



Leamington Primary Science Knowledge Organiser

Year 4 – Plants – How did the blossom become an apple?

Strand – Biology



What I should already know	What I will learn	Important words to help me. (vocabulary)	Ideas for Scientific Enquiry																		
<p>- That plants need water, air, space, nutrients and light to be able to grow and stay healthy.</p> <p>- Photosynthesis is a chemical reaction that takes place inside a plant, producing food for the plant to survive.</p> <p>- The roots of a plant play a vital role in sucking up the water and nutrients from the soil.</p>	<p>What do parts of a flowering plant do?</p> <p>- I will learn that there are male and female parts of a flower.</p> <p>- The male part produces pollen and consists of 2 parts: anther and stalk/filament.</p> <p>- The petals are brightly coloured to attract bees and insects for pollination.</p> <p>How do plants survive?</p> <p>- I will explore the requirements of plants for life and growth and how they vary from plant to plant.</p> <p>- I will investigate the way in which water is transported within plants.</p> <p>What is the life cycle of a flowering plant?</p> <p>- I will learn which part of the flowers play an important role in the life cycle of flowering plants, including germination, pollination, seed formation and seed dispersal.</p> <p>- Germination is the development of a seed into a plant.</p> <p>- Pollination is the transfer of pollen from a male part of a plant to a female part of a plant, later enabling fertilisation and the production of seeds.</p> <p>- Seed formation is the formation of the seed in part of the process of reproduction in seed plants.</p> <p>- Seeds can be dispersed in different ways: Wind dispersal: dandelions have fruits with parachutes of hairs that catch the wind and are blown about. Water dispersal: fruits which float, such as those of the water lily and the coconut palm are carried by water. When animals travel to other areas, they transport seeds. When animals excrete their waste, seeds end up in other locations.</p>	<table border="1"> <tr> <td>Pollination</td> <td>The transfer of pollen to a stigma, ovule, flower, or plant to allow fertilisation.</td> </tr> <tr> <td>Germination</td> <td>The development of a plant from a seed.</td> </tr> <tr> <td>Photosynthesis</td> <td>The process that plants produce their own food.</td> </tr> <tr> <td>Seed dispersal</td> <td>The movement, spread or transport of seeds away from the parent plant.</td> </tr> <tr> <td>Anther</td> <td>The male part of a plant.</td> </tr> <tr> <td>Pistil</td> <td>The female part of a plant.</td> </tr> <tr> <td>Fertilisation</td> <td>The action or process of fertilising an egg or a female animal or plant.</td> </tr> <tr> <td>Life cycle</td> <td>The series of life changes in an animal, plant or human.</td> </tr> <tr> <td>Flower</td> <td>The part of the plants that blossoms.</td> </tr> </table>	Pollination	The transfer of pollen to a stigma, ovule, flower, or plant to allow fertilisation.	Germination	The development of a plant from a seed.	Photosynthesis	The process that plants produce their own food.	Seed dispersal	The movement, spread or transport of seeds away from the parent plant.	Anther	The male part of a plant.	Pistil	The female part of a plant.	Fertilisation	The action or process of fertilising an egg or a female animal or plant.	Life cycle	The series of life changes in an animal, plant or human.	Flower	The part of the plants that blossoms.	<p><u>Classifying and Grouping</u></p> <p>- Explore the male and female parts of a flowering plant.</p> <p><u>Secondary Sources</u></p> <p>- Use secondary sources to gain further information on the jobs of the different parts of the plant.</p> <p><u>Observation Overtime</u></p> <p>- Observe the changes overtime as a plant grows in different conditions.</p> <p><u>Pattern Seeking</u></p> <p>- Investigate how seeds can be dispersed in different ways such as through wind, water, animals and explosion.</p> <p>- Discover the importance of the role of the weather in the reproduction of plants and flowers.</p> <p>- Explore the different stages of the life cycle of a plant in detail. Including germination, pollination, seed formation and seed dispersal.</p>
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Interesting Facts																					
<p>- Bamboo is an extremely rapid growing plant.</p> <p>- Friedrich Froebel introduced the concept of gardens for children, where they could participate in all aspects of growing, harvesting, and preparing nutritious, seasonal produce.</p>																					

