

## **Exploration Student Worksheet: Mechanical and Chemical Weathering**

### **Overview**

The breaking down and alteration of pre-existing rocks on or near Earth's surface is called weathering. In this Exploration, you will investigate the types of weathering and identify the associated agent.

### **Questions**

1. What is weathering?

2. Compare and contrast mechanical and chemical weathering.

3. Describe the role of living things in weathering of rocks.

4. Classify the following types of weathering as either mechanical or chemical weathering. Justify each classification.

- a. Oxidation
- b. Exfoliation
- c. Hydrolysis
- d. Frost action

5. Identify the agents associated with the following types of weathering.

- a. Unloading
- b. Dissolution
- c. Frost Action
- d. Carbonation

6. Change in temperature causes weathering. Justify this statement.

Name \_\_\_\_\_ Date \_\_\_\_\_

7. Describe the process of exfoliation.

8. Explain how limestone weathers as a result of carbonation.

9. Use a chemical reaction to explain the formation of kaolin from orthoclase.

10. Write a chemical reaction to describe the formation of hematite from pyrite. What type of reaction is this?