

PLANT GROWTH INVESTIGATION



What you will need

Pencils, pens, paper, some packets of seeds, empty yoghurt pots and compost.

Preparation

Make sure you choose some seeds that are easy to grow. Once the seeds have germinated and grown into young seedlings you are ready to set up the investigation. You will need a number of plants to cover all the variables.

Introduction

In the Pancake Wood Challenge, the children learnt that bluebells need sunlight and water to grow. They also discovered what happens when the bluebells don't get enough light; they don't grow very well! All flowering plants need sunlight and water for healthy growth and this exercise can help to bring this learning to life.

Discussion

Explain to the children that they are going to experiment with plants to see how different conditions can affect how well they grow. You can set up this investigation in the classroom or outside in your gardening area.

There are several ways to run this study depending on which variables you choose to explore. For example if you choose to vary the amount of water the plants receive then you can carry out the investigation in the following way:



First ask the children to label their plants 1,2, 3 and 4. The first plant could be watered once per day, the second twice per day, the third three times per day and the fourth not watered at all. Alternatively you could simply measure out different amounts of water to give each plant.

Ask the children to consider what makes a fair test? If water is going to be the only variable then all the plants need to be kept together in the same place so that they all have the same access to other conditions such as light and warmth.

To make the study more complex you could create several seedling sets and explore a different variable for each set. As well as different amounts of water the variables could include different amounts of light or



different temperatures. You could split the class into groups and task each group to explore one of the three variables with their seedlings.

Make predictions

Ask the children to make some firm predictions about what might happen to each plant. Which ones will grow well? Which ones will grow badly and why? Write the predictions out so they can be reviewed later.

Investigate

Start the investigation! Give each group a set of plants to work with and ask them to keep a record of every time they water their plants. They could use a table a bit like this:

Plant	Water per day
1	✓
2	✓✓
3	✓✓✓
4	0



If the children have other variables to study then work with them to find suitable places to put each seedling.

Ask the children to observe the plants everyday to assess their general health and measure their growth. They could record their findings in a diary a bit like this:

Plant	Day 1	Day 2
1		
2		
3		
4		

Assessment

Bring the children back together to share their findings. Ask the children to explain the investigation and what the results mean. The children should find that too much water may cause the roots to rot and die and too little will cause the plant to dry out and die.

Equally, if they used the other variables they should also find that plants deprived of light will not grow well and plants that get too cold are unlikely to survive.

Ask questions to help them. Why did this plant die? Why has this plant grown so well? What happens when a plant is over watered? What happens if a plant has no light? Were the predictions correct? If not, what was different? What did they find out?

Discuss all the results and draw some conclusions about what plants need to grow healthily.

