

**Gold Flakes:** small flecks of gold found in a riverbed.

**Gold Nuggets:** larger lumps of gold found in a riverbed that were medium to large sized.

**California Gold Rush:** the gold rush that started in 1849 in California.

**Gold Fever:** an extreme interest in gold.

**Pikes Peak or Bust:** wagons wrote this slogan on the side of their wagons on the way to the gold rush area along the South Platte River. It meant that they would die trying to get to the Pikes Peak gold rush.

**Ghost Town:** a town that only a few people lived in after the gold had run out and the miners had moved on to another area.

**Gold Rush:** a fast movement of people to an area where gold had been discovered.

**Mining Camp:** an area where miners lived and was usually close to the area where gold had been found.

**Supply Town:** a town that was easy to get to by railroad that brought food, goods, mining supplies and mining equipment that was later sold in mining camps. These items were later transported by mules, horses, and wagons into the mountains to the mining camps.

**Natural Resources:** things that can be found in the environment that can be used to help people to live and survive. Some examples are: land, water, soil, plants, and animals.

**Economic Growth:** an increase in the amount of goods or services over a certain period of time that provides more money for a community, town, or city.

**Narrow Gauge Trains:** a train with a smaller train track than a regular train that traveled up into the mountains. These trains later replaced mules, horses, and wagons that carried supplies to mining camps.

**Smelters:** the process of applying heat to ore to melt out the gold, silver, iron, copper, and other metals from rock or granite.

**Irrigation Methods:** ways that farmers rerouted water from water sources by digging ditches and small canals that helped water their crops.

**Population Boom:** a rapid increase in the number of people to a particular area.

**Digging Deeper Colorado’s Mining Regions and Population Changes:**

**A Historical Background**

*“Ho for Pikes’ Peak! There is soon to be an immense migration, especially from our western states, to the new El Dorado…”* ~New York Times, 1859

 The news that gold had been found along Cherry Creek’s South Platte River Basin by William Green Russell in May of 1858 in “Pikes Peak Country,” began a mining and population rush to **Colorado Territory**. Those that headed that way were known as the “**Forty-Niners**” because they left their homes to travel West in 1859. Many started the journey, but few actually made it to the area. Even fewer found gold. Those who did eventually make it to the Colorado Territory and stayed after the gold was gone in 1861 changed the territory forever.

 **Gold flakes** were actually found earlier in 1850 by Louis Ralston who was a Cherokee Indian. Not too long after that, a Delaware Indian, Fall Leaf, found a **gold nugget**. But, compared to the successes of the start of the **California Gold Rush** ten years earlier, these were insignificant finds. “**Gold fever**” swept through the country and men set out to head toward Colorado to make their fortunes traveling across Indian trails on the plains in covered wagons with the slogan, “**Pikes Peak or Bust**” written on the side.

 At first, the growth in population of the Colorado Territory was mainly of single and married men who had left behind their wives and children to try and strike it rich. It was a tough journey with rough terrain and lasted many weeks. Later, miners would send for their families to join them in the mining towns. The addition of women and children to mining towns helped change the towns into more suitable places to live by the creation of businesses, schools, and churches. Some mining towns grew into large sized communities. Other towns dwindled down to **ghost towns** after the **gold rush** was over and miners moved on to find the next gold or silver strike.

 The influx of thousands of people coming to the Colorado Territory had both negative and positive impacts on the environment, the economic climate, and the Native Americans already in the area. **Mining camps** and **supply towns** sprang up, stretching environmental and vegetation **natural resources**. New trails were blazed to accommodate prospective miners. Consequently, Native American hunting grounds were lost and they were later pushed off their lands.

 There were many positive impacts, too. New coal and iron industries produced much **economic growth** by supplying energy for steam-powered mining equipment. New roads and trails connected parts of the territory not previously connected bringing more people to the area. **Narrow-gauge trains** helped cut down costs and expenses of getting much needed supplies to the mining camps and gold and silver ore to **smelters**, which led to an expansion of railroad transportation on the Great Plains. Others tried their hand at farming and used creative **irrigation methods** to make a good living. Too, less than 20 years after the mining boom started, Colorado became the 38th state in 1876.

 Mining and population growth brought over 100,000 people to Colorado in the 1800’s. They came from all directions, were male and female, and were rich or poor. Regardless of who they were or where they came from, they started a boom not only involving gold, silver, and other minerals, but a **population boom** that helped us become what is now our present day state of Colorado.

