NAME DATE CLASS

Chapter 4

ENRICHMENT

Use with Section 1

• Minerals—Earth's Jewels

Gold Mining—The Old-Fashioned Way

During the gold rush, in 1848, thousands of people went to California hoping to strike it rich. In 1896, thousands more moved to southeast Alaska and the Yukon in search of gold. How did miners know when they had found gold? How did they separate gold nuggets from other minerals?

Panning for Gold

In some places, pieces of gold could be found in the gravel and sand of stream beds. To mine them, miners used a pan shaped like a large pie plate.

First, a miner chose a stream bed to work in. The miner would dump some water and sediment from the stream bed into the pan, then swirl the mixture in the pan, letting some water and sediment spill over the side. When the miner was finished swirling, the gold, if any, was left in the bottom of the pan.

How does panning work?

Miners chose a particular stream because they could see something sparkling at the bottom. They were using their knowledge of gold's yellow color and metallic luster.

Miners could separate gold nuggets from other minerals because gold is denser than most other minerals. As the miners swirled their pans, the gold sank to the bottom.

Answer the following questions, using complete sentences.

1. It can be hard to tell real gold from "fool's gold," or pyrite. Pyrite contains iron and sulfur. Like gold, it is a shiny yellow. But pyrite is much harder and produces a black streak when it is rubbed across an unglazed porcelain streak plate. Gold produces a yellow streak. Also, gold is much heavier than pyrite. Explain how gold miners may have avoided being fooled by "fool's gold."

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2. Sometimes gold is found in large nuggets, at other times in tiny particles. Do you think that panning for gold would be effective for mining gold dust? Explain.

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