

5-1 What is mechanical weathering?

Lesson Review

Complete each statement with a term from the list. Write your answers in the spaces provided.

TERMS

- contract   expand   mechanical weathering   chemical weathering  
 pressure   ice wedging   root action   weathering

- The process by which rocks on the earth's crust are broken down is called \_\_\_\_\_ or become \_\_\_\_\_.
- Only the sizes and shapes of rocks change during \_\_\_\_\_.
- The makeup of rocks is changed during \_\_\_\_\_.
- During the day, heat causes the outside of rocks to \_\_\_\_\_ or become larger.
- At night, the outside of rocks cool and \_\_\_\_\_.
- When water inside rocks freezes and melts over and over again, \_\_\_\_\_ can occur.
- The roots of trees can exert \_\_\_\_\_ on a sidewalk and cause it to crack.
- If a tree causes a sidewalk to crack, mechanical weathering called \_\_\_\_\_ has taken place.

Skill Challenge

Skills: analyzing, classifying

Decide which kind of mechanical weathering is described by each statement. In the space provided, write "T" for temperature change, "I" for ice wedging, and "R" for root action.

- After a harsh winter, a street has many potholes. \_\_\_\_\_
- Cracks appear in a sidewalk near a tree. \_\_\_\_\_
- A stone wall begins to crumble after several winters of ice forming in its cracks. \_\_\_\_\_
- The outside of a rock peels off from repeated heating and cooling. \_\_\_\_\_
- Cracks develop between the bricks in the wall of a flower bed. \_\_\_\_\_

5-2 What is chemical weathering?

Lesson Review

Match each term in Column B with its description in Column A. Write the correct letter in the space provided.

Column A

- change that produces new substances \_\_\_\_\_
- caused by chemical changes in rocks \_\_\_\_\_
- reaction between oxygen and another substance \_\_\_\_\_
- iron oxide \_\_\_\_\_
- mineral containing iron \_\_\_\_\_
- chemical reaction between water and another substance \_\_\_\_\_
- a gas in the air \_\_\_\_\_
- water + carbon dioxide \_\_\_\_\_
- rock made of calcite \_\_\_\_\_
- acid-producing plant \_\_\_\_\_

Column B

- moss
- oxidation
- carbonic acid
- chemical change
- pyrite
- carbon dioxide
- chemical weathering
- rust
- hydrolysis
- limestone

Skill Challenge

Skills: analyzing, identifying

The equations show chemical reactions. The substances that combine are shown on the left of the arrow. The new substance that is produced is shown on the right of the arrow. In the space provided, identify each chemical reaction as an example of hydrolysis, carbonation, or oxidation.

- oxygen + a mineral → a new compound \_\_\_\_\_
- water + feldspar → clay \_\_\_\_\_
- water + sulfuric acid → acid rain \_\_\_\_\_
- oxygen + iron → iron oxide \_\_\_\_\_
- carbonic acid + calcite → limestone \_\_\_\_\_
- water + nitrogen compounds → acid rain \_\_\_\_\_
- water + carbonic acid → acid rain \_\_\_\_\_

# Weathering Vocabulary

Name \_\_\_\_\_ Class Period \_\_\_\_\_

Use the glossary (pg. 407) of the Earth Science book to define/describe the following terms:

- Weathering: \_\_\_\_\_  
\_\_\_\_\_
- Chemical Weathering: \_\_\_\_\_  
\_\_\_\_\_
  - Carbonation: \_\_\_\_\_  
\_\_\_\_\_
  - Hydrolysis: \_\_\_\_\_  
\_\_\_\_\_
  - Oxidation: \_\_\_\_\_  
\_\_\_\_\_
- Mechanical Weathering: \_\_\_\_\_  
\_\_\_\_\_
  - Ice Wedging: \_\_\_\_\_  
\_\_\_\_\_
  - Root Action (not in glossary-use info on pg. 80): \_\_\_\_\_  
\_\_\_\_\_
  - Temperature Change (not in glossary-use info on pg. 80): \_\_\_\_\_  
\_\_\_\_\_