Name _____ Date _____ Class _____



# Classifying Rocks

*This section explains how geologists classify rocks.*

## Use Target Reading Skills

*As you preview the headings in this section, complete the graphic organizer with questions in the left column. Then as you read, fill in the answers in the second column.*

| Question | Answer |
|---|---|
| What does a rock's color tell about the rock? | |
| | |

## Introduction

1. Earth's crust is made of _____.
2. Circle the letter of each characteristic that geologists use to classify rocks.
   - **a.** texture
   - **b.** mineral composition
   - **c.** hardness
   - **d.** color

## Mineral Composition and Color

3. What are rocks made of? _____

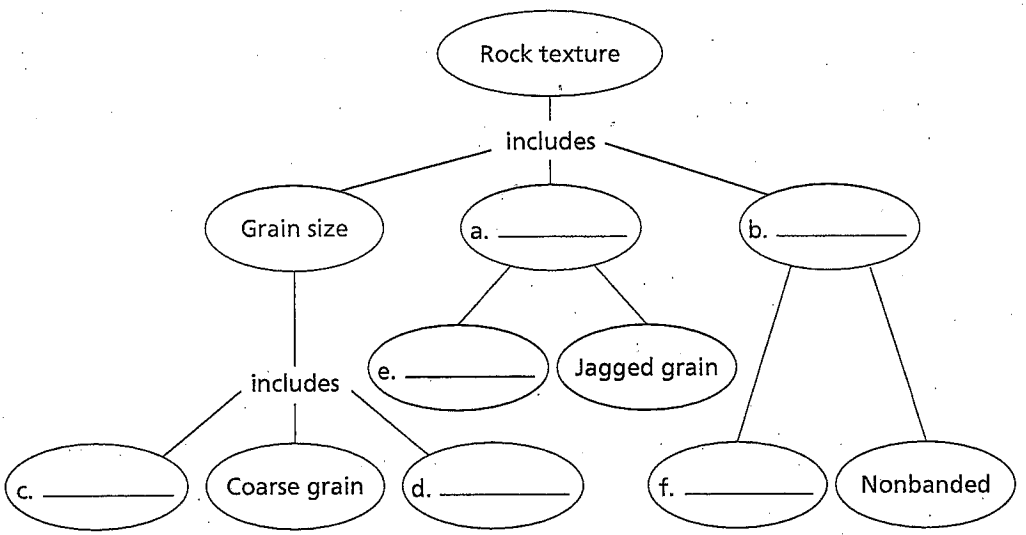
   _____

   _____
4. Circle the letter of each mineral that is found in granite.
   - **a.** quartz
   - **b.** feldspar
   - **c.** mica
   - **d.** hornblende

## Classifying Rocks *(continued)*

### Texture

5. Is the following sentence true or false? Most rocks can be identified by color alone. _____
6. The look and feel of a rock's surface is its _____.
7. Particles of minerals and other rocks that make up a rock are called _____.
8. Is the following sentence true or false? A rock's grains give the rock its texture. _____
9. Circle the letter of each sentence that is true about the grain size in rock.
   - **a.** An example of a coarse-grained rock is diorite.
   - **b.** An example of a fine-grained rock is slate.
   - **c.** Grains in fine-grained rock are easy to see.
   - **d.** Grains in coarse-grained rock are microscopic.
10. Complete the concept map showing the characteristics of rock texture.




g. Is the following sentence true or false? *Coarse grain* is a term that describes a rock's grain pattern. _____

11. Circle the letter of the choice that determines the grain shape of a rock such as granite.
    - **a.** Shape of the rock's crystals
    - **b.** Size of the rock's crystals
    - **c.** Shape of fragments of other rock
    - **d.** Coarseness of the rock's grains

12. Circle the letter of the choice that determines the grain shape of a rock such as conglomerate.
    - **a.** Fineness of the rock's grains
    - **b.** Size of the rock's grains
    - **c.** Shape of the rock's crystals
    - **d.** Shape of fragments of other rock

13. Circle the letter of the description of the grain pattern of gneiss.
    - **a.** It looks like different colors in bands.
    - **b.** It looks like a stack of pancakes.
    - **c.** It looks like waves.
    - **d.** It looks like rows of squares and rectangles.

14. Circle the letter of the sentence that is true about rocks with no visible grain.
    - **a.** Some rocks without crystal grains cooled very quickly.
    - **b.** Some rocks have no visible grain even under a microscope.
    - **c.** Rocks without crystal grains look rough and coarse.
    - **d.** An example of a rock with a glassy texture is slate.

## How Rocks Form

15. How do geologists classify a rock? _____

_____

_____

16. List the three major groups of rock.
    - **a.** _____
    - **b.** _____
    - **c.** _____

## Classifying Rocks *(continued)*

17. Complete the compare/contrast table to show the similarities and differences among the types of rocks and how they form.

| How Rocks Form | |
|---|---|
| **Type of Rock** | **How It Forms** |
| a. | Molten rock cools. |
| b. | Particles are pressed and cemented. |
| c. | Existing rock is changed. |

**d.** What do the three major types of rocks have in common? _____

_____

**e.** How are they different? _____

_____

18. The type of rock that forms from magma or lava is _____ rock.

19. The type of rock that forms in layers is _____ rock.

20. Is the following sentence true or false? Most metamorphic rocks form close to the surface. _____

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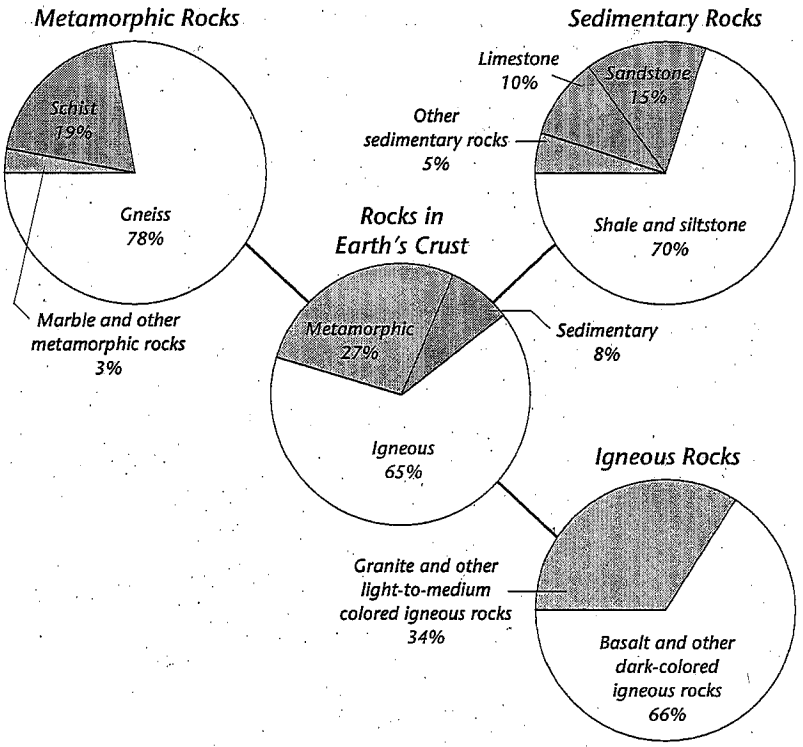
**Rocks** ▪ *Enrich*

# A Crust Full of Rocks

The three major groups of rocks make up Earth's crust. But these groups of rocks are not found in equal amounts. The circle graph in the center below shows each group's percentage of the crust. The three circle graphs that surround the central one show the percentage of rocks that make up each group. You'll learn about many of these rocks as you read the rest of the chapter. Study the circle graphs below, and then answer the questions that follow.




*Answer the following questions on a separate sheet of paper.*

1. Which rock group makes up most of Earth's crust, and what is its percentage?
2. How do rocks in that rock group form?
3. What kind of rocks make up most of the igneous rocks? From your knowledge of Earth's crust, where would you most likely find such rocks?
4. Which rock group makes up the least part of Earth's crust, and what is its percentage?
5. How do rocks in that rock group form?
6. What kind of rock makes up the greatest part of metamorphic rocks, and what is its percentage?
7. How do metamorphic rocks form?