

# Plants

## Knowledge Plants

I can identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers

I can 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

I can investigate the way in which water is transported within plants

I can explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.

## Working Scientifically

Comparing the effect of different factors on plant growth, for example, the amount of light, the amount of fertiliser; discovering how seeds are formed by observing the different stages of plant life cycles over a period of time;

Looking for patterns in the structure of fruits that relate to how the seeds are dispersed.

Observe how water is transported in plants, for example, by putting cut, white carnations into coloured water and observing how water travels up the stem to the flowers.

*Children will be introduced to the relationship between structure and function: the idea that every part has a job to do. They will explore questions that focus on the role of the roots and stem in nutrition and support, leaves for nutrition and flowers for reproduction.*

## Hook into a Book



## Activate Prior Knowledge

### EY

- Exploring the natural world around them, making observations and drawing pictures of plants
- Know similarities and differences between the natural world around them.
- Planting seeds and care for growing plants
- Life cycles of plants
- Respect and care for the natural environment

### KS1

- I can identify and name a variety of common wild and garden plants, including deciduous and evergreen trees
- I can identify and describe the basic structure of a variety of common flowering plants, including trees.
- I can describe some features of seeds and plants and make comparisons.
- I can describe the structure of common plants.
- I can observe and describe how seeds and bulbs grow into mature plants
- I can find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.

## Future Learning

### KS2

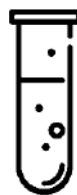
- I can recognise that living things can be grouped in a variety of ways
- I can explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment
- I can investigate the way in which water is transported within plants
- I can explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.
- I can describe the life process of reproduction in some plants and animals.
- I can describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including micro-organisms, plants and animals
- I can give reasons for classifying plants and animals based on specific characteristics.

Investing in

the UNIQUENESS

of each individual

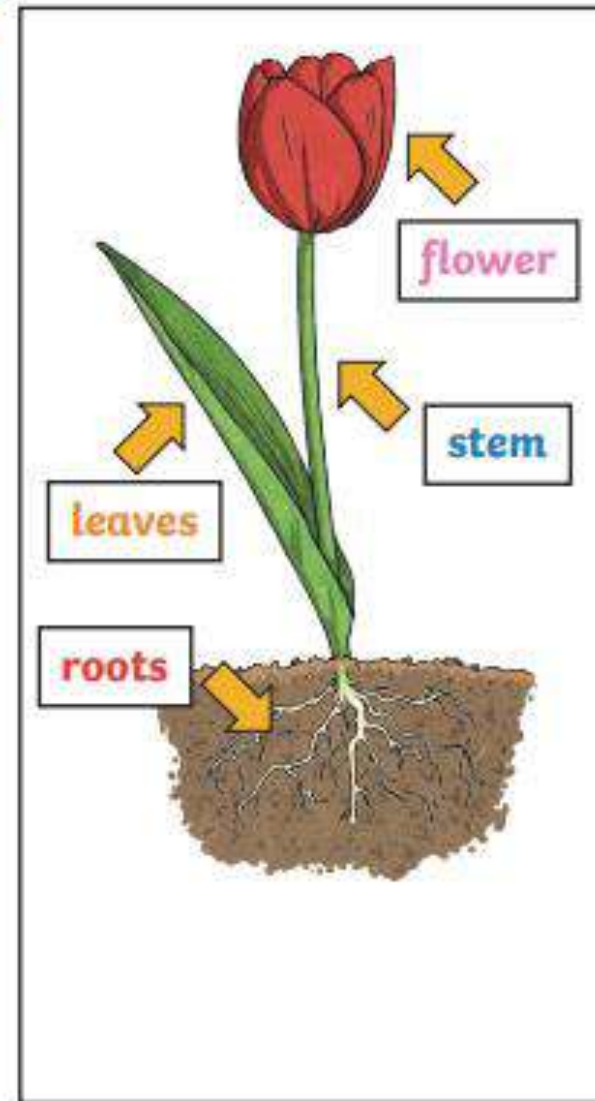
"I Am Fearfully And Wonderfully Made"  
– Psalms 139 v14





