Subject	Term	Unit
Science- Year 3	Autumn 2	Plants

Intent
Interweaving knowledge and enquiry to discover the world around us.

Prior knowledge	National Curriculum
• identify and name a variety of common wild and garden plants, including deciduous and evergreen trees • identify and describe the basic structure of a variety of common flowering plants, including trees. • observe and describe how seeds and bulbs grow into mature plants • find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.	• 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.

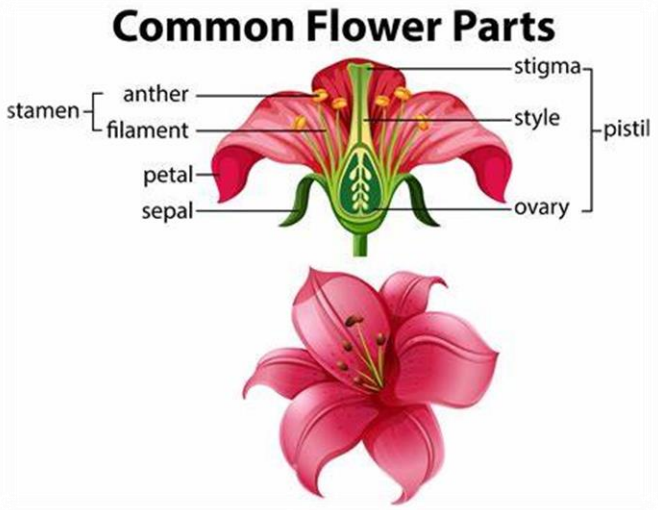
What?	To understand parts of a plant, what they need to grow and how they reproduce.
Why?	The children need to know how to keep a plant healthy and how plants make new plants. This will help them when they move on to animal reproduction in later learning.
How?	Through experimentation and observation. By making studies of plants and flowers and by seeing what happens to them when we change certain variables.

Vocabulary	
Absorb	Soak up or take in.
Anther	The part of a stamen that produces and releases the pollen.
Carbon Dioxide	A gas produced by animals and people breathing out.
Climate Zone	Sections of the earth that are divided according to the climate. There are 3 main climate zones polar, temperate and tropical.
Deciduous	Trees that lose their leaves in the autumn every year.
Dispersed	Scattered, separated or spread through a large area.

Dissect	To carefully cut something up in order to examine it.
Ever Green	A tree or bush which has green leaves all year round
Fertilisation	In plants where pollen meets the ovule to form a seed.
Flower	The part of plant that is often brightly coloured and grows at the end of the stem .
Fruit	Something that grows on a tree or a bush containing seeds or a stone covered by a substance you can eat.
Germination	If a seed germinates it starts to grow
Healthy	Well and not suffering from illness.
Lifecycle	The series of changes that an animal or plant passes through from the beginning of its life until its death.
Nutrients	Substances that help plants and animas to grow.
Ovule	A small egg.
Pollen	A fine powder produced by flowers. It fertilisers other flowers of the same species so that they produce seeds.
Pollination	To pollinate a plant or tree means to fertilise it with pollen. This is often done by insects.
Roots	The parts of a plant that grow under the ground.
Stigma	The top of the centre part of the flower which takes in pollen.
Vegetation	Plants trees and flowers.
Wild	Animals or plants that live or grow in natural surroundings and not looked after by people.

Learning	
Objective	**Learning**
Can I describe the functions of a flower?	**Identifying and classifying** · Petals - usually bright to attract bees and insects so they can collect pollen to make seeds. · Seeds - able to grow and make new plants. This is called germination. · Leaves - use carbon dioxide and sunlight to make food for the plant. · Stem - carries water and nutrients from the roots to the rest of the plant. Leaves use this water to make food. · Stem - holds the plant upright so the sunlight can reach it easier.

	· Roots - anchor the plant in the soil. Absorbs water and nutrients from the soil for the stem to carry to the rest of the plant. Look at plants and label. Discuss the function of each part of the plant and label with the functions. Complete statements such as without the _____ the plant could not_____.
Can I explain what plants need to grow?	**Comparative testing** · Air · Water · Sunlight · Nutrients · Room to grow · Suitable temperature The amount of these may vary you could discuss that cacti needs less water than other plants. Use the fair test planning boards. Ask the children to discuss what they would change or measure. Make predictions. Discuss with children how to create a chart and ask them to draw in their books. Set up plants with different variables and see what happens to them over time. Sentence to record findings.
Can I explain how is water transported within plants?	**Observing over time** · Water is absorbed from the soil by the roots. · It is then transported from the roots to the stem and then to the rest of the plant. Place white carnations in dyed water to observe how plants transports water. What does this mean? Where does the water travel to?
Can I explain the importance of flowers in the life cycle of flowering plants?	**Observing over time** · The flowers job is to create seeds so that new plants can grow. · Pollination occurs when pollen from the anther is transferred to the stigma by bees and other insects. · Pollen travels down and meets the ovule when this happens seeds are formed this is called fertilisation. · Seeds are then dispersed so the germination can begin again.

	Dissect flowers to find and label the different reproductive parts. Explain that the female parts- the ovary- turn into fruits and seeds. 
Can I understand how plants are fertilised?	**Identifying and classifying** • The flowers job is to create seeds so that new plants can grow. · Pollination occurs when pollen from the anther is transferred to the stigma by bees and other insects. · Pollen travels down and meets the ovule when this happens seeds are formed this is called fertilisation. · Seeds are then dispersed so the germination can begin again. **Watch videos on how plants are fertilised and how the seeds are formed. Write a step by step guide with pictures to show what happens.**
Can I explain how seeds are dispersed?	**Research** Dissect fruits / flowers to observe their structure and use this to explain how seeds are dispersed. · Wind (helicopter seeds, dandelion) · Explosion (poppy) · Water (coconut) · Animals (black berry / cherry) Look at different types of seeds- sycamore, seed pods, fruit seeds, coconuts and see if we can work out how they are dispersed based on their characteristics. Sort different seeds into different categories.

Websites
What are the parts of a plant? - BBC Bitesize

Plants: Year 3 | Lesson Plans for Teachers | Young People's Trust For the Environment (ypte.org.uk)
Life cycle of a plant | Science & Nature | National Geographic Kids (natgeokids.com)
How do plants spread their seeds? - BBC Bitesize

Recommended Reads