

Directed Reading A

Section: What Is a Mineral?

1. What is a mineral?

MINERAL STRUCTURE

- _____ 2. Which of the following is NOT a characteristic of a mineral?
- a. It is a solid.
 - b. It has a crystalline structure.
 - c. It is nonliving material.
 - d. It is formed in a laboratory.

Match the correct definition with the correct term. Write the letter in the space provided.

- | | |
|--|-------------------|
| _____ 3. the smallest part of an element that has all the properties of that element | a. crystal |
| _____ 4. a substance that cannot be broken down into a simpler substance by chemical means | b. atom |
| _____ 5. a substance made of two or more elements that have been chemically bonded | c. element |
| _____ 6. a solid whose atoms, ions, or molecules are arranged in a definite pattern | d. compound |
| _____ 7. a mineral that is composed of only one element | e. native element |

TWO GROUPS OF MINERALS

8. What two groups are minerals divided into based on their chemical composition?

9. Minerals that contain silicon and oxygen are called

Directed Reading A *continued*

10. Which silicate minerals are the main component of most rocks on Earth's surface?

11. Which silicate minerals separate easily into sheets when they break?

12. What silicate mineral is the basic building block of many rocks?

Match the correct description with the correct term. Write the letter in the space provided.

_____ **13.** minerals that contain sulfur and oxygen

a. native elements

_____ **14.** copper, gold, and silver

b. carbonates

_____ **15.** minerals that contain one or more elements like lead or iron combined with sulfur

c. halides

_____ **16.** minerals that contain carbon and oxygen

d. oxides

_____ **17.** minerals that form when an element such as aluminum or iron combine with oxygen

e. sulfates

_____ **18.** minerals that are compounds containing fluorine, chlorine, iodine, or bromine

f. sulfides

Skills Worksheet

Section Review

What Is a Mineral?

USING KEY TERMS

1. In your own words, write a definition for each of the following terms:
element, compound, and mineral.

UNDERSTANDING KEY IDEAS

- _____ 2. Which of the following minerals is a nonsilicate mineral?
- a. mica
 - b. quartz
 - c. gypsum
 - d. feldspar

3. What is a crystal, and what determines a crystal's shape?

4. Describe the two major groups of minerals.

MATH SKILLS

5. If there are approximately 3,600 known minerals and about 20 of the minerals are native elements, what percentage of all minerals are native elements?
Show your work below.

Section Review *continued*

CRITICAL THINKING

6. Applying Concepts Explain why each of the following is not considered a mineral: water, oxygen, honey, and teeth.

7. Applying Concepts Explain why scientists consider ice to be a mineral.

8. Making Comparisons In what ways are sulfate and sulfide minerals the same. In what ways are they different?