**Digging Deeper: Historical Background Questions**

1. In paragraph one, it states that gold was found in 1858 in “Pikes Peak Country,” and in paragraph two that wagons going West had signs on them that said, “Pikes Peak or Bust.” Since gold was found in the South Platte River Basin in the Denver area 85 miles away, why do you think that people referred to that area as the Pikes Peak area?
2. Why do you think that many potential miners started the journey to the territory of Colorado but didn’t make it?
3. Describe some characteristics of a person who might have had “gold fever.”
4. If your family had moved to a mining town during 1859, do you think you would have liked it? Why or why not? Give examples to support your opinion.
5. How do you think that environmental and vegetation resources were affected in a mining town?
6. Do you think mining and population growth in the 1800’s was good for Colorado today? Why or why not? Give examples about your thoughts.

**TEACHER ANSWER KEY
Digging Deeper: Historical Background Questions**

1. In paragraph one, it states that gold was found in 1858 in “Pikes Peak Country,” and in paragraph two that wagons going West had signs on them that said, “Pikes Peak or Bust.” Since gold was first found in the Denver area, why do you think that people referred to that area as the Pikes Peak area?
Pikes Peak was a major discovered landmark 52 years earlier (1806, Zebulon Pike) and, at that time, the most well-known and visible mountain as travelers crisscrossed the Plains. Pre-gold strike era, the area was still largely an unpopulated and unexplored region so newspapers in the East and West referred to the whole area as Pikes Peak Country. Gold was not actually found in the Pikes Peak region until 1893 in Cripple Creek.
2. Why do you think that many potential miners started the journey but didn’t make it to the territory of Colorado?
There were many hazards to face on the journey to Colorado Territory: weather, animals, Native Americans, cost of the trip, length of the trip, sickness, and rough terrain.
3. Describe some characteristics of a person who might have had gold fever.
People who had gold fever couldn’t stop thinking about what being rich would do to help change their lives and futures. They made plans for what they would do with the money they made; what they would buy and how it would make benefit their families. They had one purpose; the pursuit of gold no matter the cost. Many people put that priority above their families and their friendships.
4. If your family had moved to a mining town during that time, do you think you would have liked it? Why or why not? Give examples to support your opinion.
Answers will vary. Make sure the why/why not and examples are given.
5. How do you think that environmental and vegetation resources were affected in a mining town?
Environmental resources:
-There were a lot of people all in one place. They needed space for temporary housing like tents and lean-to’s. Nearby water was used to drink and cook, water was also used to extract the gold from the soil with cyanide and other harmful chemicals which seeped into the soil harming wildlife and humans. Too, trees were cut down for the timber to build buildings.
Vegetation resources:
-local animal and plant life were used for food and medicines, grass disappeared due to use for feeding horses, oxen, and cattle along with needed land for living areas used for miners.
6. Do you think mining and population growth in the 1800’s was a good thing for Colorado today? Why or why not? Explain your thoughts.
Answers will vary. Can use as a short constructed response or a longer essay.

Worksheet MP-1 **Colorado’s Mining Regions with ANSWER KEY**

[**MP-1 Interactive Map**](http://unco.maps.arcgis.com/apps/webappviewer/index.html?id=aeed10c185bd4dfcb11570d2da24cc28)

