


















Plants: What Do Plants Need to Grow?

Aim Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy. Performing simple tests. Using their observations and ideas to suggest answers to questions. To design and set up a test to find out what plants need to stay healthy.		Lesson Duration All timings are approximate.	
Success Criteria I can identify when a plant is healthy. I can give my ideas about what plants need to stay healthy. I can suggest ways to find out what plants need to stay healthy.	Key Vocabulary Seed, germination, sunlight, water, temperature, test, scientists, healthy, not healthy.		
Resources That May Need Purchasing Soil Small pots Fast growing seeds such as cress or beans Fully grown plants (one healthy, one beginning to wilt through dehydration) Cotton wool Bulbs or different seeds for class plant	Preparation Lesson Pack What Does a Plant Need to Stay Healthy? Activity Sheet - one per child, or A3 per group Class Plant Diary - one for whole class Knowledge Organiser - per child (this will be used in each lesson)		

Prior Learning: In year 1, children learnt the names of a variety of plants, including evergreen and deciduous trees. They also learnt to identify the basic structure of a plant. You may wish to consolidate any Y1 learning, prior to starting this unit, using the [Perfect Plants eBook](#).

Learning Sequence

	Remember It: Use the Lesson Presentation to recap key learning from Y1, including plant names and the parts of a plant. Allow the children a minute to discuss each answer.	
	Growing, Growing, Grown: Introduce children to the Growing, Growing, Grown eBook , which they will be using to learn more about plants during this unit. Discuss the front cover and contents page and read up to the end of page 6 together. Introduce the Knowledge Organisers and look at the key vocabulary together.	
	Healthy or Not? Show the children the examples of the healthy and wilting plant (if not using real plants, use the photographs on the Lesson Presentation). Allow the children a little time to look carefully at each plant, then ask the key questions shown. Discuss with the children how they can identify a healthy plant. Can the children identify a healthy plant and explain how they know it is healthy?	
	What Does a Plant Need to Grow and Stay Healthy? Look at the examples of seeds and unhealthy plants on the Lesson Presentation . Ask the children to discuss in pairs what they think a plant needs to grow and stay healthy and to write their ideas on their whiteboards. Ask the children to share their ideas and make a note of these somewhere visible. Ask: How can we find out what a plant needs to grow and stay healthy? Discuss why growing plants under different conditions would be a good way to find out. Together with the children, choose the conditions they think are most important. These should include light, water, the right temperature and soil. Make a note of these for use in future lessons. Can the children explain what they think a plant needs to grow and stay healthy?	
	Testing Our Ideas: Discuss with the children how they can set up their test, using the prompts on the Lesson Presentation . Can the children suggest ways to carry out the test?	

	<p>Setting Up a Test: Children plant their seeds in mixed groups. Firstly, they can plant one 'everything' pot that will have everything the children think that plants need. They can then plant 4 more pots, with one pot for each condition they are testing (no light, no water, the wrong temperature, no soil). Put each pot into your chosen place for each set of conditions. You will have the following plants:</p> <ol style="list-style-type: none"> 1. A plant planted in soil, in a warm place, with light and with water. 2. A plant with no soil (e.g. planted in cotton wool) in a warm place, with light and with water. 3. A plant planted in soil, in a warm place, with light, that stays unwatered. 4. A plant planted in soil, in a warm place, with water, but no light. 5. A plant planted in soil, with light and water, but kept in a cold place. <p>Note: Ensure that children have adequate adult supervision while planting the seeds. In preparation for Lesson 4, you may find it useful to also plant the same test seeds yourself separately. These can then be used to model observations and record results.</p> <p>Take a photograph of the first plant with the correct conditions as it is today, to print and add to the Class Plant Diary in the starting week. It is suggested that this plant is observed over a period of a few months.</p>	
	<p>What We Did: Children complete the first page of the What Does a Plant Need to Stay Healthy? Activity Sheet, drawing pictures to show what each pot will have and writing what each one will be missing. You may wish for children to complete this independently, or enlarge to A3 for use as a small group task.</p>	
	<p>What Do We Think Will Happen? Ask the children to discuss their ideas about what they think will happen for each pot, using the prompts on the Lesson Presentation. They can then fill in the 'What We Think Will Happen' section of the What Does a Plant Need to Stay Healthy? Activity Sheet. They will come back to their ideas in a future lesson.</p> <p>Note: Depending on your school's preference, you may wish to begin to introduce the term 'prediction'.</p> <p>Can the children give their opinions on what they think will happen and why?</p>	

Explore it

Grow it: If outside space allows, children could plant and grow their own fruit or vegetables, such as strawberries, beans or carrots, and research how to look after these accordingly. Smaller plants could be grown indoors.

Observe it: Children observe plants that grow in their local area and the conditions they grow in (lots of light, wet weather, etc.). Children could record their observations through photographs or drawings.

Reason it

Children discuss **Reasoning Card 1 What Do Plants Need to Grow?** Children explain how they know a plant is healthy or unhealthy and how to find out if lots of water would help a plant to grow healthily.

Assessment

Scientific Knowledge	
Working Towards the Expected Level With support, children can suggest what they think a plant needs to grow and stay healthy.	Children:
Working At the Expected Level Children can suggest what they think a plant needs to grow and stay healthy.	Children:
Working At Greater Depth Children can suggest what they think a plant needs to grow and stay healthy. They begin to understand how a lack of these things can affect a plant. They can also notice links between cause and effect with support.	Children:
Working Scientifically	
Working Towards the Expected Level With support, children can begin to recognise ways in which they might answer scientific questions. They can carry out simple practical tests, using simple equipment.	Children:
Working At the Expected Level Children can begin to recognise ways in which they might answer scientific questions. They can carry out simple practical tests, using simple equipment.	Children:
Working At Greater Depth Children can recognise ways in which they might answer scientific questions and suggest ways to test these. They can independently carry out simple practical tests, using simple equipment.	Children: