

# Compost experiment:

## Teacher's notes

### Learning aims

- Children understand that natural materials change and decay over time
- Children are able to make visual observations and record change over time
- Children are aware that composting reduces landfill waste and is good for the environment

### What you'll need

- 1 clean plastic 2 litre bottle (label and lid removed)
- Scissors
- Cellotape
- Rubber band
- Paper towel
- A4 paper
- Pen/pencil
- Water in spray bottle

### Experiment ingredients

- Brown materials (carbon)
- Garden soil
- Shredded paper
- Shredded cardboard
- Dried leaves
- Green materials (nitrogen)
- Banana peel
- Apple cores
- Fruit/vegetable peelings
- Grass clippings
- Don't add any meat or dairy to your bottle!

### What to do:

1. Get all of the materials ready to start your compost in a bottle experiment.
2. Cut off the top section of the bottle and set aside (you'll need this later).
3. Next we need to fill the bottle using equal amounts of brown and green ingredients. Layer up the bottle with a few handfuls of your chosen ingredients from the list, starting with a brown layer. Use your spray bottle to keep your ingredients moist (but not damp!). To get the best results, make sure your materials are shredded/cut into small pieces.
4. Finish filling a few centimetres from the top and then reattach the top section of the bottle with cellotape.
5. Using a paper towel and rubber band, cover the lid opening to create a breathable seal.
6. Place on a sunny windowsill with the A4 paper stuck behind. Mark the layers on the paper and make sure to add the date to the top of the paper.
7. Your experiment will last 4 weeks. Your class will need to visually check the bottle weekly, to observe changes and spray with water if it looks dry.

**Next, it's time to investigate your compost...**



## After 4 weeks, it's time to take a closer look at your compost:

### Part 1

How has the volume of materials changed over the 4 weeks? Refer to the A4 paper and layer lines marked at the start of the experiment to discuss changes and why these might have happened.

### Part 2

Pour the compost on to paper or in a tray to enable the children to investigate using their hands. Encourage them to discuss how the materials in the bottle have changed, describe the texture and colour of the compost and if it smells or not.

*Remind the children to keep their hands away from their face/mouth during the investigation and to wash their hands afterwards. Any cuts/open sores should be covered or provide gloves to wear.*

## Key questions post experiment:

- How has the volume changed?
- How much is left?
- How has the material inside the bottle changed?
- What does the compost smell like?

Key vocabulary		
EYFS	KS1	KS2
Plants	Rot/rotting	Decomposition
Soil	Soil	Medium
Water	Temperature	Temperature
Air	Brown (carbon)/ Green (nitrogen)	Carbon/ Nitrogen
	Compost	Microbes (bacteria)
	Oxygen	Anaerobic
	Water	