**Directions:** Do the Step and then the Task for that Step before moving on
to the next Step and Task.

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| **Step 1** | **Your Task** |
| **A. In a browser go to (or click link):**<http://unco.maps.arcgis.com/apps/webappviewer/index.html?id=aeed10c185bd4dfcb11570d2da24cc28>**B. Complete Task #1 & #2** (on your right).  | **1.**This online map shows the Colorado Mountain Region, early trails, and mineral belt ***before*** the gold rush began in Colorado. **2.** Look at the Legend and familiarize yourself with the key and its symbols. In pencil, label **one spot** on the map for each: **an early trail, mountains, the mineral belt and one of the sides of the Colorado border.****Students will have various spots labeled on the map. Do a quick check of partner groups to make sure they have labeled the map correctly.**  |
| **Step 2** | **Your Task** |
| **C.** Close the **Legend** box (X) on online map. **D.** **Complete Task #3** | **3.** Make a **prediction** of the length and width of the Mineral Belt in miles on the map. **Prediction**-Length of Mineral Belt: **Various answers** miles**Prediction**-Width of Mineral Belt: **Various answers** miles |
| **Step 3** | **Your Task** |
| **E.** Click on the ruler icon at the top left to open Measurement box.**F.** Click on the middle icon labeled **Distance** and choose **Miles** from dropdown. **G.** Click on one end of the Mineral Belt (length or width). -A green marker will appear. -Now click on the other end of the Mineral Belt for ending point and another green marker will appear with a blue line between the two points. -This will calculate the distance between these two points. -Your total mileage will show in the Measurement box. Use the **Clear** button to start over or to recalculate. Or, close and then open the Measurement box to also clear measurements. **H. Complete Task #5 & #6.** Record the actual mileage in the Task column.  | **4.** **Do Steps E, F, G & H** on map.**5.** **Using the Measurement Tool**, now measure the **actual** length and width of the Mineral Belt in miles, making sure to find the farthest points from top to bottom for length and widest points across for width. **Actual** Length of Mineral Belt: approx. range 253-260 miles**Actual** Width of Mineral Belt: approx. range 63-68 miles**6.** What was the **difference** between your **prediction** and what you found for the **actual** length and width of the Mineral Belt?**Difference** in Length of Mineral Belt prediction and actual:Various answers\_\_\_\_\_\_\_\_\_\_\_miles**Difference** in Width of Mineral Belt prediction and actual:Various answers \_\_\_\_\_\_\_\_\_\_\_miles **Work Space:** -No calculator use! Have both students use this workspace to check and compare their answers before moving on to Step 4.-With whole group, discuss some of the predictions made for the tasks above. Remind students that predictions need to be reasonable. See Activity One Teacher Notes for more clarification. |

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| **Step 4** | **Your Task** |
| Walk around the classroom to see what students are doing on the map. Ask questions to facilitate their own discussions with their partner.  | **7.** Look below at the map of Colorado’s early trails, mountains, and mineral belt again. On this map, predict and draw in with a colored pencil where you think some of Colorado’s first mining camps might have been. **8.** Why do you predict this location(s)? Discuss and record your reasons for your choices.**9.** Make another prediction and draw in on the same map with another colored pencil where you think Colorado’s early **mining trails** were.  |
| **Step 5** | **Your Task** |
| **I.** Click on the **Layer List** button . Check on the **Mining Camps and Ghost Towns** layer.Check on the **Gold Rush Trails** layer.**J. Complete Task # 10**Answers will vary, but make sure students compare the first prediction to the second and can reasonably defend the choices they made on the their map. Do wrap-up and review Learning Target. Do a quick check in with a thumbs up/side/down to gauge feedback on their thoughts about their understanding of the lesson today and the Learning Target.  | **10. Compare your two estimates with the map: 1) where you thought the mining camps would be; and 2) where you thought the gold rush trails would be.** Are they both the same? Are they different from each other? If so, why? If not, why? **Write your answers below and discuss with your partner.**  |

Worksheet MP-2 **Population Changes in a Mining Town with ANSWER KEY**

[**MP-2 Interactive Map**](http://unco.maps.arcgis.com/apps/webappviewer/index.html?id=aeed10c185bd4dfcb11570d2da24cc28)

