

Edible Soil Layers Activity

Grade Levels: K-12

Time: 15 minutes

Group Size: Any

Brief Description: Soil has many layers. Each layer is different and has certain distinct characteristics. The composition of soil determines what the soil is used for and why it is important. This edible activity will help students learn about each layer. A description of each layer is listed with each material. Instructor can decide how in detail to go on each layer.

Objectives: Students will learn about the different layers of soil.

Materials Needed:

- Chocolate Pudding
- Crushed Oreos
- Roughly chopped graham crackers
- Butterscotch chocolate chips OR round tan cereal (ex: Kix, Reese's Puffs)
- Green coconut (colored with green food coloring)
- Sprinkles—preferably a mixed variety with three colors
- Gummy worms
- Small clear cups and spoons

Procedure:

1. Prepare or buy chocolate pudding
2. Have students fill their cups in the following order and explain what each ingredient represents:
 - a. Butterscotch chocolate chips—represents bedrock. Bedrock is usually a light tan color and is made of rock from the compressed layers of soil above it. Plant roots do not reach this layer.
 - b. Chopped graham crackers—represents a layer of parent material. A layer of parent material exists between bedrock and subsoil and can contain rocks. Organisms don't exist, and chances of plant roots entering it are low. This can be found 5 feet below our feet, but it varies on location.
 - c. Chocolate pudding—represents subsoil. Subsoil contains some nutrients but is also rich in clay. Subsoil can be found 2-4 feet below are feet.
 - d. Crushed Oreos—represents topsoil. Topsoil is rich in nutrients, such as Nitrogen, Phosphorus and Potassium. Topsoil is essential for plant growth. Topsoil can be as deep as 2 feet.
 - e. Gummy worms—represents worms! The topsoil is alive with organisms and organic matter.
 - f. Green coconut—represents the grass and many plants that grow in the soil.
 - g. Sprinkles—represent fertilizer. Plants take nutrients from the topsoil and need to be preplaced with fertilizer. Fertilizers play an important role in keeping the soil healthy and in growing our food.