



Knowledge Organiser	Subject: Science	Topic: How Plants Grow	Year: 3
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Key Knowledge

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). 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.

Common misconceptions

- 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.

Key Learning

- To explain the function of the parts of a flowering plant.
- To describe the life cycle of flowering plants, including pollination, seed formation, seed dispersal, and germination.
- To describe different methods of pollination and seed dispersal, including examples.

Disciplinary Skills

- Observing
- Investigating
- Classifying
- Researching

Key Concepts

Structure and Function of Plant Parts

Many plants have roots, stems/trunks, leaves, and flowers, each with a specific function.

Roots absorb water and nutrients from the soil and anchor the plant.

Stems transport water and nutrients while supporting leaves.

Leaves use sunlight and water to produce food for the plant through photosynthesis.

The Life Cycle of Flowering Plants

Some plants produce flowers that help them reproduce.

Pollination occurs when pollen from the male part of the flower is transferred to the female part of another flower.

Seeds form after pollination, often contained within fruits or berries, and are dispersed in various ways.

Growth and Reproduction Variations

Different plants require specific conditions for germination and growth (such as water, light, and temperature).

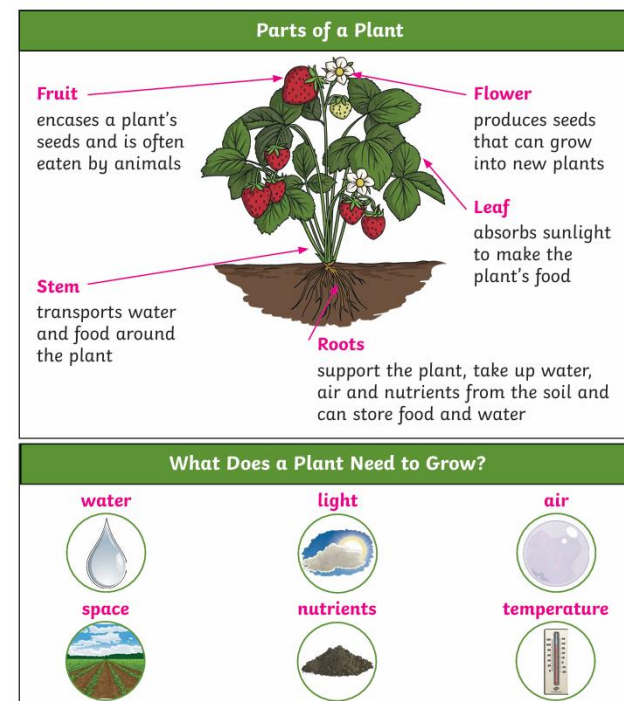
There are different methods of pollination (such as wind, insects) and seed dispersal (e.g. wind, animals, water).

Plants have adapted to their environments to ensure successful reproduction and survival.

The Big Question

How do plants grow?

Key Vocabulary	
Fertilisation	Fertilisation is the process whereby part of the pollen combines with an ovule in the flower's ovary, producing a seed that can grow into a new plant.
Flower	A flower is the part of a plant that makes seeds, which grow into new plants. Most flowering plants only grow flowers for a short time each year.
Germination	Germination is the process by which a seed starts to grow.
Leaf	A leaf is the part of a plant that makes food for the plant by absorbing energy from sunlight.
Nutrients	Nutrients are substances that are needed by living things to grow and survive. Most plants gather nutrients from the soil using their roots.



Linking Thinking Across Our Learning Journey						
Early Years	Year One	Year Two	Year Three	Year Four	Year Five	Year Six
		Plants 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.	How do plants grow?		Living things and their habitats Describe the life process of reproduction in some plants and animals.	