Create Edible Soil by Making Food with Layers

Dig deep for some edible, dirt-loving fun! Children will eat up this delicious activity that uses food with layers to bring about learning. It demonstrates the different layers of soil and encourages discussion on soil's vital role in sustaining plant and animal life on our planet.

What makes up soil?

Soil is so much more than what's under our grass. Each layer of earth is defined by its own "horizon". These horizons run parallel to the ground and serve up distinct characteristics that aid the layers above and below. Now that soil horizons are explained, what is a soil profile? When a vertical section of these many horizons is taken, it's known as a soil profile. Profiling soil isn't the most colorful or exciting activity, but creating an edible representation by using food with layers sure can be!

What you'll need:

- Cookie (chocolate chip, vanilla wafer, etc.)
- Chocolate pudding
- Whole Golden Oreo (1/student)
- Crushed Oreos (2/student)
- Green sprinkles
- Twizzlers Pull N' Peel (1/student – they can tear into smaller pieces)
- Clear cups
- Spoons

Step 1: Make the edible soil bedrock

Beginning with your empty cup, drop an entire Golden Oreo into the bottom. This represents the bedrock. Bedrock is a solid rock that lies under loose or softer material. It is the outermost layer of the Earth's crust. Nothing can grow in bedrock, but it supplies the soil with components important to its future

Step 2: Create the parent material

Grab your chocolate chip/vanilla wafer cookie and layer them on top of the Oreo by gently breaking the cookie into pieces. The broken cookie pieces characterize the parent material. Parent material is formed from bedrock after a long weathering process, either by natural or chemical means. This is the spot where the soil layers above will be formed – it is part weathered rock and partly weathered soil.

Step 3: Add in the subsoil

Spoon in the chocolate pudding to represent subsoil. The subsoil is not high in organic matter concentrations but offers rich minerals for plants and trees searching for root systems. This layer is hidden, though it is directly affected by water movement.

Step 4: Set up the topsoil

On top of the subsoil goes the crushed-up Oreos, portraying topsoil. Stick the Twizzlers out of the topsoil to represent worms! Topsoil provides the richest matter for germinating seeds. Nutrients, bacteria, fungi, and life are abundant here.

Step 5: Add the organic material

Organic Material: This layer is usually less than an inch thick. It consists of plant and animal residues at various stages of decomposition.

Sprinkle your colored sprinkles on top, allowing your worms to poke out.

Step 6: Label!

Label your layers. You can do this on your cup using a marker or on the provided worksheet. Look carefully at your soil profile while discussing the function of each tier. Soil horizons explained through labels will allow for connections between the layers of food. Then last but certainly not least, grab your spoon and dig in! Yum!

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