

Those Amazing Earthworms

Wyoming Science

Objectives:

- Observe earthworms and learn how they are beneficial to our environment.
- Identify and describe several characteristics of earthworms

Background:

Earthworms live in warm, moist soil throughout the world. Earthworms can be found in many different sizes. The smallest earthworm can be only one millimeter long and the longest can be eleven feet long!

Earthworms are great recyclers because they take food scraps and other decaying matter in the soil and turn it into nutrients for plants. Whether it is humus (dead plant material) or food scraps, earthworms will eat all kinds of things that are soft to chew. This earthworm “food” is digested and then excreted back into the soil in a nutrient-rich matter. These nutrients are great for the soil and enable the plants to grow.

Earthworms also dig through soil and mix it up. Particles called sands, silts, and clays make up most of the mineral content of soils. As earthworms dig, they loosen up the soil and mix different types of soil so plants have a better environment to grow in. Earthworms also provide air passages for soil, which help plants grow. Other organisms found in soil include plant roots, insects, and small mammals.

Activity Procedures

1. In the bottom of each jar, put a layer of dark soil about one inch thick. On top of this, place a one-inch thick layer of light sandy soil. Keep adding dark, then light layers until the jar is half full.
2. Slightly moisten the soil in both jars with water.
3. Place the two earthworms in one jar, and then add some carrot scraps to both jars;
4. Put a lid on each jar. Label the jar with the earthworms as “earthworms” and label the other jar “No Earthworms.”
5. Take the dark pieces of paper and wrap around each jar. Tape tightly. Put the jars aside.
6. Have each student write down their predictions about what they think will happen in each jar.
7. After three days, unwrap the jars. See what has happened.



Standards

Science

Life Systems

1.1, 1.3

Science As Inquiry:

2.1, 2.2A, 2.2c, 2.2D, 2.2E

Materials

- Two jars
- Lids with holes
- Dark soil
- Sandy soil (light color)
- Two earthworms
- Carrot scraps
- Dark paper (two pieces)
- Masking tape
- Water

Estimated Time

20 Minutes

plus observation time

Grades 1-2

vocabulary:

- *soil*
- *sand*
- *digest*
- *environment*
- *insects*
- *mammals*

Additional Activities

- Keep putting food scraps in the jar with the earthworms and continue a month long observation.
- The class could make a compost bin and put earthworms in it, then observe what happens.

Questions for Investigation:

- Which jar contained earthworms? Describe the soil in each jar.
- Which jar do you think is better place for a plant to grow? Why?
- Have the students compare and contrast their predictions with the actual observation.



Materials Adapted from Illinois Agriculture in the Classroom