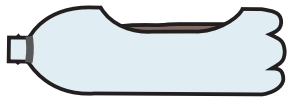




Soil is a complicated eco-system which plays a vital role in many Earth processes. But soil is a limited resource. Erosion from wind, rain and agriculture constantly removes the top layer of soil.

This releases carbon into the atmosphere, removes organic material which was good at absorbing water and washes away vital nutrients that could have made their way into crops and onto our dinner plates.

Exploring Soil Erosion



X 3

1

Cut 3 small plastic bottles in half and attach string to make 3 'buckets'.

2

Cut a large, hole in the side of 3 large bottles and add 6-7 cm of soil to each.

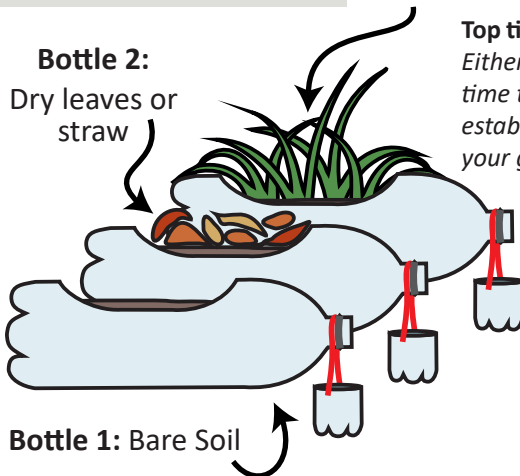
3

Set up the experiment.

Bottle 3: Grass

Bottle 2:

Dry leaves or straw



Top tip: The grass needs a good root system. Either plant seeds and give them plenty of time to grow or use a section of established grass from your garden.

Bottle 1: Bare Soil

4

Run the experiment.

Pour the same amount of water into each bottle making sure that some overflows into the 'buckets'.

Observe the colour of the water that comes out of each bottle.

Equipment

- 3 Large plastic bottles
- 3 Small clear plastic bottles
- String
- Dry leaves or straw
- Grass or grass seeds
- Water

Results

Bottle 1: Brown, murky water

Nothing is holding the soil together. The water easily carries soil particles away leading to lots of soil erosion.

Bottle 2: Cloudy water

The dry leaves or straw protect the soil. The water carries away less soil particles and less soil is eroded.

Bottle 3: Clear water

The roots from the grass hold the soil together. The water cannot carry soil particles away so barely any soil is eroded.

Top Tip: You may also notice that less water came out of bottle 3. This is because the roots are holding on to the water as well as the soil.