

Science Knowledge Organiser

Plants and classification

Summer Term 2021

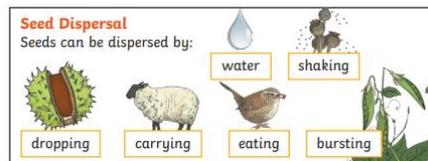
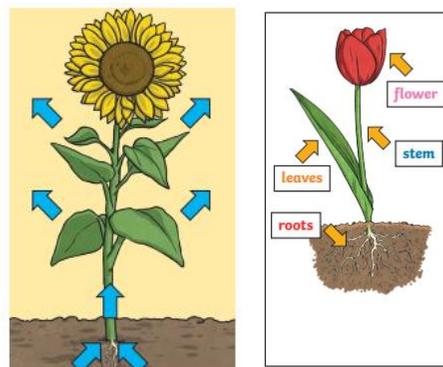


Biology

Key Stage 2 – Year 3/4

Key Vocabulary

Roots	These anchor the plant into the ground and absorb water and nutrients from the soil.
Stem	This holds the plant up and carries water and nutrients from the soil to the leaves. A trunk is the stem of a tree.
Leaves	These make food for the plant using sunlight and carbon dioxide from the air.
Flowers	These make seeds to grow into new plants. Their petals attract pollinators to the plant.
Nurtients	These substances are needed by living things to grow and survive. Plants get nutrients from the soil and also make their own food in their leaves.
Evaporation	When a liquid turns into a gas.
Fertilisation	When the male and female parts of the flower have mixed in order to make seeds for new plants.
Stamen	The male parts of the flower. The stamen is made up of the anther and the filament. The filament's job is to hold up the anther. The job of the anther is to make the pollen.
Petal	The brightly coloured part of the flower that attracts insects to pollinate the plant.
Carpel	The female parts of the flower. Made up of the stigma, style and ovary.
Sepal	Leaf-like structures that protect the flower and petals before they open out.
Pollination	When pollen (a fine powdery substance



Key Questions

- What is the function of the parts of a flowering plants?
- What are the needs of a flowering plant?
- What happens if you deny a flowering plant one of its requirements?
- How are seeds made?
- How can you group plants?

Key Facts

Structure of plants

Roots draw water from the soil/stabilising material
 Roots anchor the plant to provide stability
 The stem/trunk enables water to travel up the plant's stem to the leaves/flower
 The stem/trunk provides stability
 The leaves enable the plant to produce food (photosynthesis)
 Flowers enable plants to produce fruit and reproduce

Plant growth

Plants need water, light, air, warmth, space and nutrients from soil to live and grow
 Plants can adapt to live in different conditions- dry/wet/dark/hot
 Water is drawn through a plant's roots and transported through its stem/trunk and to its leaves/flowers (transpiration)

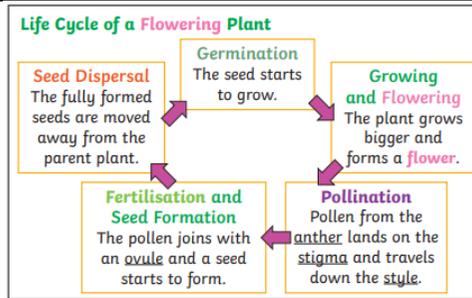
Plant reproduction

Plant life cycle: seed > Germination> seedling >plant> flower >pollination > fruit/seed
 There are 5 different ways that seeds can be dispersed (wind/air, floating/water, Explode and project (ballistic), hooks to animal's fur, fruit for ingestion)

Classification

Flowering plants and non-flowering plants can all be grouped.

	produced by a flowering plant) is moved from the male anther of a flower to the female stigma.
Pollinator	Animals or insects which carry pollen between plants. Examples include birds, bees and bats.
Germination	When a seed starts to grow.
Seed dispersal	A method of moving the seeds away from the parent plant so that the seeds have the best chance of survival.



Plants can be grouped into plants with seeds (e.g. flowering plants and conifers), or without seeds (e.g. ferns and mosses)
Plants grow in a location that suits their needs