

Chapter 2 Minerals

Section 2.3 Properties of Minerals

This section discusses the properties used to identify minerals, including color, luster, crystal form, streak, hardness, density, and some distinctive properties.

Reading Strategy

Outlining As you read, fill in the outline. Use the headings as the main topics and add supporting details. For more information on this Reading Strategy, see the **Reading and Study Skills** in the **Skills and Reference Handbook** at the end of your textbook.

<p>I. Properties of Minerals</p> <p style="padding-left: 20px;">A. Color</p> <p style="padding-left: 40px;">1. _____ _____</p> <p style="padding-left: 40px;">2. _____ _____</p> <p style="padding-left: 20px;">B. Luster</p> <p style="padding-left: 40px;">1. _____ _____</p> <p style="padding-left: 40px;">2. _____ _____</p>

Color

1. Is the following sentence true or false? Because color is unique to all minerals, it is always useful in mineral identification.
- _____

Streak

2. The color of a mineral in its _____ form is called streak.

Luster

3. What is a mineral's luster? _____
- _____
4. Circle the letter of the type of luster some minerals have that makes them appear to be metals.
- | | |
|-------------|-----------------|
| a. earthy | b. sub-metallic |
| c. metallic | d. glassy |

Crystal Form

5. Is the following sentence true or false? The visible expression of a mineral's internal arrangement of atoms is its crystal form.
- _____

Chapter 2 Minerals

Hardness

6. Circle the letter of the hardest mineral shown on the graph.

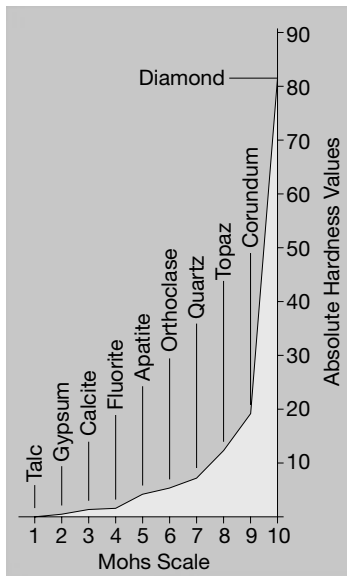
- a. talc
- b. diamond
- c. topaz
- d. quartz

7. Circle the letter of the hardness number of corundum on the Mohs scale shown on the graph.

- a. 7
- b. 9
- c. 10
- d. 20

8. Circle the letter of the mineral that is harder than apatite shown on the graph.

- a. talc
- b. calcite
- c. fluorite
- d. orthoclase



Cleavage

9. What is a mineral's cleavage? _____

Fracture

10. Minerals are said to _____ if they do not show cleavage when broken.

Density

11. What equation could you use to express the density of an object such as a mineral sample? _____

Distinctive Properties of Minerals

12. Circle the letter of the distinctive property you could use to distinguish graphite from talc.

- a. color
- b. feel
- c. double refraction
- d. smell

Chapter 2 Minerals

WordWise

Solve the clues to determine which vocabulary terms from Chapter 2 are hidden in the puzzle. Then find and circle the terms in the puzzle. The terms may occur vertically, horizontally, or diagonally.

V E M A S S N U M B E R U N
 C D Y S X T H E I M G N G I
 W M E J H S P A Q X Z I O S
 M I N E R A L S R E U Y J O
 S C E H V T H Q N D A E I T
 A X R Y P O B D T C N S L O
 L I G R A M C U G P L E S P
 B A Y C S I L I C A T E S E
 T K L F U C L E A V A G E S
 M I E G X N T E K P H T E P
 A D V U L U S T E R Z P J B
 C H E L E M E N T D S S T X
 E X L M N B A U S S V H A L
 Z P S B C E W R T N O H I A
 R G C D Q R J H S M F L K P

Clues

How light is reflected from the surface of a mineral

Number of protons in an atom of an element

Atoms of the same element having different numbers of neutrons

Measure of how a mineral resists scratching

Substance that cannot be broken down into simpler substances

Examples include quartz, copper, fluorite, and talc

Regions where electrons are located

Most common groups of minerals on Earth

Tendency of a mineral to break along flat, even surfaces

Sum of protons and neutrons in the nucleus of an atom

Hidden Words
