

MAKE YOUR OWN COMPOST MAKER

Experiment: PET compost maker

ACTIVITY: The compost maker experiment is an easy, cheap and vivid method of showing the decomposition of organic and inorganic material. These instructions should explain how to make a PET-compost maker and contribute ideas of how to incorporate the experiment into your class lessons.

TASK 1: Get all the material. Here is what you will need:

- 1.5 litre PET bottle
- One piece of coloured paper/construction paper (A4)
- One small piece of cloth (e.g. handkerchief)
- 0.3 litres woodchips
- 0.3 litres compost (soil from an existing composter)
- 0.3 litres rubbish (paper tissues, banana peels, bubble gum, biodegradable packing materials e.g. grocery bags, disposable tableware)
- Rubber band
- Saucer
- Cutting knife
- Drill with 5-6mm drill bit or nail (5-6mm diameter)
- Candle
- Tape

TASK 2: How to setup your PET compost maker:

1. Rinse the bottle and let dry.
2. Drill holes into the bottle (or heat up the nail over the candle and burn the holes in). Leave out the upper third of bottle.
This way the compost is provided with enough oxygen.
3. Cut off the upper third of the bottle using the cutting knife.
4. Scatter a 3-4cm layer of woodchips in the base of bottle. This way the water can seep away and waterlogging is prevented.
5. Chop the rubbish into small pieces and mix with the remaining woodchips and the compost soil.
6. Fill the mixture in the bottle and use the piece of cloth and rubber band to cover it.
7. Put the coloured paper around your composter and attach it with the tape. Microorganisms are more productive when it is dark.
8. Put everything on a saucer to contain excess water.

TASK 3: Upkeep!

1. Chop any new material (about the width and length of one finger). That way the microorganisms have a bigger surface to attack and decomposition happens faster.
2. Water the compost in your bottle once a week. But be careful: Too much water will cause the soil to start rotting. The compost should be as wet as a sponge. When you squeeze it there must only be a small amount of water dripping down.
3. Gently mix the compost once a week. That way the compost gets aerated and evenly decomposed.

Observation

The time it will take for the material you put in your compost maker to decompose can vary. Organic material will take 8 to 14 weeks to be decomposed to soil. In your compost maker this happens mainly due to microorganisms. The decomposition of inorganic material takes much longer and can only be observed during a longer period of time.