



The Canons CE Primary School



Year 3 – Plants		
Prior Learning	In Year 3	Future Learning
In Year 1 children will be taught to: - describe how flowers grow - compare flowers and plants to identify similarities and differences - name the different parts of a flower e.g. root, stem, leaf - identify and name a variety of common wild and garden plants and trees, and those classified as deciduous and evergreen. In Year 2 children will be taught to: - find out and describe how plants need water, light and a suitable temperature to grow and stay healthy - identify what a seed needs to germinate - describe how seeds and bulbs grow into mature plants.	In Year 3 children will be taught to: - describe the process of pollination - describe how seeds are dispersed - describe how seeds are formed - describe how water is transported through a plant - identify the requirements of a plant for life and growth (air, water, light, nutrients from soil, and room to grow) and how they vary from plant to plant - describe how the structure of the plant links to its function - describe the functions and different parts of a flowering plant - identify the different parts of a flowering plant (roots, stem/trunk, leaves, flowers) Key Vocabulary flower, seed, leaf, stem, roots, petal, pollen, life cycle, dispersal, fertilisation, germination, ovary, ovule, sepal, stamen, anther, filament, stigma, style, photosynthesis, pollen, insect/wind pollination, seed formation, seed dispersal, wind dispersal, animal dispersal, water dispersal	In Year 5 children will be taught to: - describe asexual reproduction in plants - identify the processes of sexual reproduction in plants - describe the similarities and differences between the life cycles of different plants. <i>(All living things and their habitats)</i>
Famous Scientists	Common Misconceptions	Possible Evidence to be Secure
- Joseph Banks – botanist - Jan Ingenhousz - Barbara McClintock (1902 – 1992) - Joseph Banks (1743 – 1820) - Gregor Mendel (1822 -1884) - Carl Linnaeus (1707 – 1778) - George Forrest (1873 – 1932)	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.	Children can: - explain the function of the parts of a flowering plant - describe the life cycle of flowering plants, including pollination, seed formation, seed dispersal, and germination - give different methods of pollination and seed dispersal, including examples.



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Working Scientifically

National Curriculum Statutory Requirements

1. Ask relevant questions and use different types of scientific enquiries to answer them.
2. Set up simple practical enquiries, comparative and fair tests.
3. Make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment, including thermometers and data loggers.
4. Gather, record, classify and present data in a variety of ways to help in answering questions.
5. Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables.
6. Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.
7. Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions.
8. Identify differences, similarities or changes related to simple scientific ideas and processes.
9. Use straightforward scientific evidence to answer questions or to support their findings.

Highlighted = main focus during this topic

Teaching Ideas – Different Types of Scientific Enquiry

Comparative and Fair Testing	Identifying and Classifying	Observation Over Time	Pattern Seeking	Research
Which conditions can help seeds germinate faster? How does the length of the carnation stem affect how long it takes for the food colouring to dye the petals?	How many different ways can you sort a seed collection?	What happens to celery when it is left in a glass of coloured water? How do flowers in a vase change over time?	What colour flowers do pollinating insects prefer?	What are all the different ways that seeds disperse?

Teaching Ideas – How Pupils Could Work Scientifically

Teaching Ideas – Possible Evidence to be Secure

(Bracketed Number = National Curriculum Statutory Requirement Link)

- Observe what happens to plants over time when the leaves or roots are removed. (3)
- Observe the effect of putting cut white carnations or celery in coloured water. (3)
- Investigate what happens to plants when they are put in different conditions e.g. in darkness, in the cold, deprived of air, different types of soil, different fertilisers, varying amount of space. (3, 4, 7)
- Spot flowers, seeds, berries and fruits outside throughout the year. (3)
- Observe flowers carefully to identify the pollen. (3)
- Observe flowers being visited by pollinators e.g. bees and butterflies in the summer. (3)
- Observe seeds being blown from the trees e.g. sycamore seeds. (3)
- Research different types of seed dispersal. (9)
- Classify seeds in a range of ways, including by how they are dispersed. (4)
- Create a new species of flowering plant. (9)

Children can:

- explain observations made during investigations (4, 7, 9)
- look at the features of seeds to decide on their method of dispersal (9)
- draw and label a diagram of their created flowering plant to show its parts, their role and the method of pollination and seed dispersal. (9)