



Lesson Plan: **Bugging Out**

Alignment with **STEM Framework**

Investigator 🔍

Overview

Youth will be collecting leaf litter and soil samples to sift through with the goal of identifying six different microorganisms. This will be completed by comparing found microorganisms with a key that matches physical characteristics with insect names.

Practice Goal

- Asking questions and defining problems
- Developing and using models
- Engaging in argument from evidence
- Obtaining, evaluating, and communicating evidence

Content Goal

- How can I identify different microorganisms and insects?
- What physical differences are there between the organisms I find?
- What places might contain the most/least microorganisms based on where I collected my leaf litter?

Purpose

The purpose of this lesson is for youth to investigate organisms and engage in communicating their findings based on evidence and other provided information.

Teacher Background Information

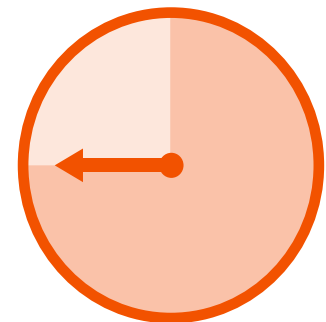
Teachers should be familiar with the different microorganisms that can be encountered and how to identify them. All of this information is provided in the Bugging Out handout sheet.

Materials

- [Buggin Out Handout sheet](#)
- Leaf Litter and Soil (collected by youth during lesson)
- Shake Boxes
- Bug Aspirators

Time Needed

1 hour & 45 Minutes



Instructional Sequence

Introduce youth to EnviroScape

In this activity we will be investigating insects that we can find in common leaf litter.

- ▶ In pairs or small groups, put a small amount of leaf litter and the ½” of topsoil beneath it, on your shake box. Vary the locations in which you collect the litter. (logs, tree bases, near grass or vegetation, needles, etc.)
- ▶ Sift the bit of dirt and insects within the leaves through into the bottom of your shake box.
- ▶ Use your aspirator to collect the insects into your vial. Be sure to inhale through the screened side (connected to rubber tubing). **BE GENTLE!**
- ▶ Repeat this procedure until you have collected about a half-dozen (6) unique organisms.