

EDIBLE SOIL PROFILE

Overview: Students will learn about the layers of the soil profile and the role each layer plays in supporting plant life. Using edible ingredients, students will create a soil profile that represents each layer.

Materials: Clear cups (1 for each youth), Spoons (1 for each + extra for serving), Paper towels, Small sticky tabs, Fine point markers, Serving containers for food ingredients, Food ingredients for each soil layer: Parent material- whole sandwich cookie, Subsoil- chocolate chips and butterscotch chips mixed, Topsoil- pudding, Organic matter- shredded coconut dyed green and gummy worms

Introduction: Soil is the loose, crumbly outermost part of the Earth's surface on the ground - made up of tiny pieces of rock, decayed plants and animals, air, and water, which helps plants grow and get the food they need to thrive.

The typical soil consists of approximately 45% minerals, 20-30% water, 20-30% air, and 5% organic matter. A soil profile is a vertical section of soil that shows the layers, or horizons, that make up the soil. Soil horizons are parallel to the soil's surface and have different properties from the layers above and below.

- Organic matter: decomposed plant and animal matter that feeds the soil
- Topsoil: rich, nutrient-filled soil where most plants grow
- Subsoil: darker, denser layer with fewer nutrients below the topsoil
- Bedrock: solid, unmovable layer deep underground

Lesson Instructions:

- Set up the serving containers for the food ingredients according to each soil layer they represent.
- Students will build their own soil profiles from the bottom (bedrock) to the top (organic matter) by layering each food ingredient in their cups. Talk through the various descriptions of each soil layer as they build.
- Use sticky tabs to label each distinct layer.
- Enjoy your yummy soil snack together!

