



# The Nature of Soil

## *Essential Question:*

What are the characteristics of soil?

How does the composition of soil vary?

# Key terms:

- Soil: a mixture of weathered rock, decayed organic matter, mineral fragments, water and air
- Humus: dark-colored, decayed organic matter that supplies nutrients to plants
- Organic matter: plant and animal matter that is in the process of decay
- Litter: leaves, twig, and other organic matter than can be changed to humus

# Formation of Soil

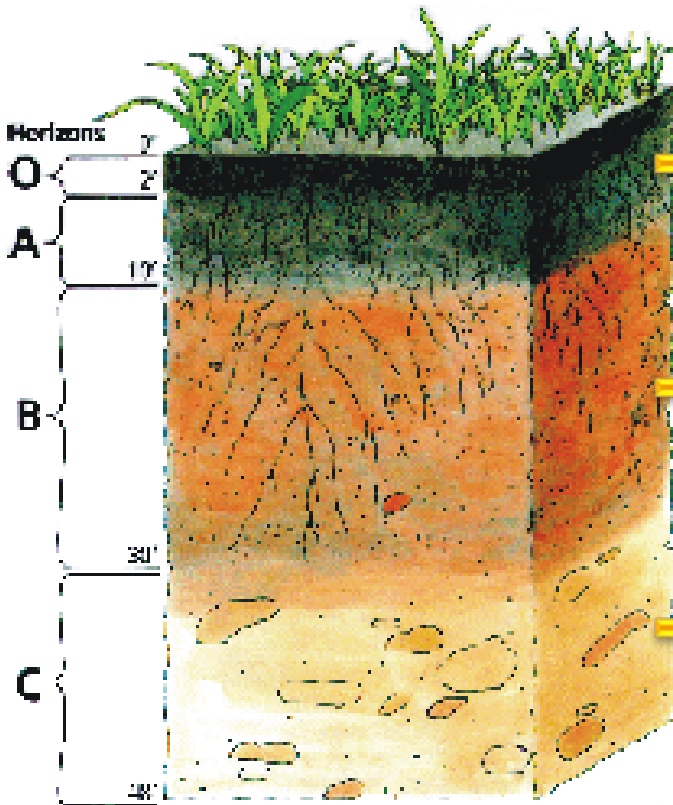
- Formation of Soil can take thousands of years
- Soil is a mixture of weathered rock, decayed organic matter, mineral fragments, water, and air
- Formation is influenced by climate, slope of the land, type of rock, types of vegetation, and length of time that rock has been weathering

# Composition of Soil

- Composition of soil- the ingredients that make up soil
- Clay, Silt, and Sand are all small particles of sediment
- Decaying, dark-colored plant and animal material is called humus
- Small spaces between soil particles may be filled with air or water
- Good soil has an equal mix of humus and weathered rock

# Soil Profile

- Horizons are the different layers of soil
- All horizons form a soil profile



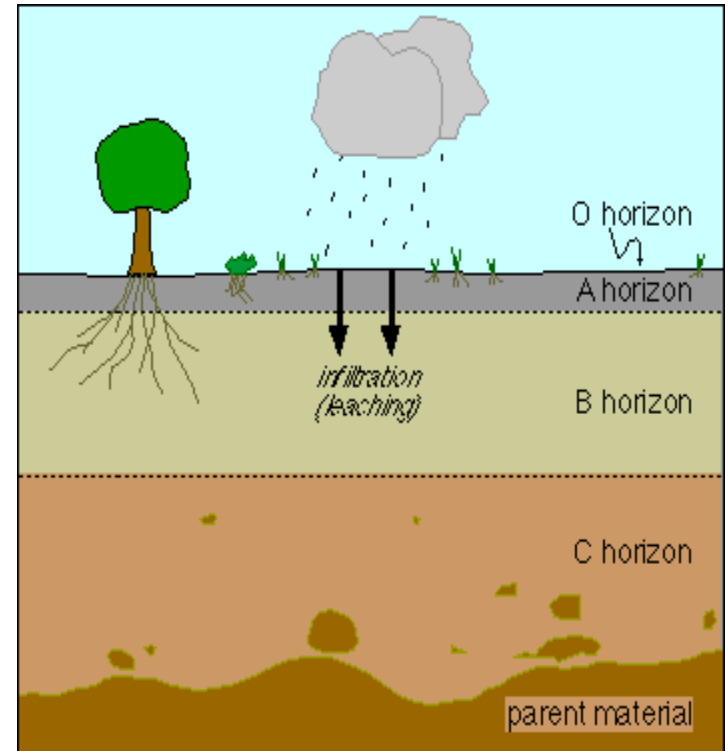
**A Horizon:** the top layer of soil, usually covered with litter, or leaves, twigs, and other organic material

**B Horizon:** the subsoil layer. Lighter in color due to less humus and is less fertile.

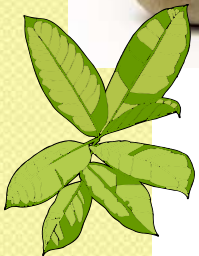
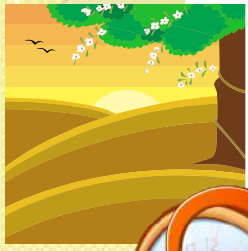
**C Horizon:** the parent material. Mostly weathered rock and is bottom of the soil profile. It is most like the bedrock.

# Leaching

- Leaching is the removal of minerals that have been dissolved in water
- When it rains, the water picks up minerals and carries them down from the A Horizon to the B Horizon.



# Soil Types



- Soil types differ in different places
- Different regions have different climates that affect soil development
- Parent rock affects soil formation and type of vegetation that grows in a region
- Time affects soil development because the longer the weathering has occurred, the less the soil resembles the parent rock
- Soil on steep slopes develops poorly