

Name \_\_\_\_\_

### What is weathering?

**Weathering** is the name for all the ways a rock may be broken down. There are two kinds of weathering: physical and chemical. In **physical weathering** the physical properties of a rock change, but it remains the same kind of rock. Physical weathering occurs in areas where temperatures change, causing rocks to expand, shrink, and break off. Plants and animals also cause physical weathering. Plant roots break up rocks as they grow, and rodents loosen rocks as they dig in the ground.

In **chemical weathering** the physical properties of a rock change, and it no longer remains the same kind of rock. Chemical weathering dissolves rocks by chemical changes. Water dissolves rock salt. Water also reacts with some minerals causing them to rot into a soft clay. Rainwater can cause chemical weathering. Carbon dioxide in rain makes a weak acid that wears away limestone in caves. Chemical and physical weathering often act together.

Climate, surface area, & rock composition also affect the rate of weathering.

In the paragraphs above: Underline the things that can cause physical weathering. Circle the things that can cause chemical weathering.

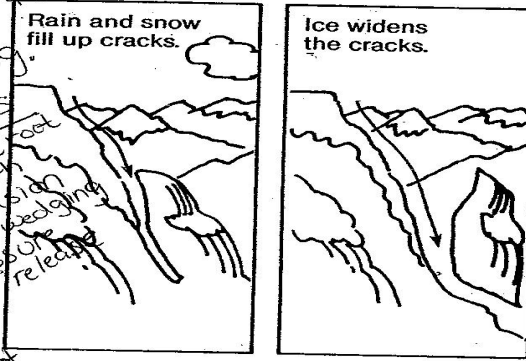
B. Read the examples of physical and chemical weathering. Write which type of weathering is shown in each statement.

1. A rock splits apart from frost. physical
2. Water and feldspar (a mineral) form clay. chemical
3. A tree breaks a boulder as its roots grow. physical
4. Rainwater eats through limestone. chemical
5. A gopher breaks up a rock as it burrows underground. physical

Soil is formed by the weathering of rocks. Look at a cupful of soil under a magnifying glass. How many different things do you see in the soil?

physical and mechanical weathering mean the same thing.  
4 types  
① plant root growth  
② abrasion  
③ ice wedging  
④ pressure release

### Physical weathering of rocks



In cold regions, rain and snow fill up the cracks in rocks and freeze. Ice widens the cracks, breaking the rocks.  
In hot regions, such as deserts, the sun heats the rocks during the day. At night the rocks cool and shrink, causing the rocks to split.

Acid rain & polluted air speed up weathering.