



ROCKS & MINERALS

EDITABLE student notebook pages - digital links included for students to complete guided notes on Google Drive

Question: How are minerals identified?

PROPERTIES OF MINERALS

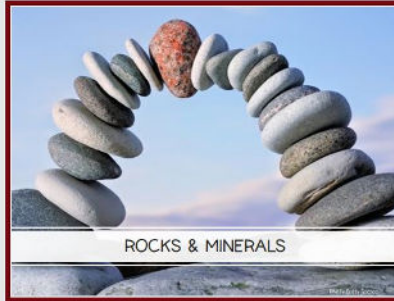
mineral - naturally occurring, inorganic solid that has a crystal structure and a definite chemical composition, must have the following **FIVE** characteristics:

1. Must be **formed by processes that occur in the natural world**
2. Must be **inorganic**, meaning that it cannot come from materials that were once part of a living thing
3. A **solid** - with definite shape and definite volume
4. Particles that make it up line up in a **repeating pattern** which form a **crystal**
5. Has a **definite chemical composition** or range of compositions

Each mineral has certain characteristics:

- **Color** - used to identify a few characteristic colorings
- **Streak** - color of a mineral's powder
- **Luster** - how light is reflected from the surface
- **Density** - each mineral has a characteristic density
- **Hardness** - using the Mohs hardness scale from softest to hardest
- **Crystal system** - crystals grow in different patterns - these structures are categorized based on the number of faces and angles
- **Cleavage** - if a mineral breaks easily along flat, smooth surfaces
- **Fracture** - when a mineral breaks in an irregular way

Special properties can also be used to identify minerals under an ultraviolet light.



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Properties of Minerals

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Each mineral has certain characteristics that help identify it:

- **Color** - used to identify a few mineral characteristic colorings
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Mineral characteristics cont.

Some minerals form when pure metals that crystallize from hot water solutions underground often form veins, or a narrow channel or slab mineral that is different from the surrounding rock

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Minerals are the source of a variety of materials used to make many products.

- **Gemstone** - hard, colorful mineral that has a brilliant or glassy luster; once cut and polished it is called a gem
- **Metals** - minerals are the source of metals such as aluminum, iron, copper or silver
- **Ore** - a rock that contains a metal or other useful mineral that can be mined and sold at profit

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Geologists look at the mineral composition, color and texture of a rock, which can contain a mixture of minerals and other materials or only a single mineral.

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Color - provides clues to the rock's mineral composition

- **Granite** - light colored rock having high silica content
- **Basalt** - dark colored rock that is low in silica

Texture - the look and feel of the rock's surface which is made up of particles of minerals or other fine rocks called grains

- Grain size
- Grain shape
- Grain pattern

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Sedimentary Rock

Rock material that forms where rocks are broken down into smaller pieces or dissolved in water as rocks erode or the remains of plants and animals are pressed and cemented together

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Metamorphic Rock

Forms when existing rock is changed by heat, pressure or chemical reactions

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EDITABLE PowerPoint presentations include high-resolution graphics and feature all topics and vocabulary covered in the notes

Name _____ Date _____

CHAPTER TEST ROCKS

Multiple Choice

Choose the answer that best completes each statement.

- ____ 1. A mineral is inorganic, which means that it is
a. compounds
b. materials made by humans
c. parts of living things
d. no materials that were once part of living things

- ____ 2. The rocks are
a. crystals
b. elements
c. compounds
d. rocks

- ____ 3. _____ is the
a. Talc
b. Quartz
c. Diamond
d. Gold

- ____ 4. Most rocks are
a. silicates
b. fractures
c. crystals
d. luster

- ____ 5. The softest
a. quartz
b. talc
c. apatite
d. gypsum

- ____ 6. Igneous rocks are
a. smooth
b. multicolored
c. coarse
d. made of

- ____ 14. A series of processes on Earth's surface and in the crust and mantle that slowly changes rocks from one kind to another is called

- a. erosion
b. the rock cycle
c. crystallization
d. evaporation

- ____ 15. Silky, metallic and pearly are terms used to describe _____

- a. streak
b. color
c. luster
d. density

Complete each statement

16. A mineral with a hardness of 6 is harder than 6.

17. Igneous rocks that are

18. High pressure can change

19. Dissolved materials are carried away by a process called _____

20. The carrying away of materials is an important process called _____

21. Small, solid pieces of _____

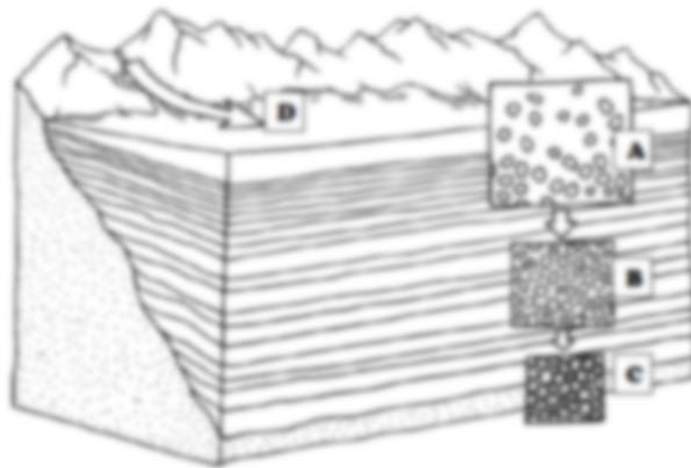
22. _____

23. A rounded, hollow rock is called _____

EDITABLE Chapter test includes multiple choice, fill in the blank, interpreting diagrams, & short Answers questions

Interpreting Diagrams

Use the diagrams to answer each question.



24. Name the process and explain what is occurring at D.

25. Identify each process that is occurring at A, B and C.

26. What is needed for process A to end and process B to begin?

Answer key included – Images are blurred for copyright reasons



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