**Directions:** Do the Step and then the Task for that Step before moving on
to the next Step and Task

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| **Step 1** | **Your Task** |
| **A.** Click on the link or copy and paste the link into your browser to see more detail of the picture of the miner’s log cabin to the right:<http://www.unco.edu/hewit/doing-history/colorado-miners/food-clothing-shelter/shelter.aspx> | Macintosh HD:Users:cyndytatum:Desktop:log-cabin (1).gifPhoto: Colorado Historical Society**1.** Using your historical detective eye, examine the photo of this miner’s log cabin in the 1860’s. What things do you notice about the geography of the land? What natural resources do you see?What other things do you notice in the picture?**Discuss with your partner and write down your observations in the space below:** Answers will vary but may include: **Geography of the land**: it looks like it is a mountainous area and might be high altitude due to the patches of snow. **Natural Resources:** a good amount of trees used for log home, vegetation, and dirt could be used to fill in spaces between logs of cabin. **Other things:** tools, large rocks, gold pan by miner by the door, looks like the buildings on hillside could be a mine.  |
| **Step 2** | **Your Task** |
| **B.** Click on the link or copy and paste the link into your browser to see more detail of the picture of Central City, one of the first Mining Towns on the right. <http://www.unco.edu/hewit/doing-history/colorado-miners/mining-towns/central-city.aspx> | Macintosh HD:Users:cyndytatum:Desktop:1864-central-city.gifPhoto: Colorado Historical Society**2.** Using your historical detective eye again, look at this photo of Central City, one of the first mining towns in Colorado. What things do you notice about the geography of the land? How does the geography of this area compare to the miner’s log cabin photo?What natural resources do you see?What other things do you see? What is different? What is the same?**Discuss with your partner and write down your observations.** Answers will vary but may include: **Geography of the land**: it looks like it is a mountainous and hilly area. The city is situated in a valley.**Natural Resources:** trees are almost gone from the area, may be grass on the hills. **Other things:** crowded with buildings, can see laundry hanging on a clothes’ line, dirt roads. **Comparison between the miner’s cabin and Central City-**Same:-both in mountainous areas, both have buildings, both have snow in the area.Different:-cabin is on the hillside, Central City in a valley.-log cabin looks like not as sturdy as buildings in the town.-many more trees by cabin than in the town.   |
| **Step 3** | **Your Task** |
| **C. Open the online Map.** In a browser go to (or click link):<http://unco.maps.arcgis.com/apps/webappviewer/index.html?id=aeed10c185bd4dfcb11570d2da24cc28> D. Use the Layer List button  to check on ONLY the following layers: -**1880 Counties**-**Mining Camps and Ghost Towns**-Check OFF any other layers.**E. Do Task #3, 4, & 5** | **3.** You are going to now gather data and compare population changes from the same County in Colorado during 1880, 1900, and 1930. Your teacher will assign you a County. Write the name of your County on the line below. You may want to hand out the names of the Counties on slips of paper to each student partner group.**4.** Find your county on the map. Click on counties to get a pop up window of its name. **Make sure NOT to click on a mining camp.** You can use the zoom in/out tools to see your county close up. **5.** Click carefully on each Mining Camps/Ghost Town and **find 3 mining camps/ghost towns in your County**. You will see that mining camps and ghost towns are in the same layer on the map. That is because most ghost towns started out as mining camps. Write 3 names of the Mining Camps/Ghost Towns in your County below. (Not all Counties will have 3 Mining Camps/Ghost Towns) \*\*\* **6. Follow Step F for your next Task #7.**  |
| **Step 4** | **Your Task** |
| **F.** Click on your County on the map to bring up its pop up box. **-CHECK ON only 1880**. No other year layers should be on. Record the population data in the chart. **-CHECK OFF 1880.** -**CHECK ON 1900**. Record the data in the chart. -**Then CHECK OFF 1900.**-**CHECK ON 1930.** Record the data in the chart. **G. Use this area for work space for Task #7 calculations, if needed:** Answers will vary for #8 depending on the County assigned. Check calculations of the male and female population differences.After students have finished the questions they can share their information with another student partner group. Do wrap-up and review Learning Target after students are finished with the questions. Do a quick check in with a thumbs up/side/down to gauge feedback on their thoughts about their understanding of the lesson today and the Learning Target.  | **7.** In the chart below, you will see three years: 1880, 1900, and 1930. For each year you will fill out the population information by checking off and on the layer needed for that year on the map. **See Step F.****Population Data for:**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (Your County)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | County Name | Total Population | Male Population | FemalePopulation | Male & FemalePopulationDifference |
| 1880 |  |  |  |  |  |
| 1900 |  |  |  |  |  |
| 1930 |  |  |  |  |  |

**8.** Answer the questions below using the data from your chart:1. What year was the population the smallest?
2. Why do you think this was the smallest at this time?
3. What year was the population the greatest?
4. Why do you think this was the greatest at this time?
5. What year was the difference between the number of men and women the greatest?
6. Did the percentage of male to female change? If so, why do you think the county would have changed?
7. What do you think caused the changes in population in Colorado mining areas between 1880 and 1930?
8. If you could choose a year to have lived in a Colorado Mining Camp, which year would you choose and why? Write your reasons below.
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Worksheet MP-3 **Population Changes in a Colorado Supply Town with ANSWER KEY**

[**MP-3 Interactive Map**](http://unco.maps.arcgis.com/apps/webappviewer/index.html?id=aeed10c185bd4dfcb11570d2da24cc28)

