Highlands-Cashiers LAND TRUST

"Saving Special Places since 1909"

## Kids in Nature presents...

BACKYARD NATURE EXPLORERS

# Totally SOIL

The lesson's objective is for families to understand soil characteristics and identify local soil types.

**Background:**

- Soil is a foundation for all life on land. Farmers, landscapers, and gardeners look to soils to determine what kinds of plants can live in an area.
- Soil content is: 25% Air, 25% Water, 45% Minerals (created by weathered rocks), 5% Organic Matter (decomposed plant and animal material).
- Topography, organisms, climate, time, and parent material affect soil type.
- There are different layers of soil - starting with the leaf litter (organic material) on top and ending with bedrock at the bottom. A visual of the horizontal layers of soil in one specific location is called a soil profile.

**Explore Your Soil with Three Activities:**

### Activity 1: Dig a hole!

Soils differ from place to place with different texture, smell, moisture content, and nutrients. Find a patch on the ground. Remove the leaf litter to the side and carefully make a small hole, no deeper than 2 feet. Consider these questions and record your observations:

What does the soil feel like? Is it more wet or dry? Are the contents chunky or fine? Are there animals living in the soil?

## Activity 2: Ribbon Texture Test

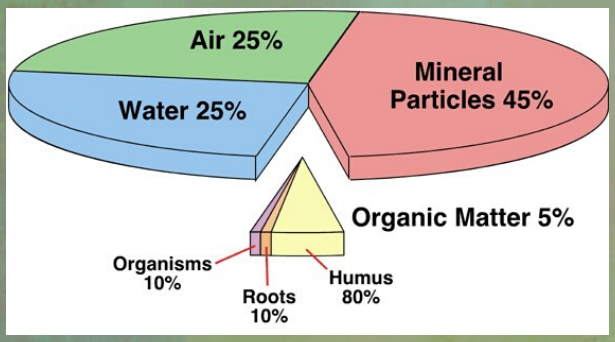
Soil texture is determined by how fine or coarse the soil is, or rather, the amount of sand, silt, and clay it has. The texture determines how much water the soil can hold and what kinds of plants will live there. The finer (smaller) the particles, the more water it can hold. Clay has the finest particles and sand has the most coarse (largest). Determine your soil texture by doing the ribbon test. Follow the instructions on the ***Soil Ribbon Test*** worksheet.

Questions:

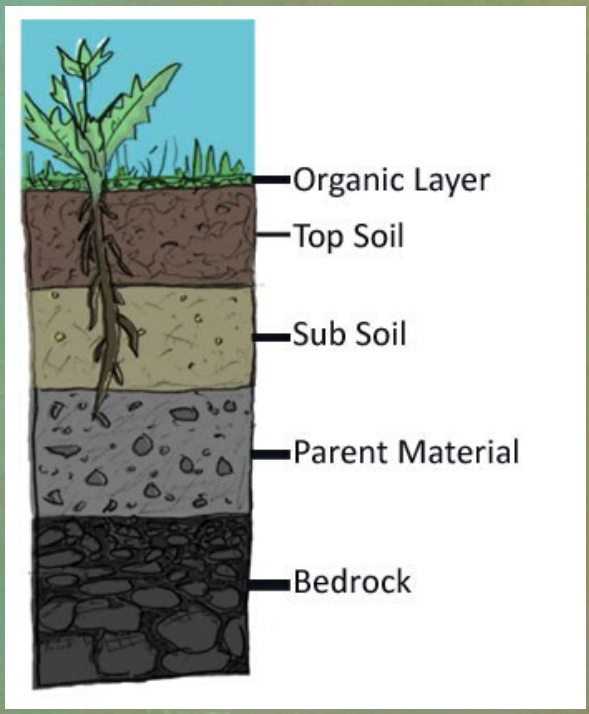
- What texture best describes your soil: sandy, loam, or clay?
- Will your soil hold a lot of water or drain easily?
- Which type of soil do you think is best for plants?

(*Answer: It depends on the plant! Loam soil is good for many plants because it retains moisture, but doesn't get waterlogged. But, some plants like well drained sandy soil and others like it very wet!)*

Soil Composition




Soil Profile




## Activity 3: Litter Critter Scavenger Hunt

Healthy soil is loaded with living creatures including tiny microbes, worms, insects, millipedes, and more! Many of these critters are essential decomposers, meaning they break down organic matter and help create soil. Try to find all of the animals on the ***Leaf Litter Critter Scavenger Hunt*** worksheet. Hint: look under rocks and logs!