



Discovering Decomposers

Wiggly Worms

Earthworms are a fascinating creature with no bones, just muscles. They spend most of their lives underground. There are so many worms out there, that you could be standing on top of 1 million worms under every football field. Worms have soft bodies with many flexible segments. Worms don't have ears or eyes, but they can still sense daylight, and prefer to be burrowed in the soil where it is dark and damp.

Worms are great for the soil, and farmers work hard to make sure worms stay in their gardens. Worms burrow down in the dirt, eat soil and **decomposing** leaves, and then drop 'worm castings' back near the surface. Worm casting, or worm poop, are a really good fertilizer for plants and help them grow. Today you can buy 8 cups of worm castings for \$6.50. Who knew you could make money off worms?! This process of consuming dirt and turning it into nutrient-rich fertilizer (like vitamins for plants) means that worms are **decomposers**. They take living materials and help speed up the process that turns them back into nutrients for plants to absorb. We will learn more about decomposers in the next activity.



Worms Busters



There are a lot of myths out there about worms that we want to bust. For starters, if you cut a worm in half, it will not grow back into 2 new worms. It will die ☹️ so be gentle when you're handling worms. Worms are not snakes! They have no bones, while snakes do.

EXPERIMENT 1: Rainy Day Walks

It's been raining a lot lately here in Douglas County. This is a great time to go out 'worm hunting'. Worms pop to the surface and crawl on the ground and on sidewalks when it's wet out. They need to keep their skins wet, so if they are on the move for a new home, they must move during or right after a rain storm. After a rainstorm, go for a walk and see if you can spot worms out and about.

You will need:

- Your observation journal
- A pencil
- Rainy-day clothes



Instructions:

1. Right after it rains, put on your wellies (rubber boots) and go for a walk.
2. Choose a path that you know well and can remember the way you went on your journey.
3. As you're walking, scan the ground for worms.
4. Each time you find one, make a note in your journal. Record the number and where you saw it on your walk. Was it crawling towards more pavement or crawling back towards the dirt? Did it look healthy? When I went out this morning, I saw 1 worm crawling towards the middle of the road! And then I saw another that looked very white, but it was still crawling along.



THINK ABOUT IT! If you went out on the same walk after a few days of sunshine, do you think you would still see any worms? You can repeat this experiment after different kinds of weather. This is a way to test how weather and precipitation (rain, snow, hail) will change the way that worms behave. Congrats, you're now becoming an animal behavior scientist!

EXPERIMENT 2: What do worms like?

This experiment is to help you get comfortable handling worms (not that gross or slimy don't worry!) and make observations about their behavior.

You will need:

- A shovel or large kitchen spoon
- A small clear tray or tupper ware
- A plate
- A cup of water
- A spoon
- A tray with some dirt
- A paper towel
- A piece of cardboard or dark construction paper
- Scissors



Instructions:

1. Wash your hands first so that you don't get anything on the worms. Gather your shovel or large spoon, and clear tray and head outside.
2. Ask a parent where it is ok to dig - maybe near a fence or by the sidewalk. Start digging and looking for worms. You will have to dig through the grass-root layer if you are digging near a lawn.



3. Hopefully soon you will start to find worms! Don't be discouraged if you don't right away. You can choose a new location or dig a bit deeper. When you find a worm, handle it gently. Remember that worms are very fragile and you want to be careful when handling them.
4. Try find 5 or more worms and place them in your tray with some of the dirt and some water.



5. Take the worms inside. They will probably hide in the dirt. Set up your plate, fold your paper towel in 1/2 and cut the paper towel to fit inside your plate.



6. Get your paper towel just damp by slowly spooning on water.



7. Place your piece of cardboard or construction paper in the middle. We've now created a dark and wet environment for the worms.



8. Take a worm out of your tray, wash it off gently with some water and place it on the plate. Remember to always have clean hands when handling the worms.



9. Let the worm get settled, and then begin to watch where it goes. Does it stay on top of the wet paper towel? Or does it burrow under the paper towel? Or just under the cardboard?



My first worm disappeared under the wet paper towel in less than 1 minute!

10. Repeat this experiment with a few more of your worms and see if they all do the same thing, or go to different places on the plate. At the end, remove the dark paper and you may notice that all of your worms have piled together under the dark paper.



11. You've not completed a behavior experiment to see what kinds of habitat the worms prefer. Record any observations in your journal. You can also repeat this experiment by leaving ½ of the paper towel dry and ½ of it wet. Place worms in the middle and see which way they go.



12. When you're done, take the worms back outside and leave them covered with dirt.

Thanks for conducting science with me for this Home Explorer activity from Umpqua Watersheds Education Program.
Join me for new activities posted every week!

- Ms. Robyn

