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| **SOIL**  **Objectives:**   * Describe how soil forms. * Recognize soil horizons in a soil profile. * Differentiate among the factors of soil formation. | NAME:\_\_\_\_\_\_\_\_\_  Date: \_\_\_\_\_\_ Block: \_\_\_\_\_\_ |
| **Key Terms**   * \_\_\_\_\_\_\_\_\_\_: the loose covering of weathered rock particles and decaying organic matter, called *\_\_\_\_\_\_\_*, overlying the bedrock on Earth’s surface, and serves as a medium for the growth of plants * \_\_\_\_\_\_\_\_\_\_\_\_\_\_: a soil whose parent material is the local bedrock * \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_: soil that develops from parent material that has been moved far from its original location, usually by agents of erosion * \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_: source rock for soil * \_\_\_\_\_\_\_\_\_\_\_\_\_\_: a vertical sequence of soil layers   + Mature soils have several distinct layers that take tens of thousands of years to develop; new soils (known as *\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*) do not have these layers * \_\_\_\_\_\_\_\_\_\_\_\_: a distinct layer within a soil profile   + Typically 4 major soil horizons in mature soils: O, A, B, and C   **How Soil Develops**   * Soils begin to develop when weathering breaks down \_\_\_\_\_\_\_ into smaller pieces, which continue to undergo weathering and break down further. * \_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ break down organic matter and add nutrients to the soil and create passages for air and water.   *What is helping to break up the soil in this image?*  **C07-03A-874636**  **Soil Layers and Soil Profiles**   * Through the processes of weathering, erosion, and deposition of parent material, soil will develop layers. * Residual soil has parent material that is the local bedrock; transported soil is transported from somewhere else usually through erosion. * The vertical sequence of layers make up a **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**.   *NOTE: the layer below the C-horizon is bedrock. It is sometimes referred to as the*  *D-horizon or the R-horizon. For the purposes of this class, know that below the*  *C-horizon is solid rock.*  https://msnucleus.org/membership/html/jh/biological/soil/images/soil01.gif  **Soil Profiles**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**: top layer of organic material; composed of humus and leaf litter  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**: layer of weathered rock combined with a rich concentration of dark brown organic material  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**: known as the *\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*, is a red or brown layer enriched over time by clay and minerals deposited by water flowing from above, or percolating upward from below  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**: little or no organic matter; often made of broken-down bedrock (known as *\_\_\_\_\_\_\_\_\_\_*)  **SOIL FORMATION**  Five factors:   * **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**   + Most significant factor because it impacts \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ * **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**   + Affects the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ that forms   + \_\_\_\_\_\_\_\_\_\_\_\_\_ slopes will have more vegetation * **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**   + Residual soils have \_\_\_\_\_\_\_\_\_\_\_\_ chemical compound as local bedrock; transported soils likely \_\_\_\_\_\_\_\_\_\_\_ * **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**   + \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ interact with the soil   + Different types of biological organisms can lead to different soil orders * **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**   + Determines the characteristics of a soil   + The longer weathering occurs, the greater the chance original minerals are changed or washed away   **SOIL TEXTURE**   * Simply put, it’s the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of soil particles and impacts a soil’s capacity to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and ability to \_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. * Soil texture triangle determines a soil’s texture.   Picture | **REVIEW QUESTIONS**  *(questions should line up with the location of the answer in your notes to the left)* |
| ***SUMMARY***: *Read through your notes and use the new vocabulary you learned to summarize the concepts you saw today in class.* ***HIGHLIGHT*** *EACH key vocabulary word when you use it.*  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | |