















Year Group:	FS	Strand: 2	How does a sunflower grow?
BIOLOGY			
<b>Key NC Reference and Objectives</b>	<ul style="list-style-type: none"> <li>Observes the growth of a flower</li> <li>Name the basic parts of the plant</li> </ul>		
<b>Enquiry Approaches and Skills in Science</b>	<div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> <p><b>ENQUIRY APPROACHES</b></p> <ul style="list-style-type: none"> <li><b>Comparative / fair testing</b> Changing one variable to see its effect on another, whilst keeping all others the same. </li> <li><b>Research</b> Using secondary sources of information to answer scientific questions. </li> <li><b>Observation over time</b> Observing changes that occur over a period of time ranging from minutes to months. </li> <li><b>Pattern-seeking</b> Identifying patterns and looking for relationships in enquiries where variables are difficult to control. </li> <li><b>Identifying, grouping and classifying</b> Making observations to name, sort and organise items. </li> <li><b>Problem-solving</b> Applying prior scientific knowledge to find answers to problems. </li> </ul> </div> <div style="width: 48%;"> <p><b>ENQUIRY SKILLS</b></p> <ul style="list-style-type: none"> <li><b>Asking questions</b> Asking questions that can be answered using a scientific enquiry. </li> <li><b>Making predictions</b> Using prior knowledge to suggest what will happen in an enquiry. </li> <li><b>Setting up tests</b> Deciding on the method and equipment to use to carry out an enquiry. </li> <li><b>Observing and measuring</b> Using senses and measuring equipment to make observations about the enquiry. </li> <li><b>Recording data</b> Using tables, drawings and other means to note observations and measurements. </li> <li><b>Interpreting and communicating results</b> Using information from the data to say what you found out. </li> <li><b>Evaluating</b> Reflecting on the success of the enquiry approach and identifying further questions for enquiry. </li> </ul> </div> </div>		
<b>Key Investigation</b>	<ul style="list-style-type: none"> <li>Plant and observe the growth of a sunflower  <b>Enquiry Approach: Observing over time</b>  <b>Enquiry Skills: Observing and measuring and recording data in drawings or photographs</b>  <b>Guidance:</b>            Children plant sunflower seeds (between April and May in pots). Children look after the plants by watering them. Children observe the growth and could draw pictures or take photographs of the growing plants. Children could keep a sunflower diary as a class and take photos daily to make into a video.         </li> </ul>		
<b>Other investigations and activities</b>	<ul style="list-style-type: none"> <li>Observe and explore different plants in the school grounds and local area.  <b>Enquiry Approach: Identifying, grouping and classifying</b>  <b>Enquiry Skills: Observing and recording data in drawings or photographs</b>  <b>Guidance:</b>            Children could take a nature walk around school exploring different plants, flowers and trees we may find in our school grounds. Children could draw pictures of plants found in a school area or take photographs of what they see.         </li> <li>Naming the key parts of a plant  <b>Enquiry Approach: Identifying, grouping and classifying</b>  <b>Guidance:</b>            Children can name the key parts of a plant (leaf, flower and petal). Children could draw or paint different flowers. Children may observe a range of different plant identifying leaves, flowers 2 and petals.         </li> </ul> <p><b>Provision Areas:</b>          Soil pit with tools          Garden Centre – seeds/artificial flowers/spades/gloves          Raised bed outside for digging</p>		
<b>Plants to be grown:</b>	Sunflowers		
<b>New Key Vocabulary</b>	<b>Sunflower:</b> a plant with green leaves and a large yellow flower. <b>Leaf/Leaves:</b> <b>Flower:</b> <b>Petal:</b> <b>Plant:</b> is a living things that grows in the ground.		
<b>Core substantive knowledge and</b>	The name Sun Flower is a direct translation from the botanical name Helianthus annus. Heli meaning 'sun' and anther meaning 'flower'.		

<p><b>background teacher knowledge:</b></p>	<p>As soon as the flower forms and opens, you can watch it ‘turn’. Growing in this way, following the path of the sun across the sky is called ‘phototropism’ or ‘heliotropism’. In fact, the Italian word for sunflower ‘girasole’ literally means ‘turning sun’.</p> <p>Top Tips for growing sunflowers:</p> <ul style="list-style-type: none"> <li>• Choose a sunny spot and get the soil ready by digging it over, removing weeds and raking to get a fine soil texture (it bit like crumble topping!)</li> <li>• Make 2 centimetre holes, 30 centimetres apart and drop a seed in each. Cover them up and give plenty of water.</li> <li>• Watch out for slugs as soon as your seedlings appear!</li> <li>• When they reach 30-45 centimetre in height, put a layer of Organic Matter around, but not touching, the stems to a depth of 10cm.</li> <li>• Support the stem as it gets taller by tying it to a cane.</li> <li>• Keep watering regularly</li> </ul>
<p><b>Prior Knowledge</b></p>	<p>Basic understanding of what plants are and where they grow.</p>
<p><b>Assessment</b></p>	<p>Thorough assessment of outcomes in books and folders and quizzes, also supported by observations and questioning in lessons, assessing the following:</p> <p>Substantive Knowledge:</p> <ul style="list-style-type: none"> <li>- Pupils can name common plants and begin to describe them</li> <li>- Pupils can name a leaf, flower and petal of a sunflower</li> </ul> <p>Disciplinary Knowledge:</p> <ul style="list-style-type: none"> <li>- Pupils have observed plant growth.</li> <li>- Pupils have taken pictures and drawn different flowers, showing visual differences.</li> <li>- Pupils begin using basic vocabulary of growth and change (e.g. bigger, stronger, thicker)</li> </ul>
<p><b>Useful Planning Resources and Links</b></p>	<p>Twinkl, watch your sunflower grow: <a href="https://www.twinkl.co.uk/resource/au-s-179-watching-my-sunflower-grow-activity">https://www.twinkl.co.uk/resource/au-s-179-watching-my-sunflower-grow-activity</a></p> <p>Sunflower art:</p>  <p>How to grow sunflowers guidance: <a href="https://www.gardenersworld.com/how-to/grow-plants/how-to-grow-sunflowers-from-seed/">https://www.gardenersworld.com/how-to/grow-plants/how-to-grow-sunflowers-from-seed/</a></p> <p>Growing Sunflowers:  <a href="http://www.greatgrubclub.com/domains/greatgrubclub.com/local/media/downloads/grow%20a%20sunflower.pdf">http://www.greatgrubclub.com/domains/greatgrubclub.com/local/media/downloads/grow%20a%20sunflower.pdf</a></p> <p>Stories linked to plant growth:</p> <p>‘Ten Seeds’ Ruth Brown  ‘The Gigantic Turnip’ Aleksei Tolstoy &amp; Niamh Sharkey  ‘Lifecycles: Seed to Sunflower’ Camilla De la Bedoyere</p>

