

Chapter 22 Earth's Interior

## Section 22.3 Rocks and the Rock Cycle

(pages 670–675)

*This section describes how rocks are classified. It also explains how rocks change form in the rock cycle.*

### Reading Strategy (page 670)

**Comparing and Contrasting** After you read, compare groups of rocks by completing the table. 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.

Groups of Rocks		
Rock Group	Formed by	Example
Igneous		
		Sandstone
	Heat and pressure	

### Classifying Rocks (page 670)

- Circle the letters of the major groups into which rocks are classified.
  - sedimentary
  - igneous
  - calcite
  - metamorphic
- Scientists divide rocks into groups based on \_\_\_\_\_.

### Igneous Rock (page 671)

- A rock that forms from magma is called a(n) \_\_\_\_\_.
- A mixture of molten rock and gases that forms underground is called \_\_\_\_\_.
- What is lava? \_\_\_\_\_
- Is the following sentence true or false? Igneous rock is formed when molten material cools and solidifies either inside Earth or at the surface. \_\_\_\_\_

*Match each type of igneous rock to its characteristics. Each type of rock will have more than one characteristic.*

Igneous Rock	Characteristic
_____ 7. intrusive rock	a. Forms underground
_____ 8. extrusive rock	b. Forms at Earth's surface
	c. Has a fine-grained texture
	d. Has a coarse-grained texture
	e. Cools quickly
	f. Cools slowly

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**Sedimentary Rock (pages 672–673)**

9. The process of \_\_\_\_\_ breaks down rock at Earth's surface.
10. When sediment is squeezed and cemented together, \_\_\_\_\_ rocks are formed.
11. Circle the groups into which geologists classify sedimentary rocks.
  - a. clastic rocks
  - b. foliated rocks
  - c. organic rocks
  - d. chemical rocks
12. Sedimentary rocks formed from broken fragments of other rocks are called \_\_\_\_\_ rocks.
13. Is the following sentence true or false? Clastic rocks are classified mainly based on the number of fragments they have.  
\_\_\_\_\_
14. Minerals that precipitate out of solution form \_\_\_\_\_.

**Metamorphic Rock (page 674)**

15. Circle the ways a rock can be transformed into a metamorphic rock.
  - a. by heat
  - b. by precipitation
  - c. by pressure
  - d. by chemical reaction
16. Where do most metamorphic rocks form? \_\_\_\_\_  
\_\_\_\_\_
17. Is the following sentence true or false? Metamorphism can change the mineral content and texture of a rock. \_\_\_\_\_
18. Metamorphic rocks with crystals arranged in parallel bands or layers are called \_\_\_\_\_ rocks.

**The Rock Cycle (pages 674-675)**

19. Circle the letters of the sentences that are true about the rock cycle.
  - a. A metamorphic rock that melts and cools to form a new rock becomes an igneous rock.
  - b. Forces within Earth and at the surface cause rocks to change form in the rock cycle.
  - c. In the rock cycle, rocks may wear away, undergo metamorphism, or melt and form new igneous rock.
  - d. The rock cycle is a series of processes in which rocks change from one type to another continuously.