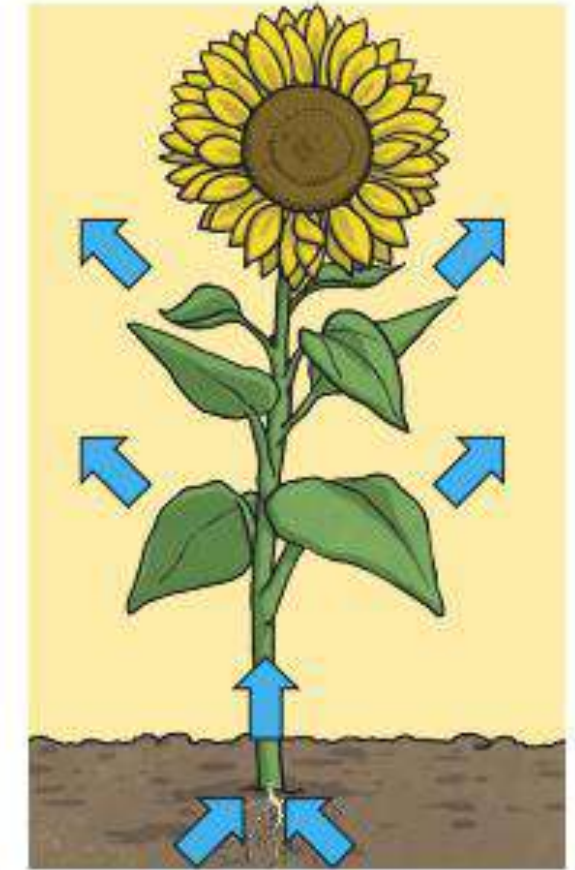
## Key Vocabulary

<b>roots</b>	These anchor the plant into the ground and absorb water and <b>nutrients</b> from the soil.
<b>stem</b>	This holds the plant up and carries water and <b>nutrients</b> from the soil to the <b>leaves</b> . A trunk is the <b>stem</b> of a tree.
<b>leaves</b>	These make food for the plant using sunlight and carbon dioxide from the air.
<b>flowers</b>	These make seeds to grow into new plants. Their <b>petals</b> attract <b>pollinators</b> to the plant.
<b>nutrients</b>	These substances are needed by living things to grow and survive. Plants get <b>nutrients</b> from the soil and also make their own food in their <b>leaves</b> .
<b>evaporation</b>	When a liquid turns into a gas.



