Soil Scavenger Hunt

Goals
Students will explore the components and qualities of soil and compost.

Objectives
Students will make sketches of soil and compost and describe what they find living in the soil.

Materials
- Gloves
- Plastic containers or buckets
- Hand trowels
- Magnifying glasses
- Compost pile (or pile of decaying organic matter)
- Journals/paper
- Markers/colored pencils/crayons
- Hand sanitizer

Time: 35 minutes

Advanced Preparation
This activity requires an active compost pile in the garden and space for students to dig. Prior to a planting activity, you can have the students turn the garden beds with shovels to both discover soil critters and prepare the beds for planting. Save any rocks you find to line the beds or make painted stones and rock gardens.

Background Information
Soil is made up of several components:
- Organic matter: dead plant parts that are decomposing.
- Microorganisms: creatures that live in the soil and break down organic matter.
- Rock particles: bits of rock in various sizes that have been broken down by wind, water, plants, and microorganisms.

Composting is the process by which microorganisms (not just worms) use air, water, and organic waste to produce soil. Some children may be uncomfortable putting their hands in the dirt. Have gloves on hand, but encourage them to feel the soil directly.

Introduction (5 min)
Have students spend 1-2 minutes of quiet time brainstorming examples of how trash can become treasure. Then have students turn to a partner and share their trash-to-treasure example, giving both students an opportunity to share. Choose 2-3 students to share their ideas with the larger group.

Activity Steps (25 min)

1. Begin by discussing what plants need to grow (sun, air, soil, water). Explain that today they are going to look at garden soil and compost. Composting is the breakdown of organic material to form humus, the basis of healthy soil. It has the ability to provide air channels in clay soil and places for nutrients and water to be released in sandy soils.
2. Give each student a collecting container and point out places where they can dig in the garden. Ask them to collect things they find in the soil. Have students draw and label the components of the soil (rocks, bark, sticks, worms, bugs, clumps of clay, sand, trash, etc.).
3. After about 10 minutes, bring the group back together and ask everyone to share their findings. Ask where their treasures came from and how it helps plants and makes soil. After the discussion, have the students return their soil to the garden or trash can, whichever is appropriate.
4. Bring students back to the circle. Explain that composting is a way of recycling organic matter. Compost aerates the soil and helps it stay moist. Walk students over to the compost pile and demonstrate how it is maintained. Pair students and give each pair a container to fill with compost. Have each group spread out their compost on the ground and observe what they find in it.
5. Have students once again draw a sketch of the compost and its components. Students should label the components.
6. In the circle again, let students share their findings. Compare and contrast the compost and the soil.
7. Have each student clean his or her hands with hand sanitizer.

Conclusion (5 min)

Have each student think of one word to describe “soil” and in an orderly manner go around the circle and each student share their word, trying not to repeat any words in the process. Repeat with the word “compost”, but reverse the direction of the circle (it is a little more difficult to think of a description toward the end of the circle and this makes it more fair).

Notes

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