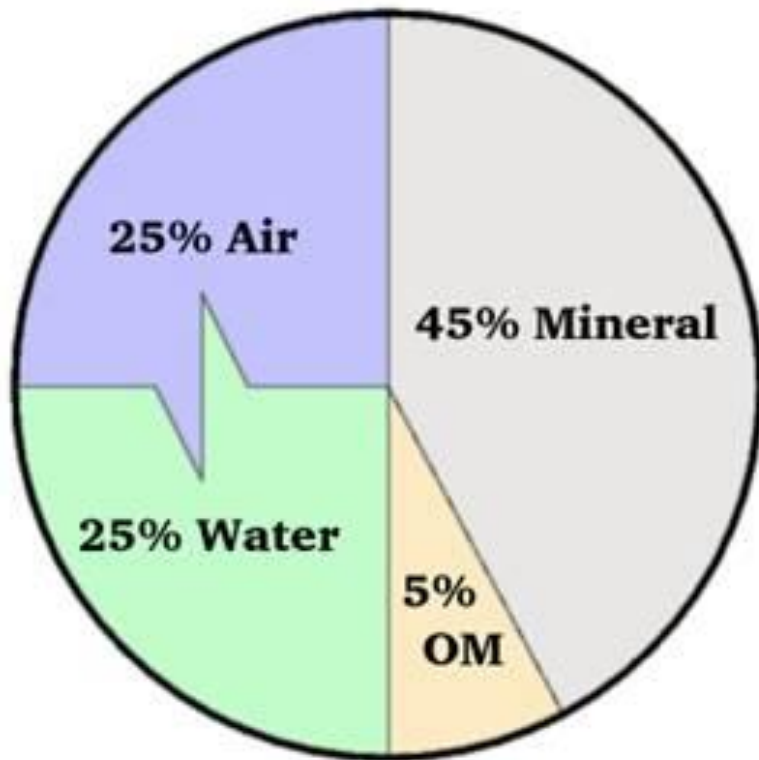




EROSION

What is soil?



- **Made up of a mixture of:**
 - Organic matter such as plant and animal-based material
 - Minerals
 - Gases
 - Water
 - Air
- **Home to organisms such as:**
 - Earthworms
 - Moles
 - Snails

What is soil made of?

Sand: 0.05 - 2mm

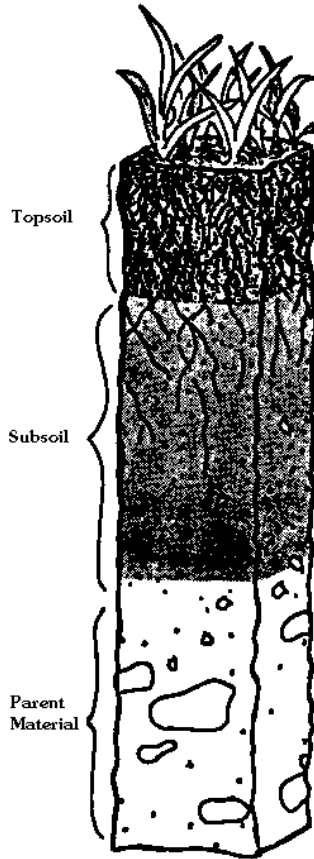
Silt: 0.002 - 0.05mm

Clay: <0.002mm



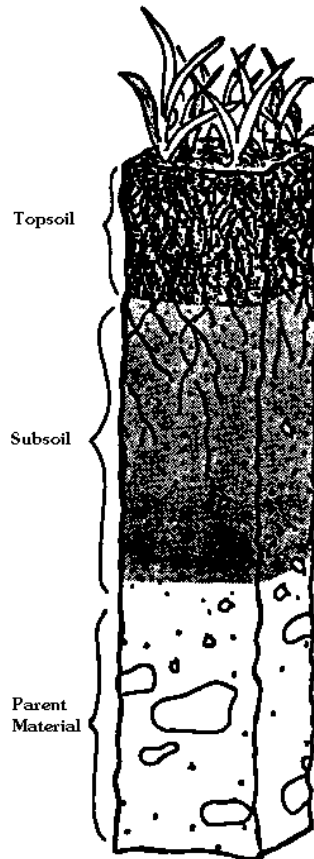
- Soil gets its texture from the size of rocks and mineral particles it is composed of.

