

### Earth Science Unit 3: Minerals and Rocks Review

**Vocabulary**

Fill in each blank with the term that best completes the following sentences.

1. The \_\_\_\_\_ is a series of geologic processes in which rock can form, change from one type to another, be destroyed, and form again.
2. Changes in temperature or pressure, or chemical processes, can transform an existing rock into a \_\_\_\_\_ rock.
3. A \_\_\_\_\_ is a naturally occurring, solid combination of one or more minerals or organic matter.
4. The rising of regions of Earth’s crust to higher elevations is called \_\_\_\_\_.
5. \_\_\_\_\_ is a physical property used to describe how the surface of a mineral reflects light.

**Key Concepts**

Read each question below, and circle the best answer.

6. The table below lists five classes of nonsilicate minerals.

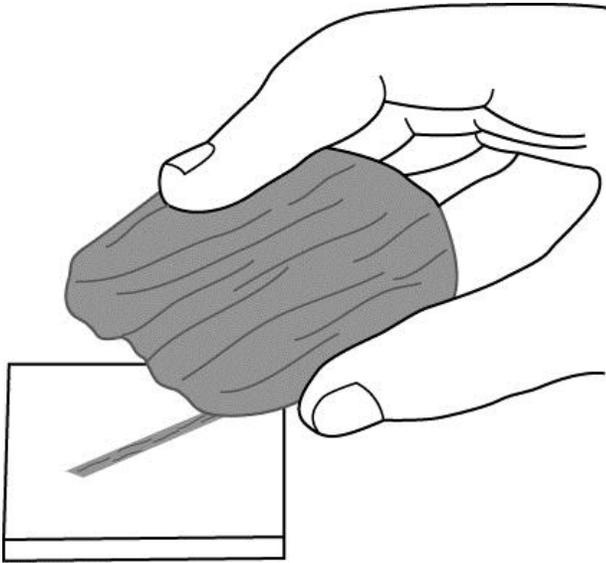
Class	Description	Example
Carbonates	contain carbon and oxygen compounds	calcite
Halides	contain ions of chlorine, fluorine, iodine, and bromine	halite
Native elements	contain only one type of atom	gold
Oxides	contain oxygen compounds	hematite
Sulfides	contain sulfur compounds	pyrite

There are actually six classes of nonsilicate minerals. Which class is missing from this chart?

- A. feldspars            C. silicates  
 B. micas                D. sulfates

7. Granite can form when magma cools within Earth. Basalt can form when lava cools on Earth's surface. What do granite and basalt have in common?
- A. They are igneous.
  - B. They are old.
  - C. They are fossils.
  - D. They are intrusive

8. A student is testing a mineral in science class.

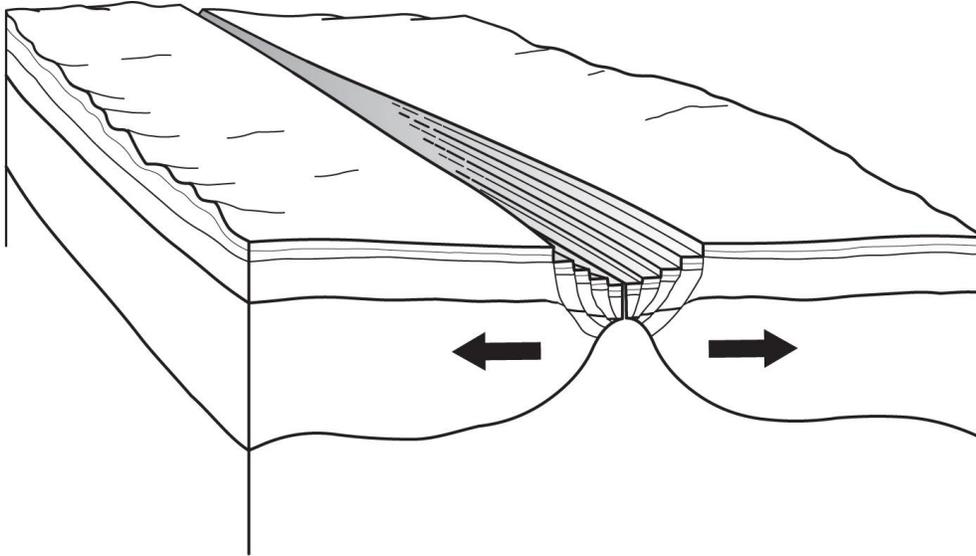


What property of the mineral is the student testing?