**Directions:** Do the Step and then the Task for that Step before moving on
to the next Step and Task

|  |  |
| --- | --- |
| **Step 1** | **Your Task** |
| **A.** Click on the link (below) or copy and paste the link into your browser to see more detail of the picture of the inside of a miner’s log cabin to the right:<http://www.unco.edu/hewit/doing-history/colorado-miners/food-clothing-shelter/interiors.aspx>**B. Open the online Map.**In a browser go to (or click link):<http://unco.maps.arcgis.com/apps/webappviewer/index.html?id=aeed10c185bd4dfcb11570d2da24cc28> | **Macintosh HD:Users:cyndytatum:Desktop:miners-in-cabin.gif**Photo: Denver Public Library, Western Historical Collection**1.** Examine the photo above of the inside of a miner’s cabin to help you make a list of supplies that miner’s needed every day. Think about which items they could make on their own and which items they would need to get from a supply town. Think also about what tools they would need in order to mine. **2. Go to Step B when list completed**Supplies Made on their own: Buy from Supply Town: bed, table, chair, bench, etc… pans, stove, food, dishes,  buckets, tea pot, silverware, bedding, brooms, nails, pick  axe, gold pan, cut wood, etc... |
| **Step 2** | **Your Task** |
| **C.** On the online map, use the Layer List button  (insert icon of layer list button here) to **CHECK ON only the following layers:****-City Pop. 1900****-1895 Railroad****-Major Mountain Ranges****-Mining Camps and Ghost Towns** | **3.** After you have Checked on the layers, **click on some of the red circles** and explore towns that you think might have been a supply town for a mining camp. You will see drop downs for railroad lines and population totals when doing this. **4.** Discuss with your partner the reasons a supply town would be located where they are and the difference between a supply town and a mining town/camp. **Write those reasons here:** Supply towns were located in easily accessible areas by various transportation and usually at the bottom of the mountains where gold was discovered. Supply Town: had the supplies delivered to them by messenger then later railroad. Then, transported up to the Mining Camps. Mining Camp: were located in the mountains where miners lived and worked close to where gold was discovered.  |
| **Step 3** | **Your Task** |
| **D.** Keep the same layers on your map and answer the questions for **Task #5**.  | **5.** Choose a Colorado Supply Town on the map and fill in the information below:Answers will vary depending on Supply Town chosen.Name of Supply town:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Population in 1900:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Population in 1910:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Population Difference:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**Why do you think the population changed in these 10 years?****Why do you think *your* Supply Town was located where it was?****Write your answers here:** While populations in mountain towns mostly declined, Supply Towns usually grew due to more railroads providing accessibility to the area. Also, many people started to leave the large cities to farm, have more space, and start a new life.  |
| **Step 4** | **Your Task** |
| **E.** Use the ***Measurement button***  and its ***Ruler tool***  to determine the distance from your Supply Town to the Mining Camp. **-**Click this button once on the Supply Town and then once on the Mining Camp. **-**Then read the “Measurement Result in the pop up box.”**-**When done, close the Measurement pop up box. **-**You can also use the ***Zoom in/out*** tools to help get a more accurate measurement.**F. Do Task #9, 10, & 11.** | **6**. What kind of people and businesses do you think you would see in a Supply Town? **Write your answer below:**There were many different kinds of people represented from many different nationalities; Chinese, African American, Jewish, Irish, etc…Businesses: Laundry, saloons, grocery stores, stables, mining supplies, places to eat, hotels, etc... Sometimes stores sold many different items instead of being exclusively just for food or mining supplies. **7.** Choose a Mining Camp/Ghost Town in the mountains and find its’ Supply Town. Answers will vary.The name of the **Mining Camp is:**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_The name of the **Supply Town** is: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**8**. **Read directions in Step E.** **9.** What is the distance between your Mining Camp and the Supply Town? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**10.** How do you think the supplies were transported from your Supply Town to your Mining Town? Horses, mules, wagons, railroads.**11.** Estimate how long the trip would take from the Supply Town to the Mining Town? Various reasonable guesses.Walking/hiking:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ hours/daysMule/horse:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ hours/daysWagon:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ hours/daysNarrow gauge railroad\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ hours/days |
| **Step 5** | **Your Task** |
| After students have finished the questions they can share their information with another student partner group. Do wrap-up and review Learning Target after students are finished with the questions. Do a quick check in with a thumbs up/side/down to gauge feedback on their thoughts about their understanding of the lesson today and the Learning Target. When business signs are completed, students can hang their signs in the classroom and do a gallery walk. The class could vote on top best business signs (Best Name, Best Catchy Slogan, Best Design).  |  **12.** Would you rather have lived in a Supply Town or a Mining Town? Give your reasons why: Answers will vary.**13.** If you could own a business in a Supply Town, what would it be and why? Answers will vary.**14.** Make a sketch/design of a sign you would have to advertise your business in a Supply Town having business name with catchy slogan and/or design: Answers will vary. |