



Plants

<u>Nursery</u>	<u>Reception</u>	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>																
<p>Comment and ask questions about their familiar world, such as the place where they live or the natural world.</p> <p>Show care and concern for living things and the environment.</p> <p>Pupils will recognise: Lavender, rosemary, mint, daffodils, dandelion, grass</p> <p>Pupils will recognise: Spider bee, ladybird, worm</p> <p>Developing an understanding of growth, decay and changes over time.</p>	<p>Explore the world around them, making observations and drawing pictures of plants.</p> <p>Pupils will know: blossom, daisies, buttercups, tulips, lime, apple trees, silver birch</p> <p>Pupils will recognise: Butterfly, fly, dragonfly, crane fly, beetle, snail, slug</p> <p>Understands some important processes and changes in the natural world around them.</p>	<p>Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees.</p> <p>Identify and describe the basic structure of a variety of common flowering plants, including trees.</p> <p><u>Pupils will:</u> Know the names and identify the trees in the school grounds:</p> <p>Silver Birch, Oak tree, fir trees, ivy, Willow.</p> <p>Name : roses, daffodils, tulips, nettles, dandelions, daisies, buttercups, moss, ferns</p> <p>Label on a diagram: stem, petals, roots, leaves, trunk, branch</p>	<p>Observe and describe how seeds and bulbs grow into mature plants.</p> <p>Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.</p> <p><u>Pupils will:</u> Grow seeds from a sunflower, cress. Use the word reproduction, seedling, young plant.</p> <p>Grow plants from bulbs. https://littlemuddyboots.co.uk/bulb-planting-and-root-growth/</p> <p>Know that a plant needs:</p> <ul style="list-style-type: none"> • Light • Soil • Water • Suitable warmth • food <p><u>Pupils will:</u> Conduct comparative tests on the correct conditions for growth.</p>	<p>Name the parts of the flower in greater depth:</p> <p><u>Pupils will:</u></p> <p>Know recognise and label:</p> <table style="width: 100%; border: none;"> <tr> <td>Stamen</td> <td>Style</td> </tr> <tr> <td>Filament</td> <td>Stigma</td> </tr> <tr> <td>Ovary</td> <td>Anther</td> </tr> <tr> <td>Ovule</td> <td>Carpel</td> </tr> <tr> <td>Stem</td> <td>Leaf</td> </tr> <tr> <td>Petal</td> <td>Trunk</td> </tr> <tr> <td>Branch</td> <td>Twig</td> </tr> <tr> <td>Roots</td> <td></td> </tr> </table> <p>Identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers.</p> <p><u>Pupils will know:</u></p> <p>The petals attract the insects. The leaves produce food. The stamen is made up of 2 parts: The anther produces pollen. The filament holds the anther up. The style is the tube that leads to the ovary The stigma collects dry pollen on its sticky surface The ovary contains the ovule</p>	Stamen	Style	Filament	Stigma	Ovary	Anther	Ovule	Carpel	Stem	Leaf	Petal	Trunk	Branch	Twig	Roots	
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				<p>The ovule is the basis of the new seed.</p> <p>The bark protects the tree</p> <p>The stem carries water and nutrients.</p> <p>The roots absorb water. Explore the part that flowers play in the life cycle of flowering plants, including pollination, germination, fertilisation, seed formation and seed dispersal.</p> <p><u>Pupils will:</u></p> <p>Plant seeds and observe germination timings.</p> <p>Use their knowledge of the parts of a flower to learn about pollination.</p> <p>As above for fertilisation.</p> <p>Look at natural ways of seed dispersal eg. bird droppings, wind, transported on the coats of animals etc.</p>
<u>Scientists</u>		<u>Scientists</u>	<u>Scientists</u>	<u>Scientists</u> George Washington Carvell
<u>Enrichment</u>		<u>Enrichment</u>	<u>Enrichment</u>	<u>Enrichment</u>
<p><u>Year 4</u></p> <p>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.</p>	<p><u>Year 5</u></p>	<p><u>Year 6</u></p> <p>Links to Living things and their habitats.</p>	<p><u>Year 7</u></p> <p><u>Key Concept:</u> Organisms are made of one or more cells, which need a supply of energy and molecules to carry out life processes.</p>	

<p><u>Pupils will:</u> Conduct <u>fair tests</u> to demonstrate the ideal conditions for growth. <u>Constant and Independent variable will be introduced.</u> Children will be guided through choice of variables and supported through the fair testing process.</p> <p><u>Log boxes will be used to collect data for light and temperature variables.</u></p> <p>Investigate the way in which water is transported within plants</p> <p><u>Pupils will:</u> Compare watered and non-watered plants and observe the results. White carnations and food colouring to show the transportation of water.</p>			<p>To understand the reactants in and products of photosynthesis.</p> <p>Pupils will: Know the equation for photosynthesis and use it to identify factors needed for plant growth.</p>
<u>Scientists</u>	<u>Scientists</u>	<u>Scientists</u>	<u>Scientists</u>
<p><u>Enrichment</u> Birmingham Botanical Gardens workshops</p>	<u>Enrichment</u>	<u>Enrichment</u>	<u>Enrichment</u>
<p><u>Possible careers:</u> Brewer, baker, sportsperson, gardener, food scientist</p>			
<p><u>Common misconceptions</u></p>			

Year groups	Vocabulary/Statements
Birth to 3	Explore natural materials, indoors and outside
Nursery	plant, leaf, stem, branch, root, bark, flower, petal, seed, berry, fruit, vegetable, bulb, plant, hole, dig, water, weed, grow, shoot, die, dead, soil, names of plants they grow
Reception	tree, bush, herb, names of plants they see (Reception - Living things and their habitats)
Year 1	leaf, flower, blossom, petal, fruit, berry, root, seed, trunk, branch, stem, bark, stalk, bud, names of trees in the local area, names of garden and wild flowering plants in the local area
Year 2	light, shade, Sun, warm, cool, water, space, grow, healthy, bulb, germinate, shoot, seedling names of plants in local habitats and micro-habitats (Y2 - Living things and their habitats)
Year 3	photosynthesis, pollen, insect/wind pollination, male, female, seed formation, seed dispersal (wind dispersal, animal dispersal, water dispersal), air, nutrients, minerals, soil, absorb, transport
Year 4	classification, classification keys (Y4 - Living things and their habitats)
Year 5	life cycle, reproduce, sexual, fertilises, asexual, plantlets, runners, tubers, cuttings (Y5 - Living things and their habitats)
Year 6	flowering, non-flowering, mosses, ferns, conifers (Y6 - Living things and their habitats)
KS3	Reproduction in plants, including flower structure, wind and insect pollination, fertilisation, seed and fruit formation and dispersal, including quantitative investigation of some dispersal mechanisms