

What is Soil?

“A living, dynamic system at the interface between air and rock. Soil forms in response to forces of climate and organisms that act on parent material in a specific landscape over a long period of time.”

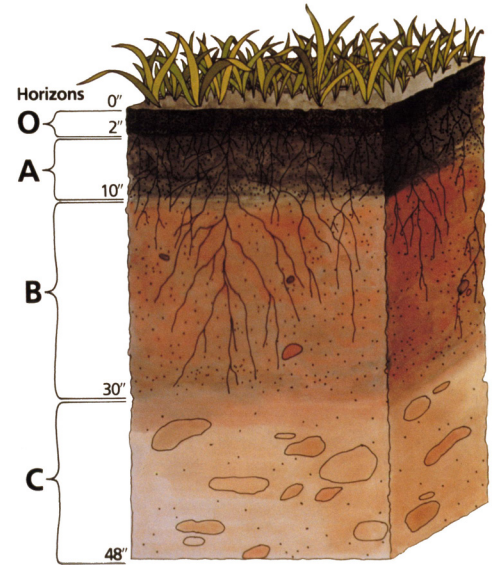


Huddleston, J., & Kling, G. F. (1996). Manual for Judging Oregon Soils (6th ed., p. 3). Corvallis, OR: Oregon State Extension Service.

A Soil Profile is.....

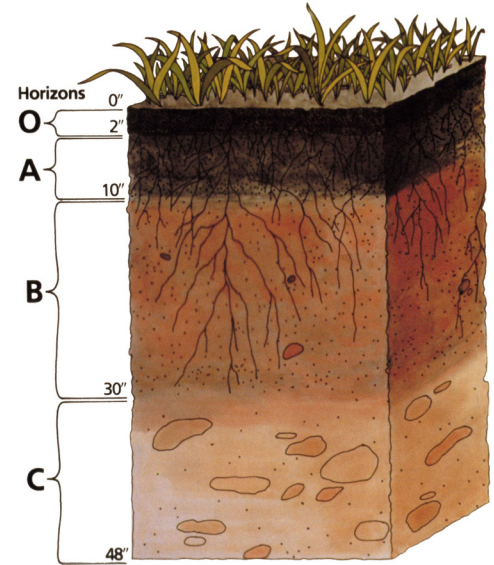
A vertical view of the soil that displays the divided layers or horizons. Soil profiles tell the stories about the area and are different from place to place.

(See example of soil profile in picture on the right)



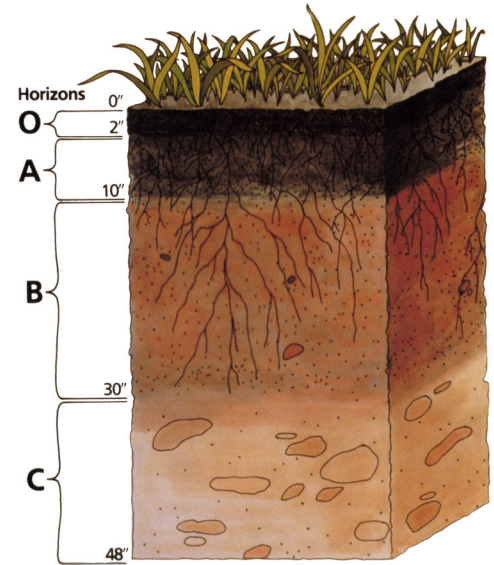
What is a Soil Horizon?

A layer of soil that forms from physical, chemical, and biological properties resulting from soil forming processes. Each is distinguishable by certain characteristics which you will learn more about as you read each horizon card. You can see the horizons labeled in the picture to the right as O, A, B and C.



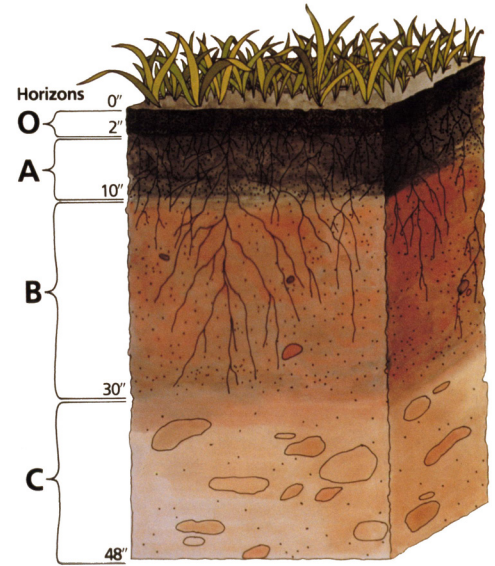
A Horizon- Surface Layer

The A horizon is often called the top soil. This layer is where most of the organic matter is found (i.e., worms, bugs, plant growth, microscopic organisms, dead organisms, decaying plants). Top soil is the darkest colored and most fertile layer of soil. The depth of this horizon can be a few inches in dry soils or more than 20 in wetter soils. This is the layer of soil where gardeners and farmers plant gardens and crops which provide an ideal environment for the growth of roots.



