

# Crystals and Gems

## Summary

Rocks are made of minerals. Crystals and gems are minerals. A crystal is a group of atoms clustered together to form a pattern. Gems are crystals that formed under the ground long ago. Most gems have to be polished and cut so the crystal patterns can be seen. Minerals can be hard or soft. Chalk is a soft mineral. The hardest mineral is a diamond. Diamonds and rubies are examples of precious gems. They are hard to find. Gems that are easier to find are semiprecious. Some gems are not made of crystals. Amber is made of resin from ancient trees.

## Before Reading

### Take a Picture Walk

Build background for the book by taking a picture walk with children. Discuss the pictures and preview the key vocabulary and concepts. Invite children to share what they know about crystals and gems.

### Vocabulary

boulder, erosion, minerals, natural resource, pollution, recycle, sand, weathering, atoms, crystal, facets, opaque, precious, semiprecious, synthetic, transparent

### Comprehension Skill: Picture Clues

*Say:* Pictures can help us learn more about things. As you read, look at the pictures in this book to see how people use different crystals. Then have children use the picture clues on page 21 to find their birthstone.

## During Reading

### Think Critically

Have children answer the *What Did You Learn?* questions located on the inside back cover of their book.

1. What is the difference between transparent and opaque gems?

You can see through transparent gems.  
You cannot see through opaque gems.

2. Name two gemstones that come from ancient plants. Amber and jet comes from ancient plants.

## After Reading

### Writing in Science

In this book you read about diamonds. Write to explain how diamonds are found and turned into gemstones. Use words from the book as you write.

### Organize Information

*Graphic Organizer:* Picture Clues Have children complete the Picture Clues chart on the BLM for this Leveled Reader to tell what the picture on page 14 shows about the way weathering works on rocks.

### Related Resources

Vocabulary Cards	Equipment Kit
Every Student Learns	Activity Flipchart
Quick Study	LabZone
Big Book of Science Songs and CD	
Graphic Organizer Transparencies	
Quick Activity Transparency	
www.pearsonsuccessnet.com	

**Write your answers.**

1. What is the difference between a precious and a semiprecious gem?  
**A precious gem is harder to find and costs more than a semiprecious gem.**
2. What did the scientist Frederick Mohs do?  
**Frederick Mohs invented a scale to tell how hard different minerals are.**
3. Which mineral is the easiest to find?  
**Quartz is the easiest mineral to find.**
4. Which mineral is harder, gypsum or quartz?  
Use the Mohs Hardness Scale on pages 8 and 9 to answer this question.

**Possible answer:**

## Picture Clues

