

Earthworm Experiments and Observations

For Pre-k-2nd:

Find an Earthworm

Find an Earthworm

Where can you find an earthworm in your backyard? Try these ideas:

- Look under rocks or logs.
- Look under backyard furniture or toys. {On many days, we find earthworms under our turtle sandbox.}
- Look for leaves that have been pulled into holes in the ground.
- Take a walk around the neighborhood after a rain storm. Rescue the earthworms on the sidewalk by placing them on the grass.
- Try to get the earthworm's to come to the surface. In the book, grandma and the boy pour water from a watering can onto part of the garden. They wait awhile {long enough to eat a few cookies} and then a worm or two poke their heads out of the ground. {We tried this a couple times in our yard, but haven't found it successful yet. It had rained the previous night, so maybe that's why it didn't work...}

Make Earthworm Observations

Once you find an earthworm, make some observations about it.

1. How can you tell which end is the head? Watch the earthworm move. Usually it moves forward, so the head in will be in front. The head is also more pointed whereas the tail is more rounded.
2. The earthworm is made of ring-like segments. Can you count how many segments it has?
3. Earthworms have setae, little hairlike bristles on each segment that help the worm move.
 1. Wash off the earthworm in a bit of water. Then, place the earthworm on a piece of paper. Do you hear the rustling sound when it moves. That's the sound of the setae rubbing against the paper.
 2. Place the earthworm in your hand. Can you feel the setae on your hand as the worm moves?
 3. Look at the earthworm under a magnifying glass. Can you see the setae on each segment?
4. What does the earthworm feel like? Is it slimy? Is it cold?

For Grade School:

Earthworm Science Experiment

This is a typical earthworm experiment you might find in a science class (preschool all the way to high school). It's a great beginning [experiment](#) to work on science skills – asking questions, making predictions (and hypotheses), making observations, collecting data, and drawing conclusions. Here's what you'll need to get started.

Materials:

- shoe box sized container (plastic or cardboard is fine)
- paper towels
- water
- earthworms (you can do the experiment with just one, but I suggest using at least 5 to get better results)

We are testing preferences of the earthworm. You can let your child design this experiment. Here are some sample ideas:

- Do earthworms prefer wet or dry conditions?
- Do earthworms prefer the dark or the light?
- Do earthworms prefer different colors of light? (Change the light color by placing colored transparencies, colored acetate, or colored plastic wrap between the earthworm habitat and the light source.)
- Do earthworms prefer different surface types? Surface ideas: paper towel, cloth, soil, sandpaper, grass, rocks, etc.
- Do earthworms prefer certain soil/food types? (Test plain soil vs. soil and grass mixture.) For this one, you'll want a larger bin. Check out the experiment set up and results at [this Earthworm Food Preference site](#).

Test if earthworms prefer wet or dry conditions. What do you predict?

1. Place a dry paper towel so it covers one side of a shoe box sized plastic container.
2. Place a wet paper towel so it covers the other half of the container. (The wet paper towel and the dry paper towel should touch in the middle of the container.)
3. Add earthworms to the middle of the container so they are touching both paper towels.
4. Observe the earthworms. Are they moving to one side or the other?
5. Place the lid on top of the container and wait.
6. After 10-20 minutes, check on your earthworms. Where are they – on the wet paper towel or on the dry? Is there anything else that you notice about them?