MTP – Science – Year 3

Topic	What makes plants and flowers grow and flourish?				
N.C Learning Objectives	Pupils should be taught to: - identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers - 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 - 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.				
Ways of being Co-Op	Do what matters most Succeed together Be yourself, always Show you care				
British Values	Democracy Rule of Law Individual Liberty Mutual Respect Tolerance				
CRL					
Vocabulary	**<u>Photosynthesis</u>** The process where plants produce food from sunlight.	**<u>Reproduction</u>** The biological processes by which plants produce new offspring.	**<u>Xylem and Phloem</u>** Tissue within a plant that transports water to different parts of the plant	**<u>Pollination</u>** the transfer of pollen to a stigma to allow fertilization.	**<u>Seed Dispersal</u>** the process by which seeds are moved away from the parent plant to new locations
Recap and Recall	Unit name - Some key learning from other year groups				
	LEARNING OBJECTIVE	**STICKY KNOWLEDGE FACT**	**CORE LEARNING**		

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Lesson 1	We are learning to know the part of a plant and explain their function	The different parts of a flowering plant are the roots, stem/trunk, leaves and flowers. They all have different purposes.	• Children can identify the different parts of flowering plants: roots, stem/trunk, leaves and flowers. • Children can explain the function of the different parts of a plant. • Roots: anchor the plant and absorb water and nutrients Stem: supports the plant and transports water and nutrients. Leaves: responsible for photosynthesis, making food for the plant. Flowers: support the reproductive structures
Lesson 2	We are learning to understand the conditions needed by plants to grow	Plants need water, light and air to survive.	• Children know that plants need water, light and air to survive • Natural sunlight allows plants to grow leaves, flower, produce chlorophyll and perform photosynthesis, a process which is required for plant growth and health. • Plant leaves use carbon dioxide from the air to make sugars and starches for the plant to use as food. Plant roots need oxygen to stay healthy and to do their job of gathering water and nutrients for the plant.
Lesson 3	We are learning to explain the process of reproduction in plants through pollination	Flowering plants reproduce by pollen from the male part of one flower travels to the female part of another flower where the seeds are made. Pollen can be carried between flowers by animals, known as pollinators. Bees are a pollinator.	• Children know that plants produce flowers to make seeds. • To make a seed a flower must be pollinated, where pollen from the male part of one flower travels to the female part of another flower where the seeds are made. • The pistil (or carpels) which has the stigma at the top is the female reproductive organ in a flowering plant that creates new seeds. • The petals act like an advertisement to attract various animals, which will carry the pollen from one flower to another.

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Lesson 4	We are learning to explain the process of reproduction in plants through seed dispersal	Seed dispersal means the process by which seeds are moved away from the parent plant to new locations. The four types of seed dispersal are mechanical, water, animal and wind.	● Children know that seed dispersal means the process by which seeds are moved away from the parent plant to new locations, enabling them to grow and establish themselves ● Children know there are four types of seed dispersal ● Mechanical: Some seed pods or fruits are designed to explosively release their seeds, propelling them away from the parent plant. Gorse plants are a good example of this. ● Water: Seeds of plants near water bodies, like water lilies, are dispersed by water currents ● Wind: the wind carries lightweight seeds from one plant to another. Dandelions are a good example of this. Animal: This can involve animals eating and defecating seeds, or seeds attaching to their fur and being carried.
Lesson 5	We are learning to know how water is transported within plants.	Water is transported through plants by special tissue that exists within the plant - Xylem and Phloem.	● Children know that plants have two different types of 'transport' tissue. ● Xylem transports water from the roots to the leaves ● Phloem transports food from the leaves to the rest of the plant. Transpiration is the process by which water evaporates from the leaves, which results in more water being drawn up from the roots.
Lesson 6	We are learning to summarise our learning and present to our peers	Summary of learning so far: - know the name and function of the parts of a flowering plant - explain the conditions plants need to grow	● Children can summarise key learning so far: ● know the name and function of the parts of a flowering plant ● explain the conditions plants need to grow ● explain the process of pollination in flowering plants ● Explain how seed dispersal is part of the reproductive cycle Know how water is transported through plants

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		- explain the process of pollination in flowering plants - Explain how seed dispersal is part of the reproductive cycle - Know how water is transported through plants	
Outcome	Group presentation on one element of learning about plants to present to the rest of the class		