

AGRI CULTURE is everywhere!

NATURAL RESOURCES

Farmers and ranchers rely on soil as a natural resource to help them grow food and fiber.

Soil & Erosion

Soil is a natural resource that is important to farmers. Soil holds roots in the ground so plants can't fall over. It holds water and nutrients that plants use for food.

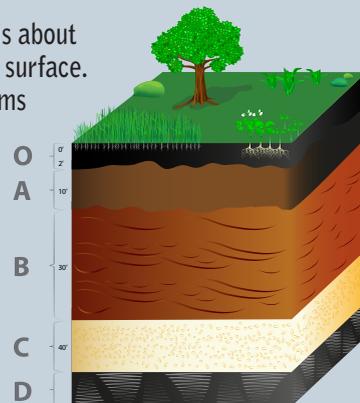
It is important to take care of the soil so we can use it for many years. It takes about 500 years to form 1 inch of topsoil. Organisms such as seeds, spores, insects and worms live in soil. There are more microscopic organisms in a handful of soil than there are people on earth. Soil helps filter pollutants to help keep our drinking water safe.

Some ways farmers protect and preserve the soil:

- They keep the ground covered either with plants or a ground cover to keep soil from eroding, washing or blowing away.
- They disturb it as little as possible. Farmers often use no-till, which means they do not plow the soil before planting.
- Farmers rotate crops. This means they plant different crops each year to keep from removing all the nutrients from the soil in a field.

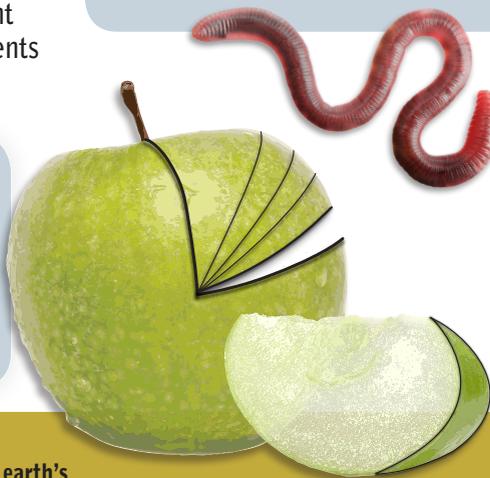
Soil is a living organism. It is made of water, air, minerals and organic matter. It generally consists of texturally distinct layers, also called profiles, which can be summarized as follows:

- O) **Organic matter:** Surficial organic deposits with layers of plant residues in relatively non-decomposed form.
- A) **Surface soil:** Plants, nutrients, and roots thrive here. Wind and water can wash away this valuable layer if it isn't protected.
- B) **Subsoil:** This layer is about 12 inches below the surface. Roots and earthworms live here.
- C) **Parent rock:** This layer is about 36 inches below the surface and is made up of rock.
- D) **Bedrock:** Contains masses of rock that can't easily be



A **Soil Scientist** studies soil properties, formation, nature, ecology, classification as well as soil management.

One who advocates or acts for the protection of soil is a **Soil Conservationist**



Earthworms contribute to soil health by creating large channels and mixing organic matter, which in turn enhances root development and nutrient levels.

ACTIVITY



The apple will represent the earth's surface as you see it on the globe.

- Cut apple into 4 equal parts; 3 represent the water and 1 part represents the land.
- Cut the land section in half lengthwise leaving two $\frac{1}{8}$ pieces. One represents deserts, swamps, Antarctic, Arctic and mountain regions. The other $\frac{1}{8}$ represents land where we can live and grow food.
- Slice the $\frac{1}{8}$ section lengthwise into 4 equal pieces making 4 - $\frac{1}{32}$ pieces. Three of these represent areas too rocky, too wet, too hot, poor soil or land already developed for housing, shopping centers, highways and entertainment.
- Carefully remove the peel from $\frac{1}{32}$ of apple. The small peel represents the soil we can produce food on.

SUPPLIES NEEDED:
large apple, world globe and sharp knife