



# Soda Bottle Compost

*Raccoon Creek Explorers Activity #34*

## **Supplies:**

- 2 liter bottle
- Sharp Knife
- Nail
- Shredded newspaper
- Dirt from outside (not potting soil)
- Grass clippings, vegetable scraps
- Small handful of dead leaves
- Flat dish to hold composter
- Spray bottle with water



## **Vocabulary:**

**Composting:** The process of recycling organic matter, such as leaves and food scraps, into fertilizer to enrich the soil

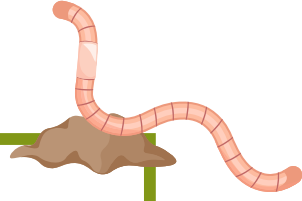
**Brown materials:** dry or woody plant material that adds bulk and help allow air to get into the compost

**Green Material:** wet or recently wet growing materials that are high in nitrogen and will supply most of the nutrients that will make the finished compost beneficial to the garden

## **Background:**

When you have food left over on your plate, or have leftover scraps from cutting vegetables, what do you do with the waste? Do you throw it away or do you compost it? If you throw it away, did you know that food can't break down properly in a landfill? When food is in a landfill buried under layers of waste it doesn't have access to proper light and oxygen which are needed for the organic waste to break down. In landfills, wasted food rots and produces methane which is a harmful gas that traps heat in the Earth's atmosphere. Instead of throwing your food scraps away you can compost them. Not only are you reducing landfill waste, compost improves the structure and health of soil by adding organic matter if it is used in your garden, To start composting you need a bin with air holes, brown material like dry leaves, straw or shredded paper, and green material like grass clippings, fruit and vegetable scraps egg shells and coffee grounds. You can not compost meat or dairy, greasy foods, pet waste, or diseased plants. These things can attract pests, create odors or can carry diseases or parasites. In this activity we will be building our own compost bin out of a soda bottle.





### Let's Get Started:

- Rise the 2 liter bottle and peel off the label
- Have a parent cut off the top of the bottle approximately 1-2 in below the neck of the bottle
- Have a parent use a nail to punch 8-10 small air and drainage holes along the sides and bottom of the bottle
- Put the bottle on a tray and fill the bottle with dirt, shredded newspaper and old leaves
- Use the spray bottle to wet the compost starter
- Add your compost! (grass clippings, vegetable scraps, coffee grounds or egg shells just no dairy or meat)
- Turn the bottle top upside down and place it in the open top of the bottle. It will act like a funnel to add a little bit of water each day to keep the contents damp
- place the composter in a spot where sunlight can reach it and cover the top of it with a kitchen towel when not in use
- Check the composter each day and stir it every few days. As the compost breaks down you can add more kitchen scraps or plant litter.

### Reflect:

After a few days, how has the compost changed over time?

How long did it take for all the compost to break down?

Is there any mold or fungus growing in the bottle?



### Apply:

Do you think your compost would break down faster if worms were added?

What will you use your compost for when it's all broken down?

### Wrap-Up:

Using a soda bottle is a small scale way to compost for the purpose of this experiment. There are many different ways to compost depending on your living situation, whether you live in an apartment or a house with a yard. You could have a compost pile in your yard or use something enclosed like a bucket or tote as long as there are holes for airflow. There must be a right mix of green and brown materials to ensure that the compost pile works correctly as without a good combinations the pile may not heat up and may take longer to break down into usable compost. Compost is ready to use when it is a rich dark brown color, smells like earth and crumbles in your hand. It is not ready when there are still recognizable food scraps, large lumps, or is still warm. Will you continue to compost after this experiment?

