

Class Activity: Build Your Own Worm Bin

Topics

1. Vermicomposting
2. Worm Diet and Habitat
3. How Red Wiggler worms create compost

Teacher's Guide

Activity overview:

This activity is meant for students to create an understanding on how vermicompost works, through a hands-on activity of maintaining their own worm bin.

Note* Worm bins can be bought premade, or created to fit classroom needs.

Activity Instructions:

1. **Introduce Vermicomposting**
 - a. Introduce vermicompost as a concept to the students, discussing why worms are good for soil, how worms break down food, etc. Refer to the guiding questions.
2. **Building the Worm Bins**
 - a. Students will hydrate the coconut fiber/worm bedding, breaking up the bedding in the water until it is dark and fluffy. Adding a layer of shredded paper/cardboard to the bottom middle bin (bin with holes), students will add the worm bedding on top of this.
 - b. Students can then add their worms! Each worm bin should have approximately 200+ worms in them.
3. **Instruct Students on Worm Care**
 - a. Students will be expected to bring in their own food waste (from home, lunch, etc.) and feed the fruit and vegetable scraps to the worms.
 - b. Each day, students will weigh their food scraps using the kitchen scales, and logging this amount in their worksheets. Students will do some basic calculations to ensure proper mass is taken.

(mass of food + container being used to weigh food - mass of container being used to weigh food).

- c. As the week(s) go by, students will check-in on their worms, and observe how the food is being eaten/broken down into compost! Students will do simple calculations to find the total amount of food waste diverted for the worms.

Guiding Questions for the activity:

1. What types of things do worms eat?
2. What happens to food after the worms eat it? What should we call that?
3. Why is the breakdown of food by the worms important to the cycle of life?
4. How do we think worms are related to composting?
5. Are there different types of worms? What does an earth worm do? What does a red wiggler worm do?

Materials List

- Stackable Plastic Bins
 - Drill
 - Hot Knife Cutter Tool
- Coconut Fiber/Worm Bedding
- Shredded paper/cardboard
- Red Wiggler Worms
- Kitchen Scale(s)
- Fruit and Vegetable Scraps
- Vermicompost Data Log Worksheets

Worm Bin Instructions

The worm bins can be built with any stackable plastic bins with lids. Using a drill and hot knife cutter tool, create holes in the bottom of one bin (assuming there will be two layers). Ensure there are enough holes and the holes are large enough for the worms to move easily between the layers.

Note* More layers to the worm bin can be added, if the groups of students are larger, or there are more worms given to each team.

