

# Putting Plants To The Test

KS2  
LOWER\*

## National curriculum objectives



- working scientifically: setting up simple practical enquiries, comparative and fair tests
- explore the requirements of plants for life and growth (air, light, water, nutrients from soil, and room to grow)

## Resources (you will need):

Plant pots (clear plastic cups are great for planting as you can often see the roots growing), seeds (cress or radish seeds grow quickly), compost and a range of materials e.g. soil, sand, cotton wool, paper, torn up fabric, gravel or a ripped-up sponge.



## 60 MINUTE ACTIVITY

Split the class into groups. Each group must choose a different material to sow their seeds in. They can choose from a range of materials such as soil, sand, cotton wool, paper, potting compost, water, torn up fabric, gravel or a ripped-up sponge (make sure one group plants in compost).

Learners should plant a few seeds in their pot, with their chosen material and leave on a warm, light windowsill. They should water their seeds gently and evenly each day (or everyone waters when the compost in the controlled experiment gets a little dry). Groups should look at other groups pots and make predictions.

Interestingly all the seeds should germinate. This is because seeds and bulbs have a store of food inside them so once given water and light, they will germinate. However, they will then need nutrients which the chosen planting material may not give them.

### Which plants grow the most quickly? Which look the healthiest?

Rather than simply stating that seeds in the compost got the most nutrients so are therefore more healthy, look deeper into reasons why the others didn't do so well. For example, garden soil - in such a small pot it can clog and get waterlogged. This means the plant may have too much water and/or not enough air. Sand/Gravel - water drains away very quickly so the plant may not get enough water to grow. It also doesn't contain enough nutrients. Cotton Wool/torn up fabric - These materials may provide the seed with enough moisture to germinate but don't hold any nutrients for the plant to grow healthily.

### Class reflection

We need plants to survive. Plants are really important for the planet and for all living things. They absorb carbon dioxide and release oxygen from their leaves, which humans and other animals need to breathe. Ensuring plants are healthy and flourishing is vital because almost all other organisms rely on plants for energy to keep them alive.

### Have time for a literacy link?

Before the session, adults gather pairs of twigs and leaves which match available trees and plants in the surrounding outdoor area (without breaking trees and plants). The twigs and leaves are handed out randomly and learners must first find the friend with the same item as them and then go together in search of the tree which matches their twig or leaf. When they find it, they use their senses to explore it, thinking of words that describe it and then coming up with their own tree name, as if they were an explorer finding it for the first time. On the last go, get learners to share the name they chose and why they chose it. The name should relate to the vocabulary they have been using to describe it.

### Philosopher question

Is it ever ok to stop watering a plant?

\*Year 3 and 4 objectives