O Horizon- Organic

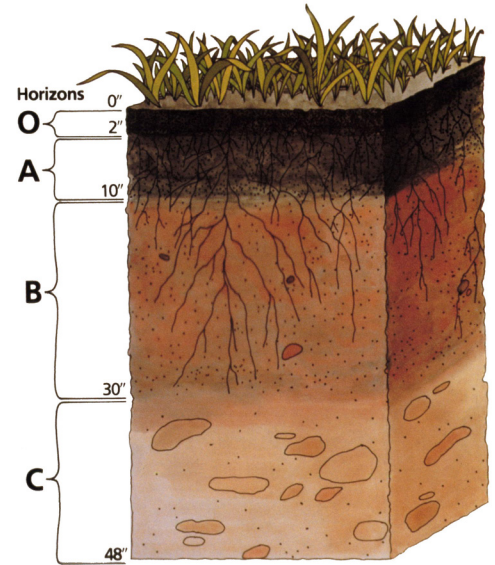
The O horizon is made up of nearly 100 percent organic material consisting of decaying leaves, twigs, or peat. O horizons usually appear in forest soils or in wet bog and swamp soils.



E Horizon- Eluviation Layer

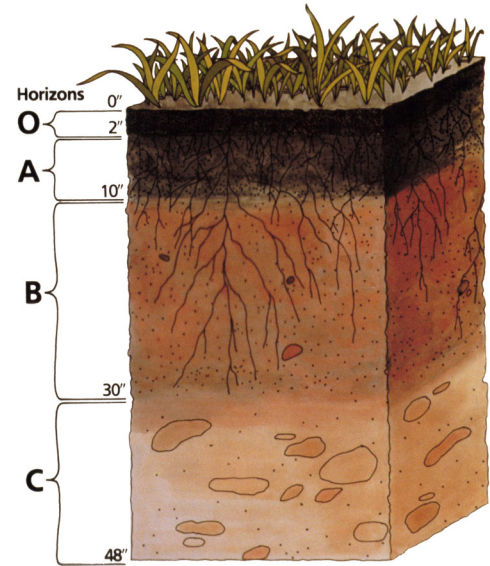
The E horizon appears light gray or white due to the leaching of iron and organic material. When present, the E horizon is below the O horizon or the A horizon.

The E horizon appears in sandy soils and in some wet, silty soils.



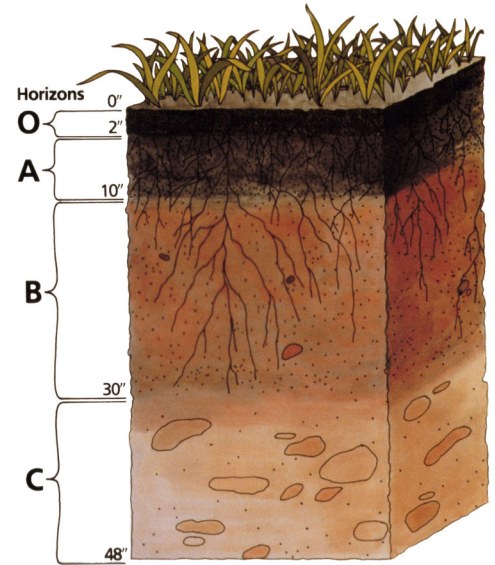
B Horizon- Subsoil

The B horizon is usually yellowish brown or reddish brown in color and doesn't contain much organic matter. This layer contains clay, nitrogen, minerals, and salts which have leached from the surface layer. Although it can be rich in minerals, this layer isn't good for growing plants because it lacks organic matter.



C Horizon- Parent Material or Regolith

The C horizon is the substratum layer and has less change than the layers above it. This layer has large deposits of sand, gravel, pebbles, rocks, and even boulders. This layer would support very little plant growth.



R Horizon- Bedrock

The R horizon is made up of 100 percent rock fragments that you cannot dig into because of the coarse structure.

