

Worm composting in the classroom

Purpose:

To give students a better understanding of composting and introduce a vermi-composting project to the classroom.

Students will learn the amazing abilities of the worm, and worm care.

Concepts:

Composting is a way to recycle food

Vermi-Composting uses red wiggler worms to break down food material. As the food rots, the worms eat the rotten food and produce "castings". Castings is just another name for worm poop. Castings are an excellent fertilizer for plants.

Worms require regular care to be healthy and make compost.

Most students are familiar with recycling paper, metal, plastic etc. The idea of recycling food may be new.

Materials:

1/4 pound of red wiggler worms

small Rubbermaid type tote in a solid dark colour with a snap lid (5 to 10 gals)

A bottom tray for leachate – an old cookie sheet works

shredded newspaper

a couple of handfuls each of soil and sand

some dried leaves (optional)

food scraps

small pail with lid for scrap collection

Assemble the worm bin:

- With a drill or hammer and nail, make multiple holes about 1 inch down from the top edge of the bin and on the bottom for the leachate. Keep them small since the worms may crawl out and die if the holes are large enough.
- Shred the newspaper and place it in the bin. Add sand and soil. The bin should be about $\frac{3}{4}$ full. Evenly moisten the bedding by sprinkling it with water. Mix the bedding up to give it some air. It should be damp, not dripping. Like a wrung out sponge.
- Bury the food scraps (Bury the scraps in a different corner each time the worms are fed. This way the worms will migrate throughout the bin and aerate it).
- Add the worms. They will migrate down toward the food and away from the light.
- Put the tray beneath the bin because worms create a nutrient rich moisture (leachate) as they process the food. The leachate can be fed to plants in the classroom.
- Cover and place bin and place in a dark spot.

Tips:

- If there is condensation on the inside of the bin or lid, wipe it away with a paper towel. Too much moisture can promote mold.
- Use your nose to judge how the bin is doing. There should never be a musty or spoiled smell.
- Your bin should not be dripping wet but should remain damp. Add a misting of water onto the contents of the bin if it seems to be drying out.
- Worms need to be fed regularly; they also need to be checked regularly to make sure that the bedding is not too dry. Every few days should be sufficient.
- It is a fallacy that when you cut a worm in half, you get two worms. This is not true, and cruel. Worms do not like light and can die if exposed for any length of time.
- Worms breathe through their skin so water is important for keeping their skin moist.

Worms love kitchen raw scraps, nothing cooked!

DO's

- ✓ Vegetable peelings and leaves
- ✓ Fruit peels and cores
- ✓ Coffee grounds and tea bags
- ✓ Egg shells

You can also add

- ✓ Dried leaves
- ✓ Cut up cardboard
- ✓ Pet hair and lint

DON'Ts

- ✗ Grease, oil or fat
- ✗ Salad dressing or sauces
- ✗ Rice or pasta
- ✗ Dairy products
- ✗ Fish, meat or bones
- ✗ Cat or dog feces
- ✗ Cat litter
- ✗ Ash from BBQs
- ✗ Treated wood products

Harvesting the castings

Finished compost can be expected in 3-4 months.

To harvest, put compost in piles under light. Worms will move to the centre and bottom to get away from the light.

Remove worms from compost. Place worms in fresh bedding and start again.

Use your compost on plants and gardens.

If you would like to order worms for your classroom, please contact Judy Vaughan 604-462-0679

www.compostworms.ca info@compostworms.ca