

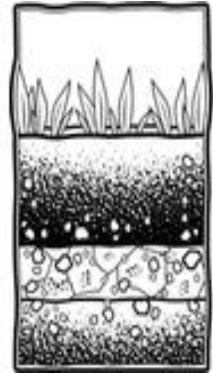
## Essential Question: Why is soil important to all living things?

### Activity 6: What are the Layers in Soil?

**Purpose:** To *identify* the four layers of soil, & the **physical properties** of soil layers.

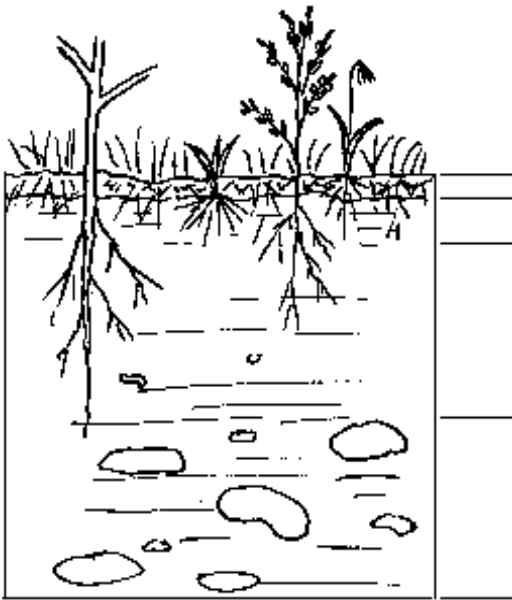
**Vocabulary:**

- **O-horizon** – (Litter Layer) Contains organic material including plants, animals, & fungi
- **A-horizon** – (Topsoil) - Layer rich in nutrients, decaying material, & microorganisms. Darker in color.
- **B-horizon** – – Less humus, nutrients & decaying material. Has more small rocks. Lighter in color.
- **C-horizon** – – Rocky, low nutrients, big rocks, part of Earth's outer layer. Lighter, bedrock color.
- **Humus** - A dark, organic material formed in soil when plant & animal matter decays.

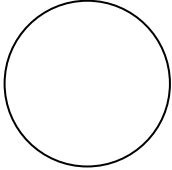
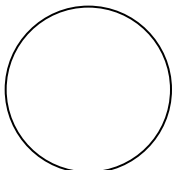
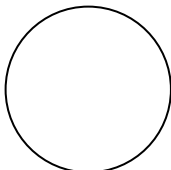


**Background:** You may have noticed that soil often looks different the deeper you dig. That's because you are digging through different soil layers. Each layer is called a horizon and is made of different materials. The surface layer of soil is called the **Organic, or O layer** (or the *Litter Layer* in the forest). The next layer is **Topsoil, or the A horizon**. Topsoil contains high amounts of *humus* (nutrient-rich soil) and microorganisms, such as fungi and bacteria. Of all the soil layers, topsoil is the most biologically active. Plants get most of their nutrients from topsoil. The **B horizon** is below the topsoil or A layer. The **B-horizon** has less humus & nutrients and is mainly made of minerals in the form of rock, sand, and clay. The bottom layer, known as the **C horizon** below the B horizon and right above the bedrock, or **R horizon**. The C-horizon is mainly weathered rock. A small amount of nutrients leak down into the B and C layers when rainwater dissolves mineral nutrients from the O and A soil layers into B and C layers below.

1. Label this diagram with the four layers of soil, **and** write a brief description of each layer.



Soil horizons are used to help construct the history of the environment and life of the soil in an area.

Sample A	Sample B	Sample C
Describe the physical characteristics of the soil:	Describe the physical characteristics of the soil:	Describe the physical characteristics of the soil:
<u>Sketch the soil color here</u> 	<u>Sketch the soil color here</u> 	<u>Sketch the soil color here</u> 
Texture:  Water Holding Ability:  Clumping Ability  Smell:	Texture:  Water Holding Ability:  Clumping Ability  Smell:	Texture:  Water Holding Ability:  Clumping Ability  Smell:
<u>What Soil Layer is this?</u>	<u>What Soil Layer is this?</u>	<u>What Soil Layer is this?</u>

Write three questions that you think could show up on a test about this activity:		
<u>Level 1 Easy</u>	<u>Level 2 Medium</u>	<u>Level 3 Hard, but doable</u>