**Making Dirt!**

**Goal**: Learning why soil is so important on a farm.

**Anticipatory questions**: Why should we care about dirt? Do we eat dirt? In a way, we do! Soil is another name for dirt. If we didn’t have soil, we couldn’t grow food.

**Introduction**: All plants grow in soil. They have to have soil to live, because their food comes from the soil. Healthy soil means healthy plants. We are going to make our own dirt, or soil. We want to make healthy soil that is full of lots of ingredients that help plants grow. When we make our own soil, we call it composting. We will visit the compost pile and talk about what is in it.

**Lesson preparation**: Large mixing container, big spoon for stirring, watering can or spray bottle, flashlight, tightly closed jar of motor oil, ziplock bag containing empty container of pesticide that has a poison warning on the label, thermometer, dead watch or clock, 6-12 small buckets to collect ingredients for making soil. Gloves for those who might want to collect manure?

**Lesson**:

1. Visit the compost pile. What is in the compost pile? Discuss what would happen if plant and animal matter did not break down over time. How does a compost pile work? Dig into the pile and feel the heat of decomposition.
2. Send the students out with buckets to gather ingredients that are needed in a compost pile. (weeds, bugs, manure, leaves, etc.) Set a collection boundary, rules about what and where to collect and how much time they have.
3. In a big bucket, place all the ingredients from the students’ buckets. Talk about why each ingredient is important and what it adds to the compost.
4. Add oxygen (stirring the compost), Add rain (water from sprinkling can or spray bottle. Add sun (shine the flashlight on the mix). Add time (throw in the dead watch). Add heat (show the thermometer). Discuss each part of the process.
5. Healthy soil is a result of the way a farmer manages the farm. Talk about what the soil we made would be like if we added motor oil or weed killer. Would they want to eat food grown in that soil? Some farmers use chemicals to feed their plants and kill pests and weeds. Other farmers (such as organic and sustainable farmers) use animal manure, compost, rotation of crops, cover crops and other farm practices that are less harmful to our environment and result in a healthy soil full of all the beneficial ingredients that plants need to grow well and become healthy food.
6. Demonstrate how completed compost is added to the garden plots. View healthy soil under a microscope to show tiny organisms.