

Minerals, Ores, and Fossil Fuels

Lesson Overview

In this lesson, students will read and analyze a text selection to learn about the importance of minerals, ores, and fossil fuels based on their properties. Students will create a Venn Diagram based on their reading to summarize their knowledge of Earth's resources.

Standards Addressed

- SC 2005 8-3.5 Summarize the importance of minerals, ores, and fossil fuels as Earth resources on the basis of their physical and chemical properties.
- SC 2014 E.5C.1 Obtain and communicate information regarding the physical and chemical properties of minerals, ores, and fossil fuels to describe their importance as Earth resources.
- NGSS MS-LS 4-1 Analyze and interpret data for patterns in the fossil record that document the existence, diversity, extinction, and change of life forms throughout the history of life on Earth under the assumption that natural laws operate today as in the past.

Disciplinary Literacy Best Practices

Notetaking from Text

Graphic Organizer: Venn Diagram

Lesson Plan

Time Required: One 65-minute Class Periods

Disciplinary Vocabulary: physical properties, chemical properties, ores, minerals, fossil fuels

Materials Needed:

- Text Selection on Fossil Fuels, Minerals, and Ores (Teacher used Prentice Hall Science Explorer Grade 8)

Engage

- Make a Prediction: Are rocks and minerals the same thing?
- Use your textbook to confirm or disprove your prediction.
- Pre-reading: Students skim the assigned text and look for pictures and diagrams about the content. Focus Questions: What is a mineral/ore/fossil fuel and how does it form? How are minerals/ores/fossil fuels useful to humans?

Explore

- Students will read the assigned text selection and use evidence from the text to answer the following questions:
 - What is a physical property? List examples.
 - What is a chemical property? List examples.
 - What are the five characteristics for a substance to be considered a mineral? Describe each of them.
 - What are ores? List some examples.
 - What is a fossil fuel? List some examples.
 - How do plants make fossil fuels?

Explain

- After reading, the teacher leads a class discussion of the information gathered in the reading about minerals, ores, and fossil fuels.
- Students will create a Venn Diagram with three circles. There should be one circle for minerals, one for ores, and one for fossil fuels. Students will use the information from their reading to compare the three types of resources.

Teacher Biographical Information

Bethany (Mihalik) Kogut is an 8th grade science teacher at Saluda Middle School in Saluda County Schools in Saluda, SC. This lesson was written during her 6th year of teaching and the 1st year of the IQ-MS Program.