

Phase: 3/4

Subject: Science

Focus: Plants

Term: Spring

What I should already know?

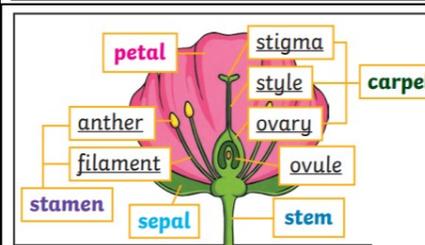
Observe and describe how seeds and bulbs grow into mature plants. Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.

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.
Nutrients	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
petal	The brightly coloured part of the flower that attracts insects to pollinate the plant.
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.
Carpel (pistol)	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.
sepal	Leaf-like structures that protect the flower and petals before they open out.
pollination	When pollen (a fine powdery substance produced by a flowering plant) is moved from the male anther of a flower to the female stigma
germination	When a seed starts to grow
Seed dispersal	Animals or insects which carry pollen between plants. Examples include birds, bees and bats.

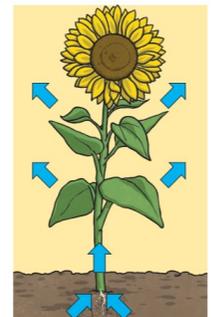
Knowledge

- 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.



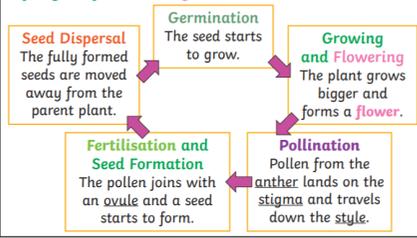
How Water Moves through a Plant

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**.

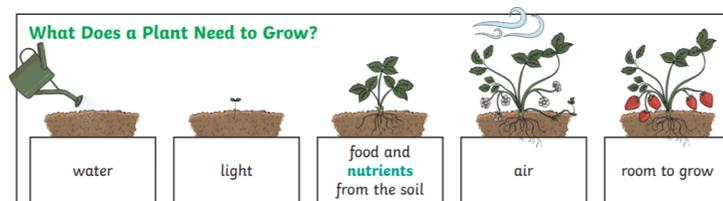


The water is sucked up the **stem** like water being sucked up through a straw.

Life Cycle of a Flowering Plant



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.

By the end of the unit I should know..

- 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.

<u>Question 1 - What is the role of the petal?</u> (Tick all that apply)	<u>Start of Unit</u>	<u>End of Unit</u>
To look pretty		
To attract bees for pollination		
To have pollen on them		
Don't know		

<u>Question 2 - What is the name for the female part of a plants reproductive organs?</u>	<u>Start of Unit</u>	<u>End of Unit</u>
Stamen		
Carpel		
Don't know		

<u>Question 3 - What is the role of the Roots?</u> (Tick any that apply)	<u>Start of Unit</u>	<u>End of Unit</u>
To anchor the plant		
To suck in water and nutrients		
To absorb water and nutrients		

<u>Question 4—</u> In what ways can a seed be dispersed?
Start of unit
End of unit

<u>Question 5— What is germination</u>	<u>Start of Unit</u>	<u>End of Unit</u>
When an ovule is fertilised by the pollen		
When a plant is about to die		
When a seed starts to grow		
Don't know		

<u>Question 6— What does a plant need to grow?</u>	<u>Start of Unit</u>	<u>End of Unit</u>
Water, light, air, nutrients, room to grow		
Water, plant food, light, air, room to grow		
Don't know		

What I would like to find out?

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Answers to my questions...

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