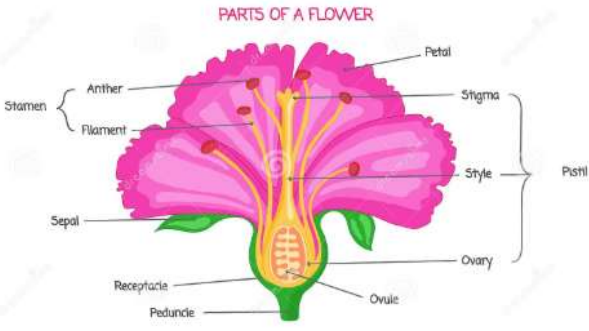


## Learning Organiser for Year 3 - Plants

National Curriculum Summary Key Subject Concept		Key Questions
<ul style="list-style-type: none"> <li>Identify and describe the functions of different parts of flowering plants: roots, stem, leaves and flowers</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>		<p>What does each part of the flowering plant do?</p> <p>How do plants carry water?</p> <p>How do the parts of the flower support pollination?</p>
Key Vocabulary	Definition	Key Facts
Nutrition	The ingredients needed for health and growth	<ul style="list-style-type: none"> <li>The petals on a flower are usually bright in order is to attract bees and other insects so that they can collect pollen to make seeds.</li> <li>Seeds grow to make new plants. This is called germination.</li> <li>Leaves use carbon dioxide and sunlight to make food for the plant.</li> <li>The stem carries water and other nutrients from the roots to the rest of the plant. It helps to keep the plant upright so that the sunlight can reach it more easily.</li> <li>The roots help to 'anchor' the plant in the soil. They also absorb water and nutrients from the soil for the stem to carry to the rest of the plant.</li> <li>The flower's job is to create seeds so that new plants can grow.</li> <li>Pollination occurs when pollen from the anther is transferred to the stigma by bees and other insects. The pollen then travels down and meets the ovule. When this happens, seeds are formed. This is called fertilisation.</li> <li>Seeds are then dispersed so that germination can begin again.</li> </ul>
Reproduction	The production of offspring	
Absorb	Take in or soak up	
Mineral	Material that does not come from an animal or a plant	
Pores	Tiny opening for gases to pass through	
Stigma	Top of the centre part of the flower which takes in pollen	
Stamen	The stamens of a flower are the small, delicate stalks which grow at the flower's centre and produce pollen.	
Style	The stalk of a carpel, bearing the stigma	
Anther	The terminal part of a stamen consisting usually of two lobes each containing two sacs in which the pollen matures	
Filament	The filament is the stalk that holds the anther.	
Sepal	The sepal is a support structure for the petal. It is typically green and helps to protect and hold up the petal. All the sepals together are called the calyx.	

Working Scientifically Skills	Diagrams/Charts/Pictures
<p>Setting up simple practical enquiries, comparative and fair tests</p>	
<p>Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment</p>	
<p>Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables</p>	
<p>Identifying differences, similarities or changes related to simple scientific ideas and processes</p>	
Possible Experiences	Biographical Information
<ul style="list-style-type: none"> <li>• How does the amount of water/light/soil affect the height/number of leaves on a plant?</li> <li>• How is seed germination affected by seed size/temperature/moisture/soil?</li> <li>• How does the amount of space for roots affect the size of a plant?</li> <li>• What affects the speed that water rises up a plant stem?</li> </ul>	<h3 style="color: green;">Who was Joseph Dalton Hooker?</h3> <p>Though you may not know his name, Joseph Dalton Hooker was one of the finest scientists of the 19th century. His father was a well-known botanist called William Jackson Hooker. When Joseph was a young boy he would listen to his father teach students about plants and it made him want to learn about them too. Joseph loved hearing about explorers like Captain Cook and would one day go on expeditions of his own.</p> <p>He studied medicine at Glasgow University and became a doctor in 1839. He went on many expeditions to places like the Antarctic, Australia, New Zealand, India and Nepal. He was a brilliant plant collector and brought many new plants back to the UK. He was also very interested in why plants grow where they do (called 'plant distribution'). He realised that if he could work out why a plant grows in a certain place then it might also grow somewhere else in the world that was similar. This helped when Britain wanted to grow plants or crops that made money, things like tea plants and the rubber tree.</p> <p>Joseph Dalton Hooker helped to change how scientists were seen - he made them more like the scientists we know today.</p> <div style="background-color: green; color: white; padding: 5px; writing-mode: vertical-rl; transform: rotate(180deg);">Joseph Dalton Hooker</div>