

What you should already know...



- Plants are a large group of living things that use sunlight to make their own food
- There are many, many different kinds of plants, including trees, vines and grasses

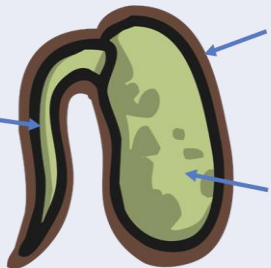
- Plants have lots of different parts – for example stems, leaves and roots
- Some trees lose their leaves in the winter (deciduous). Some keep their leaves all through the year (evergreen)
- Some plants are 'flowering plants' – they grow flowers on them

How do seeds grow?

Every single seed has the beginnings of a new plant inside it, along with a little store of food to help it grow.

When the conditions are right, the seed soaks up water and swells, and the tiny new plant bursts out of its shell. This is called **germination**.

**Embryo:**  
The tiny root and shoot which will grow into the adult plant.



**Seed Coat:**  
A tough outer covering.

**Food Store:**  
A Store of food for the young plant to use until it has grown enough to make its own food.

What do plants need to grow well?

Water



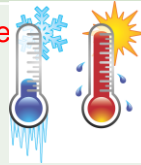
Like animals and humans, plants need water to survive. Plants are able to get water from the soil through their **roots**. They can also catch water on their leaves.

Sunlight



Plants need lots of **sunlight** to help them grow. Plants do not eat food. Instead they use sunlight to make their own food. Too little light will leave plants weak.

Temperature



Plants need the temperature to be just right for them to grow properly. If it is too hot, they may burn and wilt. If it is too cold, they may freeze and die. This is why there are fewer plants at the poles and the deserts.

Nutrition



Plants take nutrients from the soil.

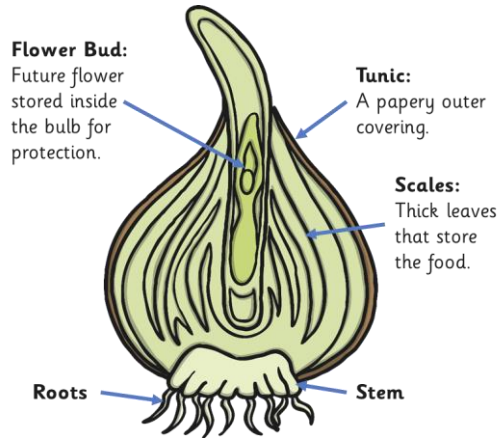
Key Vocab

<b>Flower</b>	Part of a plant that attracts insects and birds
<b>Petal</b>	Petals are part of a flowering plant which attract insects such as bees
<b>Leaf</b>	Part of a plant which <b>absorbs</b> sunlight which is used by the plant to make food
<b>Root</b>	Part of a plant which takes in water and nutrients from the soil
<b>Stem</b>	Part of a plant which helps support it and keep it upright
<b>Seed</b>	The part of a flowering plant that can grow into a new plant
<b>Bulb</b>	Bulbs are underground masses of food storage from which plants grow
<b>Absorb</b>	To take in or swallow up
<b>Sunlight</b>	Light from the sun is a form of energy which helps plants to grow
<b>Germination</b>	The stage of plant growth where the seeds begins to sprout
<b>Sprout</b>	When a plant sprouts, it grows new shoots
<b>Seed dispersal</b>	Seed dispersal is when the seeds move away from the plant. They can be moved by the wind or animals

## Seeds and bulbs

Some plants grow first from a seed, and then develop a bulb that helps them to grow back year after year.

A bulb lets the plant rest underground over the winter when it is too cold, then grow back later in the year when conditions are right.



Some common plants which grow from bulbs...

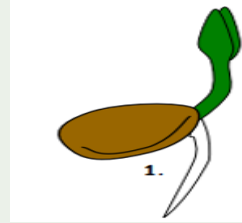


## Life cycle of a plant

Like all living things, plants have a life cycle. They live, reproduce and then die.

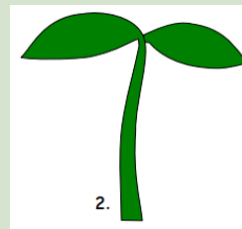
### 1. Germination

The seed begins to grow when the conditions are right. This is called germination. It puts out roots and shoots and starts to turn into a young plant.



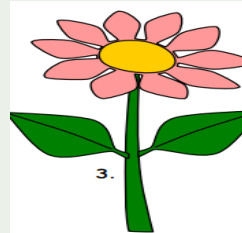
### 2. Growth

The young plant produces leaves in order to get energy from the Sun. It will need a lot of energy in the next stage of its life cycle.



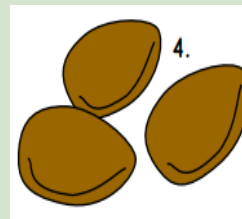
### 3. Flowering

The plant creates flowers to help it to reproduce. The flower needs pollen from another flower in order to do this. This is called pollination. Some flowering plants attract insects to help them.



### 4. Seed

When a flower has been pollinated, it produces seeds, which are capable of growing into new plants. Sometimes the seeds have a fruit around them.



London's Royal Botanic Gardens, Kew, has a multi-record-breaking flower.

The titan arum is a supersized flower from the rainforests of Sumatra that can stand taller than 3 m off the ground, making it the tallest flower in the world.

It also holds the record for 'Smelliest Flower'. The bloom releases a powerful stench likened to rotting flesh. It does this to attract flies in the dense jungle where it lives!