

## Year 3 Science Curriculum

Working scientifically links   Rubric/PCMD opp.   Key Vocabulary

### Plants

**What's the big picture?** Recap the Knowledge Organiser from Year 2 to remind children of prior learning. Use this as a retrieval game to aid the working memory and then re teach specific vocabulary that has been forgotten. Ch to generate their own questions at the start of the topic.

**Prior learning:**

Observe and describe how seeds and bulbs grow into mature plants. (Y2 - Plants)

Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy. (Y2 - Plants)

National Curriculum Principles	Objectives	Knowledge and key Vocabulary	Reading opportunities	Technology
Pupils should be taught to: Identify and describe the functions of different parts of flowering plants, roots, stem/trunk, leaves and flowers	To know the function of different parts of flowering plants and trees.	Different parts of a plant have different functions. <b>Roots</b> - carry water and nutrients to the stem, anchor plant. <b>Trunk/Stem</b> - keeps plants upright, carries water and nutrients to different parts of a plant. <b>Flower</b> - reproduction of plant, attracts <b>pollinators</b> <b>Leaves</b> - make food for plant from the sun's energy	The Hidden Forest (Jeannie Baker)  George and Flora's Secret Garden (Jo Elworthy)	
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	I know what different plants need to help them survive.	What does a healthy plant look like? Grow plants in different conditions with varying amounts of air, light, water, <b>nutrients</b> from soil and room to grow. ( <b>predict, ask questions, comparative test</b> ). Measure height of stem and record in tables. <b>Use of rubric to guide investigations.</b> <b>Investigation:</b> <b>Make systematic and careful observations</b> <b>Take accurate measurements using standard units</b>		

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		<p>Use data loggers            Gather record and present data in a variety of ways            Record findings using simple scientific language use line graphs to record growth            Produce labelled diagrams            Use results to draw simple conclusions, predict new values, suggest improvements and raise further questions.            Use scientific evidence to support findings   Focus on results and use of technology to record experiments.</p> <p>Observe what happens to plants over time when the leaves or roots are removed.</p>		
Investigate the way in which water is transported within plants	I know how water is transported within plants	<p>Put flowers in coloured water (use ink not food colouring) to show how water is transported in plants and dissect a flower stem to see how water is transported            Ask questions, make observations, record findings, produce labelled diagram            Writing conclusions skills - PCMD and Double page Spread</p>		
Explore the part that flowers play in the life cycle	I know the plant life cycle especially the importance of flowers	<p>Observe flowers carefully to identify pollen. Dissect flowers to show different parts involved in reproduction.</p> <p>Children order cards showing the flowering plant life cycle - discussion generated about what is the correct order and why.</p> <p>Research insect and wind pollination</p> <p>Look at features of seeds to decide their method of dispersal</p>		

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### Famous scientists

Joseph Banks - botanist

### Common misconceptions

Some children may think:

- plants eat food
- food comes from the soil via the roots
- flowers are merely decorative rather than a vital part of the life cycle in reproduction
- plants only need sunlight to keep them warm
- roots suck in water which is then sucked up the stem.

### Enquiry ideas

<u>Comparative tests</u>	<u>Identify and classify</u>	<u>Observations over time</u>	<u>Pattern seeking</u>	<u>Research</u>
How does the length of the carnation stem affect how long it takes for the ink to dye the petals?	How many different ways can you group our seed collection?	What happens to celery when it is left in a glass of coloured water?	What colour flowers to pollinating insects prefer?	What are all the different ways that seeds disperse?
Which conditions help seeds germinate faster?		How do flowers in a vase change over time?		