



**Science: Plants (Biology)**

Areas of study	EYFS	Y1	Y2	Y3	Y4	Y5	Y6
<b>Core substantive knowledge</b>	<ul style="list-style-type: none"> <li>Plant seeds and care for growing plants</li> <li>Understand the key features of the life cycle of a plant</li> <li>Developing an understanding of growth, decay and changes over time</li> <li>Begin to group plants/animals</li> <li>Begin to understand the need to respect and care for the natural environment and all living things.</li> </ul>	<ul style="list-style-type: none"> <li>Describe the basic needs of plants for survival and the impact of changing these.</li> <li>Identify the main changes as seeds and bulbs grow into mature plants</li> <li>Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees</li> <li>Identify and describe the structure of different parts of flowering plants as well as trees.</li> </ul>	<ul style="list-style-type: none"> <li>Observe and describe how seeds and bulbs grow into mature plants</li> <li>Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy</li> </ul>	<ul style="list-style-type: none"> <li>Identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers</li> <li>Explore the requirements of plants for life and growth (air, light, water, nutrients from soil, and room to grow) and how they vary from plant to plant</li> <li>Investigate the way in which water is transported within plants</li> <li>Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.</li> </ul>	Guides/keys to identify local plants (Living things and their habitats)	Plants and reproduction (Living things and their habitats)	Plants and classification (Living things and their habitats)



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<b>Cross-curricular links</b>	English - talk about similarities and differences Art - drawing Geography - local area	Geography - our local area English - Science - Living things and their habitats Science - seasonal changes	Geography - local habitats. English - "From Seed to Sunflower". "How do Plants Grow?" "Botany Book for Kids." Poem writing Non-chronological report (lifecycle of a plant).	English - writing based on "The Secret Garden" and "Greta and the Giants".			
<b>Range and depth of scientific knowledge-substantive knowledge</b>	Identify and name some familiar plants Identify stem, leaf, flower trunk, branch, seeds, bulbs.  Understand plants need sunlight and water to grow.	Identify and name many common plants and trees growing locally  Identify leaves, flowers (blossom), petals, fruit, roots, bulb, seed, trunk, branches, stem  Identify deciduous and evergreen (coniferous) plants.	Understand the requirements of plants for germination, growth and survival, as well as the processes of reproduction in plants.  Understand that plants germinate and grow at different rates. Some plants are better suited to growing in full sun and some grow better in partial or full shade. Plants also need different amounts of water and space to grow well and stay healthy  Note: seeds and bulbs need water to grow but most do not need light; seeds and bulbs have a store of food inside them	Understand the relationship between structure and function: the idea that every part has a job to do. Understand the role of the roots and stem in nutrition and support, leaves for nutrition and flowers for reproduction.	Re-visiting of plant identification	Re-visiting of plant reproduction	Re-visiting of classification of plants



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<b>Range and depth of disciplinary knowledge.</b>	<p>Observe and comment on change</p> <p>Record what is seen through drawings.</p> <p>Discuss similarities and differences</p>	<p>Observe closely with magnifying glasses</p> <p>Record of changes observed through annotated diagrams</p> <p>Compare and contrast plants</p>	<p>Observe and record, with some accuracy, the growth of a variety of plants from a seed or bulb,</p> <p>Compare and contrast plants' growth in different conditions.</p>	<p>Compare the effect of different factors on plant growth, such as the amount of light, the amount of fertiliser;</p> <p>Understand how seeds are formed as part of a stage of plant life cycles</p> <p>Identify how the seeds are dispersed.</p> <p>Identify how water is transported in plants</p>			
<b>Scientific enquiry-disciplinary knowledge</b>	<p>Observation over time</p> <p>Identifying, grouping and classifying</p>	<p>Observation over time</p> <p>Identifying, grouping and classifying</p>	<p>Comparative test to show that plants need light and water to stay healthy.</p>	<p>Observation-water transportation in plants (white carnations into coloured water)</p> <p>Identifying, grouping and classifying</p>			
<b>Organisation and communication</b>	<p>Drawings</p> <p>Photos</p>	<p>Diagrams</p> <p>Photos</p> <p>Venn diagrams</p>	<p>Diagrams</p> <p>Charts</p> <p>Explanations</p>	<p>Diagrams</p> <p>Explanations</p> <p>Charts</p>			