

## Boy Scout Geology Merit Badge Worksheet

1. Define Geology. Discuss how geologists learn about rock formation. In geology, explain why the study of the present is important to understanding the past. Visit the following displays to help develop your answer: Rock and Minerals, Fossils, Volcanoes, and Mountains.

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2. Pick three resources that can be extracted or mined from the Earth for commercial use. Discuss with your counselor how each product is discovered and processed.

A. \_\_\_\_\_

B. \_\_\_\_\_

C. \_\_\_\_\_

3. Review a geologic map of your area with your counselor and discuss the different rock types and estimated ages of rocks represented. Determine whether the rocks are horizontal, folded, or faulted, and explain how you arrived at your conclusion.

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4. Learn about the career opportunities available in geology. Pick one that interests you and explain how to prepare for such a career. Discuss what courses might be useful for such a career. Visit the Kids Area Career station for help with this requirement.

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5. Define a rock. Discuss the three classes of rocks including their origins and characteristics. Visit the Rock and Minerals display for help with this requirement.

A. \_\_\_\_\_

\_\_\_\_\_

B. \_\_\_\_\_

\_\_\_\_\_

C. \_\_\_\_\_

\_\_\_\_\_

6. List three of the most common road building materials used in your area. Explain how each material is produced and how each is used in road building.

A. \_\_\_\_\_

\_\_\_\_\_

B. \_\_\_\_\_

\_\_\_\_\_

C. \_\_\_\_\_

\_\_\_\_\_

7. Define a mineral. Discuss the origin of minerals and their chemical composition and identification properties, including:

- A. Hardness
- B. Specific gravity
- C. Color
- D. Streak
- E. Cleavage
- F. Luster
- G. Crystal form
- H. Origins of minerals
- I. Chemical composition of minerals
- J. What is a mineral?

8. Identify 15 different rocks and minerals. List the name of each specimen, and tell whether it's a rock or mineral, and give the name of its class (if it's a rock) or list its identifying physical properties (if it is a mineral).

A. \_\_\_\_\_

B. \_\_\_\_\_

C. \_\_\_\_\_

D. \_\_\_\_\_

E. \_\_\_\_\_

F. \_\_\_\_\_

G. \_\_\_\_\_

H. \_\_\_\_\_

\_\_\_\_\_

I. \_\_\_\_\_

J. \_\_\_\_\_

K. \_\_\_\_\_

L. \_\_\_\_\_

M. \_\_\_\_\_

N. \_\_\_\_\_

O. \_\_\_\_\_

9. With your merit badge counselor, choose two examples of rocks and two examples of minerals. Discuss the mining of these materials and describe how each is used by society.

A. \_\_\_\_\_

B. \_\_\_\_\_

C. \_\_\_\_\_

D. \_\_\_\_\_