

Compost in a Bottle

Equipment: Plastic bottles
Craft knife
Tape
Peat-free compost
Compost activator
Gloves and trowels
Fruit and vegetable scraps
Dry leaves or grass
Newspaper
Permanent marker



To make composters from bottles, ask each child to bring a clear, 2 litre plastic bottle (which has been thoroughly washed) to the meeting.

The bottles need to be cut around the top to allow items to be placed inside – cut a seam around the top of the bottle, using a craft knife, leaving a closed section (roughly 1-2 cm) to act as a hinge for the top – this will be re-sealed once the bottles have been filled.

Ensure all tables have been covered in newspaper to aid clearing up after the activity.

Explain to the children that in order for the compostable materials to be recycled there must be bacteria present to eat/recycle this. The bacteria are found in soil and so they need to have soil or compost in their bottles to allow the bacteria to get in (this is why compost bins need to have an open base and be located on top of soil in order to produce good compost).

Distribute the bottles to the children (either in pairs or one each) along with gloves, trowels and a small amount of compost (in trays) and compostable materials (fruit and vegetables, garden waste, newspaper etc.).

The children should all put on gloves (these should remain on for the duration of the activity to protect against cuts from sharp edges on bottles and also from contact with soil and waste materials) and trowels should be used to place compost or soil in bottles.

Instruct the group to fill their bottles as shown in the diagram (attached) using soil/compost layers alternate to waste layers. Ensure that each layer is visible as a distinct layer to make recording easier.

Once completed the contents should be covered in a final layer of compost activator and then the bottles can be sealed around the cut seam using tape.

The uppermost limit of the bottle contents should be marked on the bottle with permanent marker so that changes can be observed and bottles can also be marked with names or initials for identification.

Bottles should be kept on a windowsill or outside and monitored each week until changes are visible (lids should be removed occasionally to allow oxygen into the bottle to aid the rotting process). Ultimately the level inside the bottles should decrease as the materials rot, and the changes in the visible materials can be monitored – some materials will rot faster than others and this can be recorded. The group may also like to make predictions that can then be tested over time as the experiment continues.

This experiment will run 3-4 weeks.



Top layer: compost activator
Soil
Veg scraps
Compost activator
Soil
Newspaper
Compost activator
Soil
Veg scraps
Compost activator
Soil
Dry leaves/grass
Compost activator
Soil
Veg scraps
Bottom layer: soil