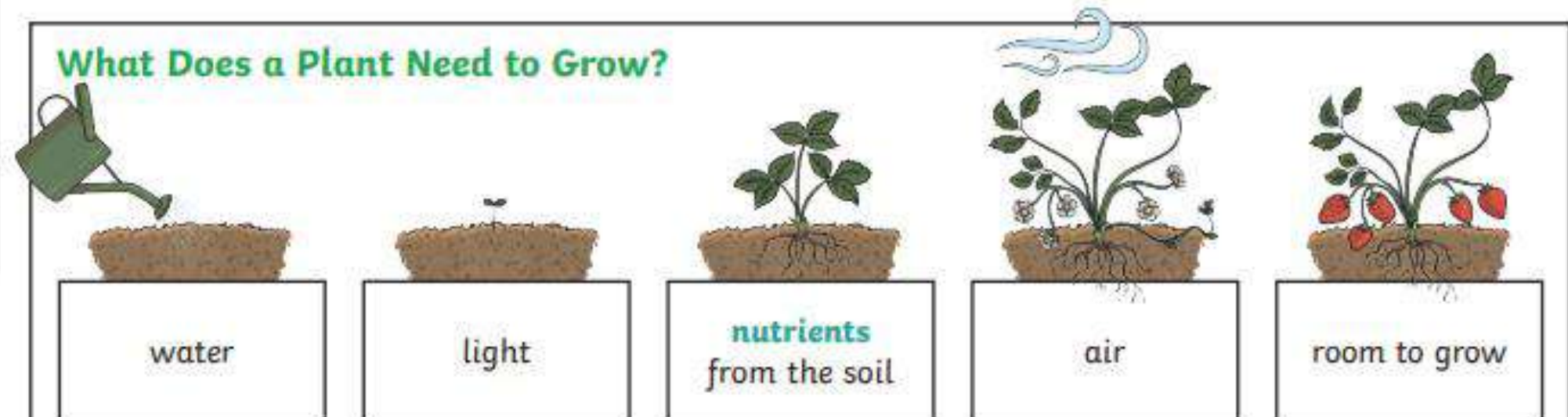
## How Water Moves through a Plant

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.

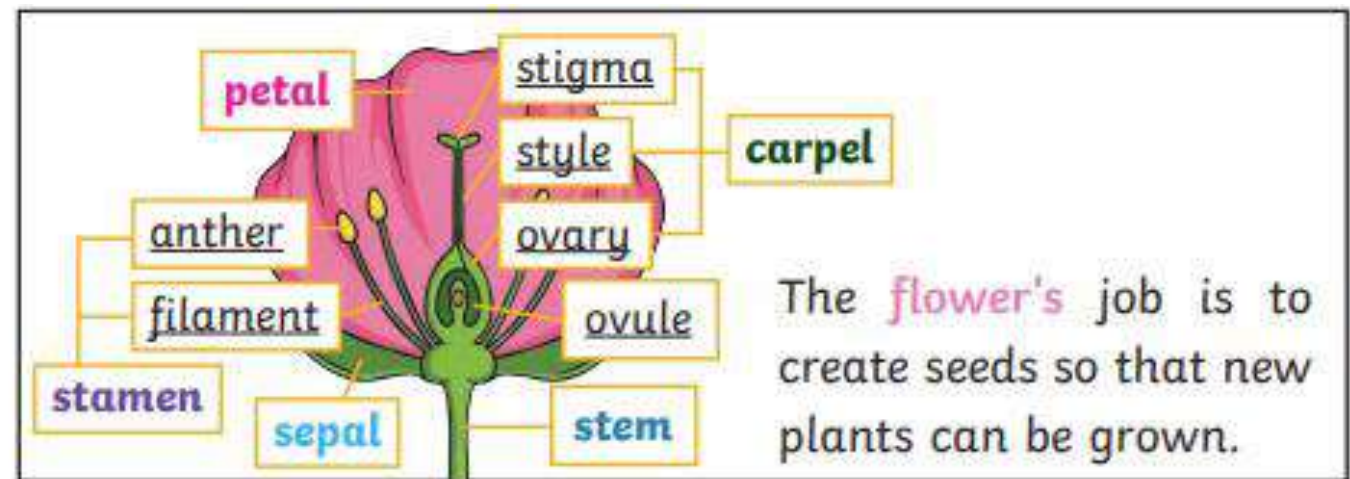
## What Does a Plant Need to Grow?



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.



Key Vocabulary	
<b>fertilisation</b>	When the male and female parts of the <b>flower</b> have mixed in order to make seeds for new plants.
<b>petal</b>	The brightly coloured part of the <b>flower</b> that attracts insects to <b>pollinate</b> the plant.
<b>stamen</b>	The male parts of the <b>flower</b> . The <b>stamen</b> 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.
<b>carpel (pistil)</b>	The female parts of the <b>flower</b> . 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 <b>pollinator</b> brushes by it. The ovary contains the ovules, which are the part of the <b>flower</b> that gets fertilised and eventually becomes the new seed.
<b>sepal</b>	Leaf-like structures that protect the <b>flower</b> and <b>petals</b> before they open out.
<b>pollination</b>	When pollen (a fine powdery substance produced by a <b>flowering</b> plant) is moved from the male anther of a <b>flower</b> to the female stigma.
<b>pollinator</b>	Animals or insects which carry pollen between plants. Examples include birds, bees and bats.
<b>germination</b>	When a seed starts to grow.
<b>seed dispersal</b>	A method of moving the seeds away from the parent plant so that the seeds have the best chance of survival.



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