- A. cleavage
- B. color
- C. luster
- D. streak

9. Which one of the following statements about elements, atoms, and compounds is not true?
- A. Elements consist of one type of atom and can combine to form compounds.
  - B. Compounds are smaller than atoms.
  - C. Elements and compounds form the basis of all materials on Earth.
  - D. Atoms cannot be broken down into smaller substances.
10. Which of the following best describes how sedimentary rock forms?
- A. molten rock beneath the surface of Earth cools and becomes solid
  - B. layers of sediment become compressed over time to form rock
  - C. chemical processes or changes in pressure or temperature change a rock
  - D. molten rock reaches the surface and cools to become solid rock

11. Study the diagram below.



What process is occurring in this image?

- A. two tectonic plates are moving toward each other, creating a syncline
- B. two tectonic plates are pulling away from each other, creating a rift zone
- C. two tectonic plates are moving toward each other, creating an anticline
- D. two tectonic plates are moving away from each other, creating a new mountain range.

12. Over time, repeated temperature changes can cause a rock to break down into smaller pieces. What is this an example of?

- A. subsidence
- B. weathering
- C. deposition
- D. erosion

**Critical Thinking**

**Answer the following questions in the space provided.**

13. You are standing by a cliff far away from the ocean. You see a sedimentary layer with shells in it. You are told the shells are from oceanic organisms. How do you think this layer formed?

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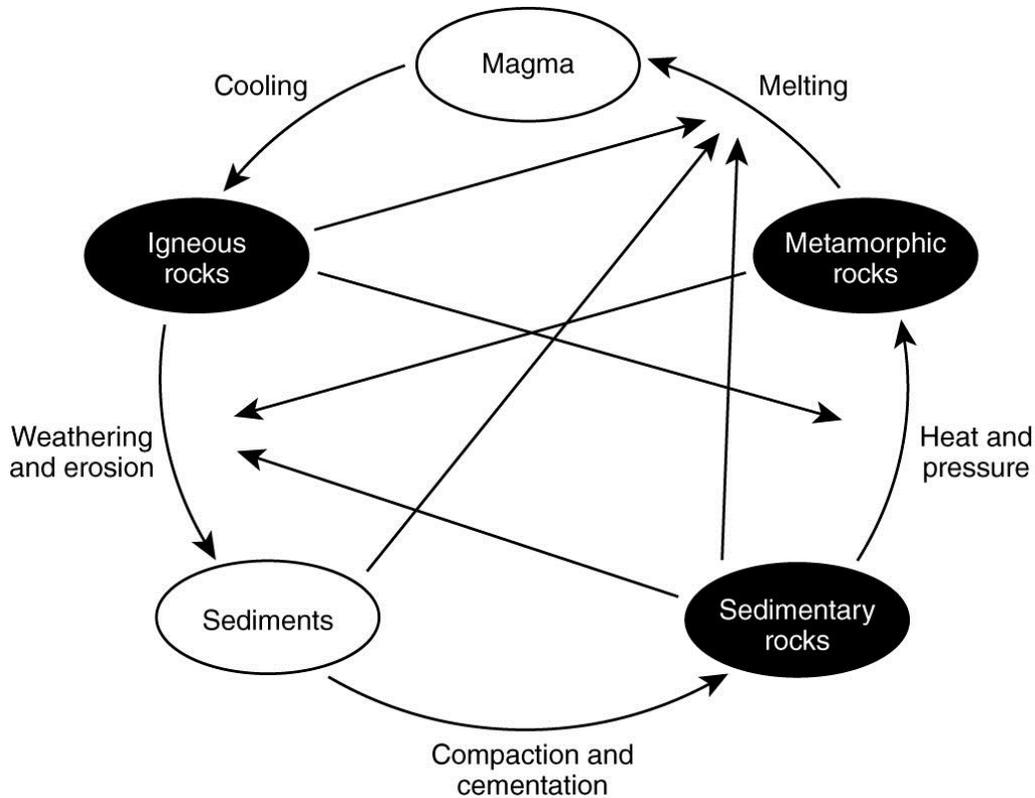
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14. The diagram below shows the rock cycle.



The rock cycle describes how rocks change. What conditions must be present for igneous or sedimentary rock to change into metamorphic rock? Name two ways that this could happen.

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15. Explain a way that a sedimentary rock could form, then over time break down into smaller pieces, and become a sedimentary rock again in another location.

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