

Make Your Own Mini-Composter

By teaching kids what things are biodegradable vs. what things are not biodegradable, this hands-on activity will demonstrate the decomposition processes that results in compost. Understanding how it works, watching it happen (ever so slowly) not only makes it easier for kids to comprehend, but also teaches them a valuable skill – patience!

Background

What is compost?

Compost is from biodegradable materials, such as food scraps, grass cuttings, cardboard and straw that rot and decompose easily. Rotting happens when biodegradable waste is broken down by different organisms such as bacteria, fungi, worms and insects. These organisms use the waste as food and help to turn it into compost. When this process is completed, a brown crumbly mixture is left behind. It looks and smells like soil.

Composting is a natural process of death, decay, and re-birth. It is nature's way^[1]_[SEP] of recycling.

What you need

- Empty 2 liter bottle (make sure it is transparent)
- Scissors
- Raw food scraps (vegetable/fruit peel, tea bags, coffee grounds, raw leftovers)
- Soil
- Water spray bottle

Instructions

Remove the label and rinse your soda bottle. Cut the top off the bottle (the end with the lid).

Throw a handful of soil into the bottom of the bottle. Follow this with a handful of food scraps. Repeat this process until the bottle is full, finishing with a layer of soil. Once your bottle is full, spray the top with water (it shouldn't be too wet, but should be damp).

Place your composter in a sunny spot. When the top soil dries out, you should spray it with water to maintain a constant level of moisture.

Watch and wait as your food scraps decompose and turn to soil. You will need some patience – the whole process will take about 8 weeks. Take photos of the bottle once a week so that you can compare changes that take place from week to week.

*A more advanced version of this experiment could include adding 'green' and 'brown' materials to your bottle, exploring the impact of nitrogen and carbon on the decomposition process.

**Take it a step further by growing plants in this compost, once it is completed, and compare that to another plant of the same species planted into soil you dig up from the yard (try to avoid your rich garden soil areas, the point is to observe the difference that the nutrient-rich compost makes in the growth of the plant). Water the plants equally each week, and observe the faster growth and more biomass that your composted plant will show.