Science – Year 3

Summer 1	Year 3 – Plants					
Prior learning	EYFS - Discover that plants are living things, learn where they come from, explore how to look after plants. Year 1 – Identify the basic structure of flowering plants and trees. Year 2 - Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy					
Lesson objective	Compare the effect of different factors on plant growth	Describe the functions of different parts of a flowering plant	Investigate the way in which water is transported within plants	Explore the part that flowers play in the life cycle of flowering plants	Understand the pollination process and the ways in which seeds are dispersed	Compare the effect of different factors on plant growth
Key vocabulary	thrive investigation prediction fertiliser nutrients	energy oxygen function photosynthesis carbon dioxide	anchor tube absorb root hairs transpiration	anther stigma stamen ovary reproduce	pollination pollen nectar seed dispersal pollinator	conclusion observe diagram comparison vary
Creative context						
Substantive knowledge	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	Identify and describe the functions of different parts of a flowering plant	Investigate the way in which water is transported within plants	Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal	Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal	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
Disciplinary knowledge	Asking relevant questions and using different types of scientific enquiries to answer them Setting up simple practical enquiries, comparative	Making systematic and careful observations Reporting on findings from enquiries, including oral and written explanations	Making systematic and careful observations	Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions	Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusion	Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions

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	and fair tests					Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions
Recorded learning	Plan and execute own experiment, pose own investigation questions, explain method and make a prediction. Challenge Task: use the stretch handout to expand predictions to suggest how their experiment will compare against their control plant, ensuring they give an explanation as to why. How will the	Draw and label a flowering plant. Describe the functions of each part. Challenge Task: give a more scientific description of the functions of a flowering plant.	Cut the celery. Create an observational drawing of the tubes. Discuss setting up an experiment to see what happens when cut flowers are put in dyed water. This experiment works best using white flowers, such as a carnation or a rose. Record a prediction of what they think they will see happening and draw a picture of	Label the diagram of a flower on the worksheet. Create a model of a flower using plasticine, showing the key parts involved in pollination and fertilisation, and use sticky notes or a whiteboard to label these key parts. Alternatively, pupils could dissect a flower with clear reproductive parts, such as a lily, and use sticky notes to label each part.	Make a class display that shows the many ways in which plants reproduce. Their display should include information about the pollination process and a chosen form of seed dispersal. Split the children into groups so they can focus on one method of seed dispersal each. Challenge Task: Ensure that their group is using	Write up the results of experiment. Ensure that they provide a diagram and a conclusion that applies their knowledge of what plants need in order to thrive. Challenge Task: explain what the optimal conditions are for a plant to thrive and why?

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	children ensure they are carrying out a fair test?		their prediction to help explain themselves.	Challenge Task: use the worksheet to create a storyboard to explain the reproductive process.	scientific language to describe how plants reproduce.	
Future learning						