

	<p style="text-align: center;">Year 3</p>	<p style="text-align: center;">Topic: Plants</p>
	<p>National Curriculum links:</p> <ul style="list-style-type: none"> 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. 	

Prior learning	Future learning
<ul style="list-style-type: none"> Observe and describe how seeds and bulbs grow into mature plants. (Y2 - Plants) Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy. (Y2 - Plants) 	<ul style="list-style-type: none"> Describe the life process of reproduction in some plants and animals. (Y5 - Living things and their habitats) Reproduction in plants, including flower structure, wind and insect pollination, fertilisation, seed and fruit formation and dispersal, including quantitative investigation of some dispersal mechanisms. (KS3)

WHAT PUPILS NEED TO KNOW OR DO TO BE SECURE	
Show understanding of a concept using scientific vocabulary correctly	
Key learning	Possible evidence
<p>Many plants, but not all, have roots, stems/trunks, leaves and flowers/blossom. The roots absorb water and nutrients from the soil and anchor the plant in place. The stem transports water and nutrients/minerals around the plant and holds the leaves and flowers up in the air to enhance photosynthesis, pollination and seed dispersal. The leaves use sunlight and water to produce the plant's food. Some plants produce flowers which enable the plant to reproduce. Pollen, which is produced by the male part of the flower, is transferred to the female part of other flowers (pollination).</p> <p>This forms seeds, sometimes contained in berries or fruits which are then dispersed in different ways. Different plants require different conditions for germination and growth.</p>	<ul style="list-style-type: none"> Can explain the function of the parts of a flowering plant Can describe the life cycle of flowering plants, including pollination, seed formation, seed dispersal, and germination <p>Can give different methods of pollination and seed dispersal, including examples</p>
Key vocabulary	
<p>photosynthesis, pollen, insect/wind pollination, male, female, seed formation, seed dispersal (wind dispersal, animal dispersal, water dispersal), air, nutrients, minerals, soil, absorb, transport</p>	

Common misconceptions

Some children may think:

- plants eat food
- food comes from the soil via the roots
- flowers are merely decorative rather than a vital part of the life cycle in reproduction
- plants only need sunlight to keep them warm
- roots suck in water which is then sucked up the stem..

Apply knowledge in familiar related contexts, including a range of enquiries

Activities

- Observe what happens to plants over time when the leaves or roots are removed.
- Observe the effect of putting cut white carnations or celery in coloured water.
- Investigate what happens to plants when they are put in different conditions e.g. in darkness, in the cold, deprived of air, different types of soil, different fertilisers, varying amount of space.
- Spot flowers, seeds, berries and fruits outside throughout the year.
- Observe flowers carefully to identify the pollen.
- Observe flowers being visited by pollinators e.g. bees and butterflies in the summer.
- Observe seeds being blown from the trees e.g. sycamore seeds.
- Research different types of seed dispersal.
- Classify seeds in a range of ways, including by how they are dispersed.
- Create a new species of flowering plant.

Possible evidence

- Can explain observations made during investigations
- Can look at the features of seeds to decide on their method of dispersal
- Can draw and label a diagram of their created flowering plant to show its parts, their role and the method of pollination and seed dispersal

Lesson 1

LO: to name different parts of a flowering plant and explain their jobs

Key Assessment Questions

Can children identify different parts of the plant?
Can children explain the jobs that the different parts of a plant do?

Lesson 2

LO: to investigate what a plant needs to grow well.

LO: to make carefully observations

Key Assessment Questions

Can children think about what plants need to grow well?
Can children think of a question to investigate?
Can children predict what will happen in their investigation?
Can children plan what they will do to set up their investigation?
Can children set up their investigation carefully?

Lesson 3 <u>LO: to record findings and present results using scientific vocab</u>	Key Assessment Questions Can children identify the needs of a plant? Can children use correct vocabulary? Can children record observations and write a conclusion?
Lesson 4 <u>LO: to investigate how water is transported through a plant</u>	Key Assessment Questions Can children suggest predictions? Can they observe closely? Can they talk about how water is transported through the plant?
Lesson 5 <u>LO: to name the different parts of a flower and explain their role in pollination and fertilisation</u> TAPS science seed dispersal https://psth.org.uk/resources/curriculum-materials/assessment	Key Assessment Questions Can children talk about how seeds are dispersed? Can children explain the process of pollination? Can children explain how pollination leads to fertilisation?
Lesson 6 <u>LO: to understand the life cycle of a flowering plant</u>	Key Assessment Questions Can children order the stages of the life cycle? Can children describe the stages of the life cycle of a flowering plant? Can children talk about the processes of pollination? Can children talk about the processes of fertilisation? Can children talk about the processes of germination?

If completing topic over a term, objectives can be covered over more than one lesson ensuring scientific enquiry skills (working scientifically) are being developed