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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.* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |