*Edible Soil

This is one of the many variations of this activity

*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!*

Time Frame: About 30 minutes

You will need:

- Chocolate and butterscotch chips mixed together
- Chocolate pudding
- Whole Oreos, crushed Oreos
- Shredded coconut mixed with green food coloring
- Gummy worms
- Clear cups or glasses
- Spoons

Step 1: Make the **edible soil** bedrock

Beginning with your empty glass, drop an entire 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 and butterscotch chips and layer them on top of the Oreo. The chips 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 gummy worms out of the topsoil. Topsoil provides the richest matter for germinating seeds. Nutrients, bacteria, fungi, and life are abundant here.

Step 5 **Organic Material:**

Sprinkle your colored coconut on top, allowing your worms to poke out. This layer is usually less than an inch thick. It consists of plant and animal residues at various stages of decomposition.

*During the Covid outbreak I was able to customize this activity so that each student got a "kit" containing a pudding cup, whole cookies (some of which they had fun crushing themselves), a spoon, and enough other ingredients to make this at their desks, limiting contact with other students.