Soil Profile



- Each soil type is unique and is made up of what we call a *soil profile*
- It has three major layers

Soil Profile - Continued



- **Topsoil layer**
 - Where lots of biological activity can be found
 - Worms, insects, plant roots
 - Burrows for animals
- **Subsoil layer**
 - Lots of minerals, clay, and water
- **Parent material layer**
 - Partially broken up rocks
 - Base of our soil
 - Can see weathering and erosion of rocks found here

5 Functions of Soil



1. Medium for plant growth
2. Regulates water level
3. Recycles raw material
4. Habitat for soil organisms
5. Landscaping and engineering medium

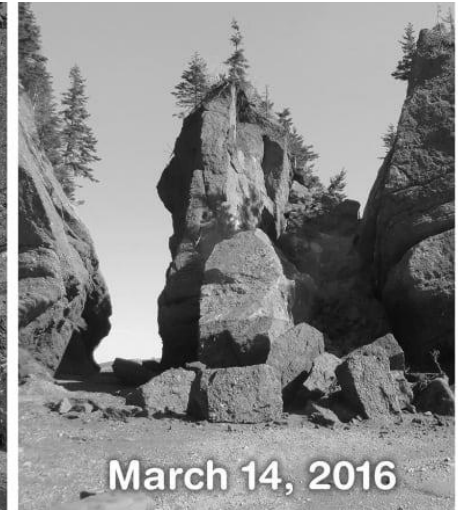
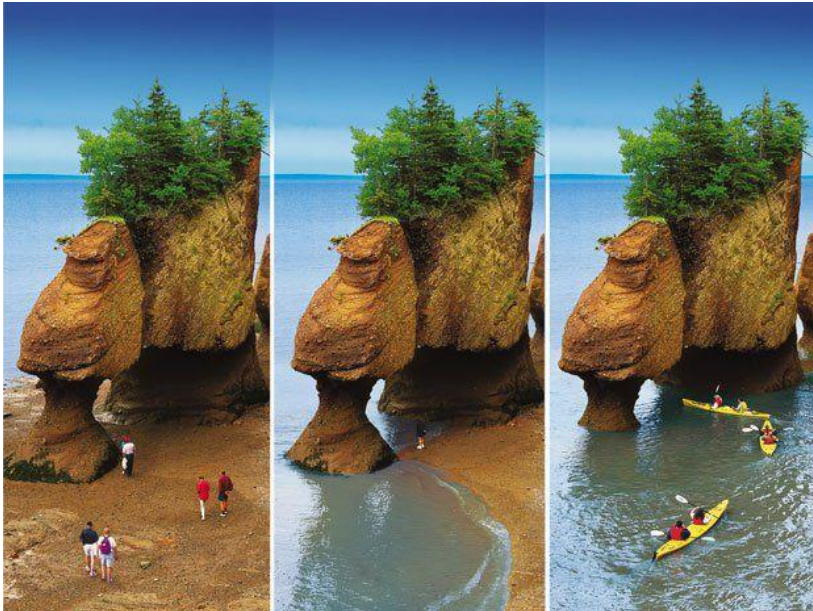
What is erosion?



- Erosion is the process by which Earth changes
- Causes soil or dirt to be worn away and transported
- Caused by forces like wind, ice, and water

Examples of Erosion

Hopewell Rocks in New Brunswick, Canada



Examples of Erosion

Badlands in Alberta, Canada



Examples of Erosion

Flowerpot Rocks in Tobermory, Ontario, Canada



Erosion Caused by Wind



- Wind erosion causes soil to be detached and moved from its original location
- How do you think this affects farming?

Erosion Caused by Wind



- Water erosion is also the detachment of soil that is caused by water.
- How do you think this affects farming?
- How does it affect communities?

Importance of Trees Against Erosion



- Soil erosion is a natural process, but it has been made worse because of human activity
- Soil is precious; it takes 1000 years to make 3 cm of topsoil

Importance of Trees Against Erosion

1. They help slow down rainfall
2. They diminish the amount of water in soil
3. A tree's roots will bind soil together
4. Trees can reverse nutrient depletion
5. Trees will obstruct incoming wind

