

MATERIALS

- Worm Bin (with enough worms for 1 per student)
- Worm Facts and Vocab poster
- Worm Bin poster
- Magnifying Bug Box (1 per student)
- Blank white paper (1 per student)
- 1 Trowel
- *What Am I?* Resource

PREPARATION

- Make sure worm bin is healthy and active with enough worms for the class.
- To save time during class, put one worm in each Magnifying Bug box before class. Be cautioned that there is little air in boxes for the worms to breathe, so less time in the boxes is better for the worms. Add a drop of water to keep them moist during class.

PROCEDURE

Part 1: Worm Investigation and Drawing

- “You will each receive a worm to adopt for the class period. When you receive your worm, investigate it with the magnifying glass and watch it move. You may touch it. Remember that a worm is a living thing and a garden helper, treat it with respect.” Distribute 1 bug box (with worm inside) to each student. After 5 minutes, hang up Worm Facts poster and distribute a sheet of blank paper to each student. “Draw your worm, including as much detail as you can. Remember our fun worm facts from the beginning of class. Can you draw food in the belly and the muscles it uses to move? Can you include the hearts inside the body?” (15 min)
- “Now we are going to pretend the worm you drew is living in a worm bin. Think of 3 vegetables or fruits that you like to eat. Worms like the same ones! Draw the vegetables around your worm and then fill in your page with soil, straw and/or newspaper to give it a happy worm bin home.” (10 min)

Part 2: Worm Sing Along

After investigation and drawings are complete, sing this song to review information.

Worm Song (Sung to the tune of The Wheels on the Bus)

The worms in the bin they eat our trash, eat our trash, eat our trash, the worms in the bin they eat our trash, all day long.

The worms in the bin they like fruits and veggies...

The worms in the bin they make new soil...

The worms in the bin they have five hearts...

The worms in the bin they have no eyes...

(5 min)

Optional activities for additional time:

- Continue drawing/coloring their worm worksheet and continue worm investigation.
- Extended Journal Entry time.

Vermicomposting

Soil & Ecology

ENGAGE

With all signs of worms hidden, begin class by reading the “Vermicomposting” resource. Have students raise their hands when they think they know what it is describing. Stop when all (or most) hands are up and allow all students to whisper their answers together. Then continue reading the list, discuss as desired. (5 min)

OBJECTIVES

The student will be able to:

- explain 2 reasons why worms are good for the garden.
- explain that decomposers have a role in creating new, healthy soil.
- list three new worm facts.

EXPLAIN

Vermicomposting

- Red Wigglers are the variety of worms best suited for vermicomposting because they are happy to live close to the earth’s surface.” Vermicomposting is “recycling with plants” and enables us to use food scraps and dead plants as worm food and then use the worm castings as a nutrient-rich soil amendment for future plants. We’re creating new, very healthy soil. Some people call worm castings “black gold” because they are so valuable to gardeners and to the soil. Worm bins can easily be stored in classrooms and homes which makes it an easy, fun way to compost inside. Vermicomposting is a mini version of what goes on in an outdoor compost pile.
- The worm bin must stay between 55-75 degrees F and should include brown matter (straw, newspaper) and green (kitchen scraps) matter as well as Red Wiggler worms which are happy to live close to the earth’s surface. Worms must stay out of the sun/light because it dries up their bodies which are dependent on moist surroundings to breathe and survive.

A Worm’s Role in the Compost/Garden

Worms tunnel through the soil to till and aerate which is conducive to healthy plant life. They are decomposers which eat green and brown matter and leave behind rich castings. They are particularly attracted to organic matter and seek gardens with healthy soil. In the compost bin, worms aid in transforming food and lawn scraps into healthy soil which can be used to grow next year’s crops.

PROCEDURE NOTES

Show students the cross-section picture of the worm bin on the Worm Bin poster. “There are two types of composting – 1. Compost bins outside in the garden (which include some worms)” and 2. Vermicomposting, today’s topic which is focused on worms. Allow students to tell what they know about how worms help with composting. As students share, point out the various parts of the worm bin that make it a healthy environment for the worms and for creating healthy soil.

ADDITIONAL MATERIALS

- No additional materials needed.

EVALUATE

Journal Prompt: In what ways do worms help the garden? What is one new fact you learned about worms?

WHAT AM I?

1. I never sleep.
2. I have no arms.
3. I have no eyes.
4. I have no ears.
5. I have no legs.
6. I have no teeth.
7. I lay eggs.
8. At birth I am clear-to-opaque and very small.
9. I do not age.
10. I can live for a long time (up to 15 years – almost a high school age).
11. I have over 1,000 species in the world.
12. I am cold-blooded.
13. I have 5 “hearts”. (Which are actually aortic arches, but are often called hearts for simplicity).
14. I have both male and female organs.
15. I catch no diseases.
16. I breathe through my skin.
17. My muscle segments help me to move.
18. I can eat up to my own body weight each day.
19. I am very strong and muscular.
20. I am a tireless worker.
21. I am a natural recycler or composter.
22. My castings increase the amount of nutrients available to plants.
23. I mix the soil.
24. I aerate the soil.
25. My enemies are frogs, moles, people, centipedes and birds.
26. They do not like sunlight – it dries them up.

Grow Pittsburgh

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