

Digging for Decomposers (Not Just Worms)

Essential Question(s):

How can we observe worm behavior?

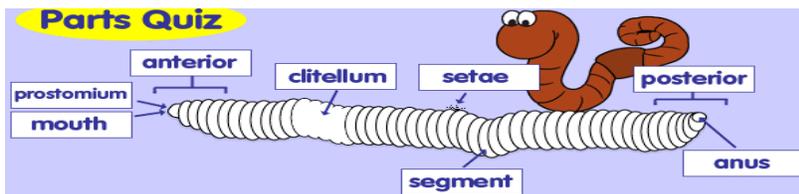
How do worms react to various stimuli?

What are other decomposers found in the forest?

Background Information:

Earthworms play a major role in improving soil fertility. They plow the soil by tunneling burrows through it. Their tunnels provide the soil with passageways through which air and water can circulate which is important for soil microorganisms and plant roots to survive. Also, these burrows can be a major conduit for soil drainage, particularly under heavy rainfall. At the same time, the burrows minimize surface water erosion.

Earthworms also aid in converting large pieces of organic matter into rich humus (“hue-miss”). Humus is the stable, long lasting remnant of decaying organic material. It improves soil structure and increases water retention. Earthworms pull down in the soil organic matter found on the dried dirt (i.e., leaves, manure) either for food or when it needs to plug its burrow. Once in the burrow, worms shred the leaves and partially digest them. Then they excrete wastes in the form of casts, a type of soil aggregate.



Worms have soft bodies with no bones, arms, legs, or eyes. They have intestines and 5 pairs of hearts.

Procedure:

A. Background:

1. Ask students what they think a decomposer is. Show the students the parts of worm picture to discuss how earth worms decompose materials in the forest and how they provide nutrient rich soil.
2. Introduce other decomposers and their roles. Ants, termites and beetles all help to break down wood, leaves, and insect remains. Mushrooms/fungi are not insects but they tend to make their home on fallen wood, eventually decomposing it and returning it to the earth.

B. Main Activity:

1. Before sending students out to look for decomposers, remind them that insects are living creatures and we must treat them with respect and do our best not to harm them. Students

Objectives: Learners will...

- 1) Understand that decomposers are helpful for soil
- 2) Observe and investigate the behavior of worms

Location: Anywhere you can dig!

Supplies:

- Insect viewers/containers
- Yogurt cups or clear cups
- Trowels/something to dig with
- Samples of soil nutrient rich and nutrient poor
- Spray bottles with water
- Kids gardening gloves

Standards:

- SKP2.
- SKL1.
- SKL2.
- S1L1.
- S2E3.
- S2L1.

should also make sure to be aware of putting rocks and branches/ground cover back where they found it since it is the home to so many friends!

2. Give student a viewfinder or yogurt cup/container for them to use as a place to hold the decomposers they find. Offer trowels and gloves for kids that may not want to touch the dirt. You may need to use a spray bottle to spray the worms so that they don't lose moisture during the observations
3. Allow students to observe decomposers naturally and share what they have found
4. After they have observed their worms, let the students find a nice soil-y spot to return their worm

Discussion/Assessment:

- What are some other decomposers?
- Where can we find these decomposers.

Take Home Message: Worms and other decomposers are interesting creatures that help make quality soil.