

## Section 1 Weathering

**A. Effects of weathering**—surface processes break down rock into small particles called \_\_\_\_\_.

**B.** \_\_\_\_\_—physical processes break rocks into fragments with the same chemical makeup and characteristics as the original rock.

**1.** Plant \_\_\_\_\_ and burrowing \_\_\_\_\_ cause mechanical weathering.

**2.** \_\_\_\_\_—water enters cracks and freezes and expands, breaking rocks apart.

**3.** Small pieces of rock have more \_\_\_\_\_ area than larger pieces of rock and weather faster.

**C.** \_\_\_\_\_—chemical reactions dissolve minerals in rocks or change them into different minerals.

**1.** Carbonic \_\_\_\_\_, formed from carbon dioxide gas and water, and plant acids can react with minerals to weather rock.

**2.** \_\_\_\_\_—chemical process that occurs when iron is exposed to oxygen in the air

**D. Effects of \_\_\_\_\_**—pattern of weather that occurs over time.

**1.** Mechanical weathering is more rapid than chemical weathering in \_\_\_\_\_ climates.

**2.** Chemical weathering is more rapid than mechanical weathering in \_\_\_\_\_, \_\_\_\_\_ climates.

**3.** Rock type can affect \_\_\_\_\_ of weathering.

## Section 2 The Nature of Soil

**A. Formation of soil**—can take \_\_\_\_\_ of years

**1.** \_\_\_\_\_ is a mixture of weathered rock, decayed organic matter, mineral fragments, water, and air.

**2.** Formation is influenced by \_\_\_\_\_, \_\_\_\_\_, types of \_\_\_\_\_, types of \_\_\_\_\_, and length of \_\_\_\_\_ that rock has been weathering.

**B.** \_\_\_\_\_ of soil—the ingredients that make up soil

**1.** Clay, silt, and sand are small particles of \_\_\_\_\_.

**2.** Decaying, dark-colored plant and animal material is called \_\_\_\_\_.

**3.** Small spaces between soil particles may be filled with \_\_\_\_\_ or \_\_\_\_\_.

**C. Soil Profile**—made up of different \_\_\_\_\_ of soil

**1. Horizon A**—\_\_\_\_\_ soil layer

**a.** May be covered with organic \_\_\_\_\_ that may turn into humus

**b.** Fertile layer with more \_\_\_\_\_ and less \_\_\_\_\_ and mineral particles than other soil horizons

**c.** Soil color can affect soil \_\_\_\_\_.

**d.** Soil \_\_\_\_\_ and \_\_\_\_\_ are important in determining seed germination.

**2. Horizon B**—\_\_\_\_\_ soil layer

**a.** Contains less \_\_\_\_\_ and is lighter in color than A horizon

**b.** Minerals travel from A horizon to B horizon in a process called \_\_\_\_\_.

**3. Horizon C**—\_\_\_\_\_ soil layer

**a.** Has very little \_\_\_\_\_ matter and is not strongly affected by leaching

**b.** Contains rock—the \_\_\_\_\_ material of the soil

**4.** Soil structure can be \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_ and \_\_\_\_\_.

**a.** \_\_\_\_\_ are clumps in the structure of soil.

**b.** Pore space affects a plant's ability to \_\_\_\_\_.