

Year 3

Unit: Plants

Intent:

Identify and describe the functions of different parts of flowering plants.

Explore the requirements of plants for life and growth 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

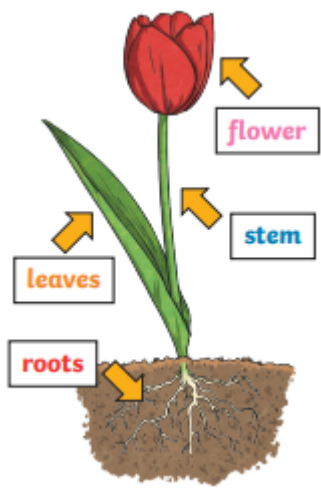
Year 2 – Observe and describe how seeds and bulbs grow into mature plants.

Year 2 – Find out and describe how plants need water, light, and a suitable temperature to grow.

Later learning (not in Year 3)

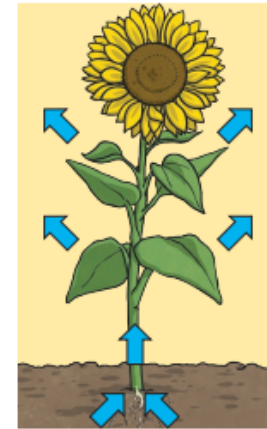
Year 5 – Describe the life processes of reproduction in some plants and animals.

KS3 – Reproduction in plants, including flower structure, wind and insect pollination, fertilisation, seed and fruit formation and dispersal.

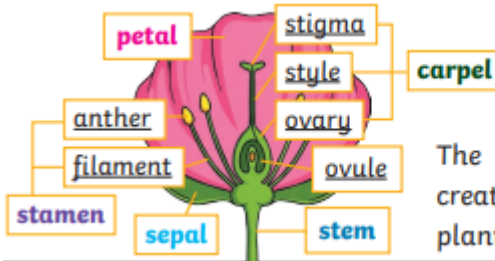


How Water Moves through a Plant

1. The **roots** absorb water from the soil.
2. The **stem** transports water to the **leaves**.
3. Water **evaporates** from the **leaves**.
4. This **evaporation** causes more water to be sucked up the **stem**.

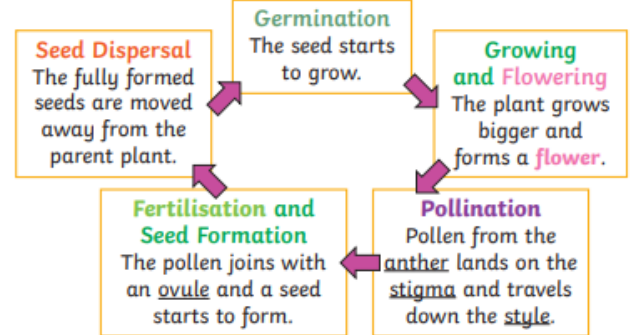


The water is sucked up the **stem** like water being sucked up through a straw.



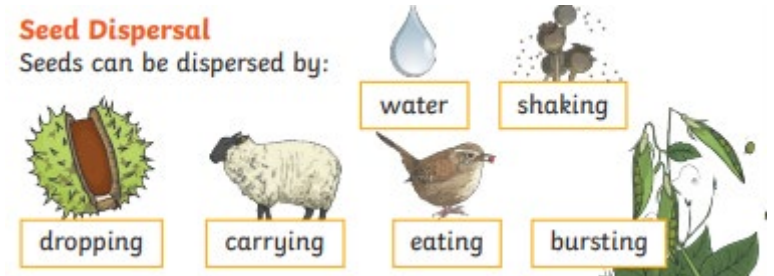
The **flower's** job is to create seeds so that new plants can be grown.

Life Cycle of a Flowering Plant



Seed Dispersal

Seeds can be dispersed by:



Key Questions:

What things does a plant need to grow?

Which part of the plant makes food using sunlight, carbon dioxide, and water?

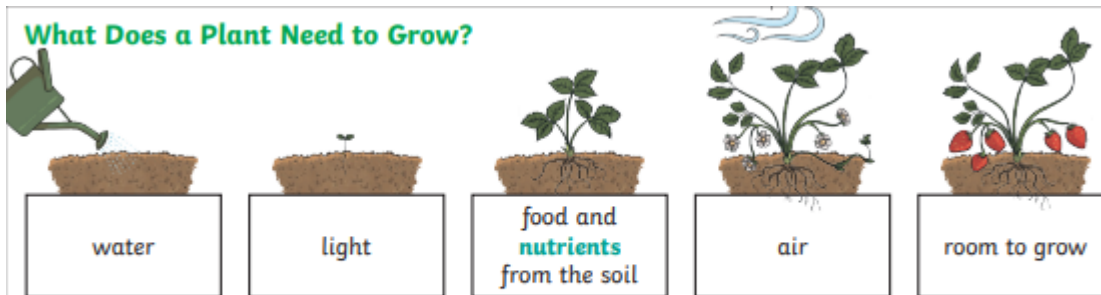
The stamen is the male part of the flower. What does this include?

Why are petals brightly coloured?

Name one pollinator.

Which part of the carpel collects pollen?

What Does a Plant Need to Grow?



Different plants vary in how much of these things they need. For example, cacti can survive in areas with little water, whereas water lilies need to live in water.

Vocabulary

| | |
|------------------------|---|
| Carpel (pistil) | The female parts of the flower. Made up of the stigma, style, and ovary. The job of the style is to hold up the stigma. The stigma collects the pollen when a pollinator brushes by it. The ovary contains the ovules, which are the part of the flower that gets fertilised and eventually becomes the new seed. |
| Evaporation | When liquid turns into a gas. |
| Fertilisation | When the male and female parts of the flower have mixed to make seeds for new plants. |
| Flowers | These make seeds to grow into new plants. Their petals attract pollinators to the plant. |
| Germination | When a seed starts to grow. |
| Leaves | These make food for the plant using sunlight and carbon dioxide from the air. |
| Nutrients | These substances are needed by living things to grow and survive. Plants get nutrients from the soil and make their own food in their leaves. |
| Petal | The brightly coloured part of the flower that attracts insects to pollinate the plant. |
| Pollination | When pollen (a powder made 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. |
| Roots | These anchor the plant into the ground and absorb water and nutrients from the soil. |
| Seed dispersal | A method of moving the seeds away from the parent plant so that the seeds have the best chance of survival. |
| Sepal | Leaf-like structures that protect the flower and petals before they open. |
| 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. |
| 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. |