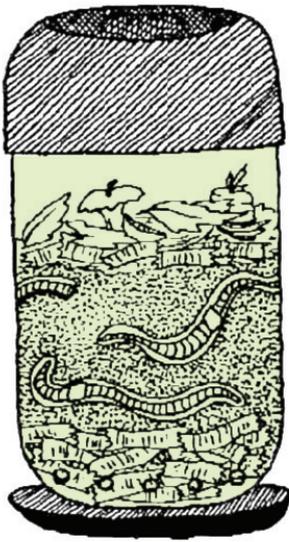


Never Underestimate the
Power of a Worm!



Observe Wonderful Worm Activity



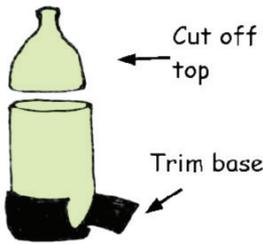
Worms play a major role in breaking down plant matter and creating fertile soil. Earthworms eat fallen leaves and other plant parts. Their droppings, or “castings,” fertilize the soil. As they tunnel into the earth, they move leaves and other organic material downward, and bring deeper soil to the surface. This tunneling and mixing aerates the soil so that plant roots and water penetrate it more easily. Observe wonderful worm activity yourself by building a worm column!



Materials

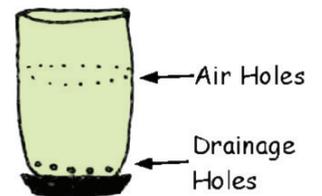
- **Two 2 liter bottles**
- **One large paper bag or sheet of brown paper** for a screen
- **15-30 red composting worms.** These can be ordered from a variety of sites online.
- **Shredded newspaper** (cut 8 –10 pages into thin strips, cut strips in half)
- **Worm food:** organic leftovers from your kitchen, garden or yard (plant material, egg shells, coffee grounds).
- **Water**

Procedure

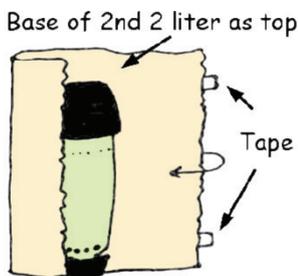


1 Remove the label from your two-liter bottle and cut the top off about 10 cm below the top. If your bottle has a base, cut the sides off for better viewing.

2 Ask your parents to help you poke at least four holes with a large hot nail. Poke low around the base of the bottle. Poke a row of air holes toward the top of the container using a smaller nail.



3 Cut the brown paper bag so it encircles the bottle and extends about 4 centimeters higher. Tape the paper around the column but leave it loose so you can easily pull it up. Worms prefer the dark, so leave the screen on the bottle unless you plan to observe the worms. Cut the bottom off the second two-liter bottle and use as a top to your worm column.



4 Fill the worm column (two-liter bottle) two-thirds full with shredded newspaper bedding. Add about a cup of water to the newspaper then fluff it until the paper strips are well separated. Make sure bedding is moist, but not saturated with water! Place worms on top of bedding. Add organic food, such as kitchen waste and leaves, to the column every 3 to 4 days. Worms feed by sucking or pumping material into their bodies, so the food should be moist and cut into small pieces.

After several months, you'll have a rich compost product that you can use in your garden.

Ask your family to consider making a “worm condo” out of a small tub, which can support a larger worm colony and can compost all of your family’s organic kitchen wastes!





Worm Composting Facts

About Worms

- Worms have no eyes, no ears and no teeth.
- Worms have five hearts and breathe through their skin.
- Red worms lay cocoons with 2-3 baby worms inside. Each cocoon is shaped like a tiny lemon and the worms come out the ends.
- If you look closely, you can often see cocoons in healthy soil. They look like the little Styrofoam pieces in potting mix except they are straw-colored.
- Worm poop makes excellent fertilizer.
- Myth: You really can't cut a worm in half and have each end grow back. So don't do it.

Vermicomposting

- Composting with the help of worms is called vermicomposting.
- Red worms (a lot smaller than earth worms) are great composters because they're the biggest eaters. They may come on their own to an outdoor compost bin and also can be purchased.
- Composting worms are specialized surface dwellers (not burrowers), typically living in very rich organic matter such as manure, compost heaps or leaf litter.
- Composting worms can eat two times their body weight each day.
- Red worms love (and can tolerate) very high levels of moisture content (80-90%), but they also require oxygen so it's important to find the right balance.
- Surface area is far more important than depth when it comes to worm bins. Tubs work much better than buckets.
- Adding crushed egg shells (or other calcium sources) can help stimulate worm reproduction.



Resources

Ohio Vermiculture Network: <http://vermicomposters.ning.com/group/ohiowormfarmersnetwork>

Red Worm Composting: <http://www.redwormcomposting.com/>

