



Primary Source Lesson Plan - Silver Ore and Smelters

Name of Primary Source

- The Argo Smelter. This primary source describes the process of refining silver ore into silver bricks.

How primary source ties into text

- Qualifies: Firsthand account by Henrietta Hitchcock of the workings of the Argo smelter.
- Elaborates: This primary source gives detailed information about refining ore into precious metal by describing the inner workings of the Argo smelting furnaces on the eastern outskirts of the city of Denver.
- Raises questions: Through these primary sources students will be able to complete a sequence of events graphic organizer.
- Corresponding Lesson: Use as a springboard for inquiry activity before Lesson 27, Service Providers Then and Now. Students will be introduced to the smelting process.

Colorado Standards

- Social Studies Standard 1 History: History develops moral understanding, defines identity, and creates and appreciation of how things change while building skills in judgment and decision making. History enhances the ability to read varied sources and develop the skills to analyze, interpret, and communicate.
 - Grade level expectation: People in the past influence the development and interaction of different communities or regions.
- Reading and Writing 1: Read and understand a variety of materials
- Reading and Writing 3: Write and speak using conventional grammar, usage, sentence structure, punctuation, capitalization, and spelling

Big Idea

- Literacy - Sequence of Events
- History - Lode or hard rock mining (as distinct from placer mining or panning) required ore to be smelted, which was a difficult and expensive process.

Critical thinking

- What do you think a smelter is? What do you think smelting is? What clues from the reading will help you find the answer?

Mini-Lesson

Teaching

Explain only briefly with the students that smelting is a process involving furnaces that produced intense heat. The heat refined silver ore into precious metal. Read the primary source The Argo Smelter as described by Henrietta Hitchcock. Be sure to discuss any unfamiliar vocabulary or phrases with students as they come up. This will become an inquiry and an inferring activity as students will have to decide what smelting is and why it's necessary, as well as what steps are involved. Tell students they will be completing a sequence of events graphic organizer for this primary source document. Fill in the first box with students.

Active Engagement

Give students their own copy of the primary source and have them read it independently. Students will complete the

sequence of events graphic organizer for The Argo Smelter primary source.

Sharing/Closing

Bring students back together to share their sequence of events graphic organizer.

“The Argo Smelter” by Henrietta Hitchcock

The Argo smelting [sic] furnaces are a group of buildings on the eastern outskirts of the city. Arriving at the works you take a short walk around a high broad fence, cross a track on which are freight cars laden with gold and silver ore and [sic] last arrive at the office door.

Here you are likely to be challenged by a burly watch man who wants to know your business.

If you are fortunate enough to know someone in the office you can gain admittance and a polite young man offers to take you over the works.

First of all is the room where the ore is being ground into powder. This is necessary before the smelting and wasting processes begin.

Here and there are heaps of powdered ore, each pile marked with the name of the mine from which it has been taken.

This ore is gray or brown or red in color and looks like any common powdered stone.

Of course these mounds contain a great deal of precious metal.

Seeing one which looked unusually rich, I asked our guide how much money he supposed was in ‘that.’

He looked queer for a minute and answered, “That’s mostly brick dust.”

Little half buckets carried off ores attached to a leather band which is constantly revolving over wheels carries the powdered ore to the furnace where the smelting process begins.

All of the slag sinks to the bottom of the furnace and at the end of a certain time is drawn off leaving only the metal, not yet, however, in the pure state...

Still another smelting and wasting process follows this when the metal is ready for the tank. Here the almost purified metal is placed in huge tanks through which the boiling water passes.

The metal here is in its most beautiful form in quantities...

Not being yet in a convenient form the metal is removed from the tanks and melted.

It is last of all poured into brick molds which contain about \$1,000 worth of silver and which weigh when turned out about 85 lbs.

Source: Henrietta Hitchcock Manuscripts, MSS#1344 Colorado Historical Society.

Name: _____ Date: _____

Sequence of Events

After reading the primary source, put the events in the correct order.

