

Life in the Soil

Objective: Students carefully examine three soil samples for living creatures.

Activity Length: Two class periods

Materials and Equipment:

- Three large buckets
- Measuring tape
- Shovel
- Six to eight small bottles with lids
- A small magnifying glass
- Small hand spade

Procedure:

1. Measure off an area 1-foot square and collect the soil to a depth of 3 inches from each of the following places:
 - a. Ungrazed woodland
 - b. Pasture
 - c. Cultivated field
2. As you remove the soil, watch for burrows of worms and other animals.
3. Carefully place the soil samples in the three containers.
4. Examine the samples, either indoors or outdoors.
5. Pour out the samples on separate sheets of white paper.
6. Carefully sort the soil, watching closely for small living things. One-foot squares of 1/4-inch hardware cloth or window screen will be helpful in making this examination.
7. Place the different kinds of animal life in the separate bottles.

8. Observe the three soil samples and count the animal life belonging to each of the following groups.

	Soil Sample #1	Soil Sample #2	Soil Sample #3
Worms (such as earthworms having no legs)			
Grubs (any wormlike animal with legs)			
Snails (without shells are called slugs)			
Insects (hard shelled, soft bodied, or winged)			
Spiders, mites, ticks (animals with four pairs of legs)			
Animals with more than four pairs of legs			
Others (any animal not falling into one of the above groups)			

Key Questions:

1. Which soil sample has the most small animal life? _____
2. Does the amount of animal life and the burrows the animals make appear to have any relation to the looseness of the soil? _____
3. What value are earthworms to the soil?

Adapted from: USDA Natural Resources Conservation Service.