The Mohs Scale

Lesson Plan for *Minerals*
Grades 3 and 4

Objective

To help students practice using graphs and scales to compare the relative hardness of various minerals.

Things Needed

- *Minerals* book
- Mohs Scale worksheet (attached)

Before the Activity

Print a copy of the Mohs Scale worksheet for each student. Then read *Minerals* out loud as a class.

Activity

Minerals are substances that occur naturally on Earth. There are thousands of different kinds of minerals. Each kind has its own properties. These properties include color, hardness, and cleavage (which is what happens when a mineral breaks). Today, students will take a closer look at hardness.

Pass out the Mohs Scale worksheets. Then have students turn to page 9 of the book. The graph on this page shows the Mohs scale, which scientists use to measure the hardness of minerals. Harder minerals have higher numbers. Explain that the worksheet gives the names of eight minerals, as well as their numbers on the Mohs scale. Students should use the graph in the book to determine which mineral goes in which blank. They can compare the Mohs scale numbers of the minerals on the worksheet with the minerals listed on the graph.

Evaluation

Use the attached answer key to give students 1 point for each correct answer, for up to 8 points total.

Standards

This lesson plan may be used to address the Common Core State Standards' reading standards for informational texts, grades 3 and 4 (RI 3.7, 4.7).

Mohs Scale

The box below shows the Mohs scale numbers for eight minerals. Use the graph on page 9 to fill in the blanks in the sentences below. Each mineral from the box will be used only once.

Mineral	Hardness
Amethyst	7
Bornite	3
Calcium	2
Iron	4
Jade	6–7
Rinkite	5
Sapphire	9
Turquoise	5–6

1. _____ is five numbers softer than diamond.
2. _____ is one number harder than talc.
3. _____ is harder than gypsum but softer than fluorite.
4. _____ is softer than apatite but harder than calcite.
5. _____ is as hard as quartz.
6. _____ is as hard as corundum.
7. _____ is usually between orthoclase and quartz.
8. _____ is usually between apatite and orthoclase.

Mohs Scale Answer Key

The box below shows the Mohs scale numbers for eight minerals. Use the graph on page 9 to fill in the blanks in the sentences below. Each mineral from the box will be used only once.

Mineral	Hardness
Amethyst	7
Bornite	3
Calcium	2
Iron	4
Jade	6–7
Rinkite	5
Sapphire	9
Turquoise	5–6

1. **Rinkite** is five numbers softer than diamond.
2. **Calcium** is one number harder than talc.
3. **Bornite** is harder than gypsum but softer than fluorite.
4. **Iron** is softer than apatite but harder than calcite.
5. **Amethyst** is as hard as quartz.
6. **Sapphire** is as hard as corundum.
7. **Jade** is usually between orthoclase and quartz.
8. **Turquoise** is usually between apatite and orthoclase.