



# PLANTS

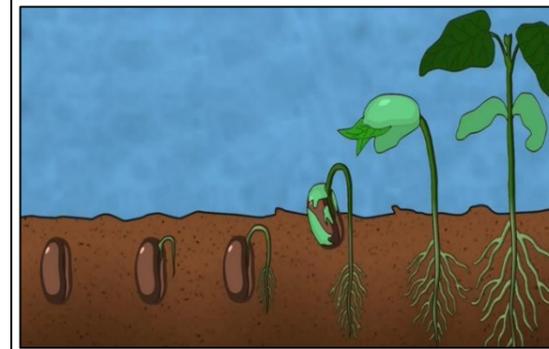
## Where does our food come from? Science Knowledge Organiser

### What you should already know...

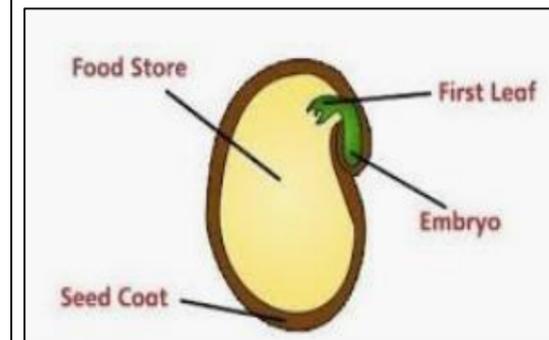


- Plants are a large group of living things that use sunlight to make their own food.
- There are many, many different kinds of plants, including trees, vines and grasses.
- Plants have lots of different parts, for example stems, leaves and roots.
- Some trees lose their leaves in the winter (deciduous). Some keep their leaves through the year (evergreen).
- Some plants are 'flowering plants' – they grow flowers on them.

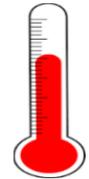
### Growth from Seeds/Bulbs into Mature Plants



- \* **Germination** is the name for when a plant starts to grow. A plant is germinating when its seed begins to **sprout**.
- \* Inside a seed/bulb is the baby plant (an **embryo**). Seeds have a tough layer on the outside to protect the plant (the **seed coat**).
- \* Seeds and bulbs do not need sunlight in order to grow. They already have their own **food store** inside them!
- \* However, they do need the **right conditions** to grow. Normally, they need **water, air and the right temperature**. This can often be found in well-watered soil!

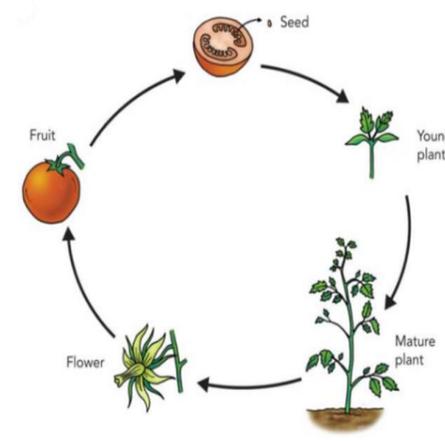


### What Plants Need to Grow

<p><b>Water and Nutrients</b></p>  <p>Like animals and humans, plants need water and nutrients to survive.</p> <ul style="list-style-type: none"> <li>-Plants are able to get water from the soil through their roots.</li> <li>-They can also catch water on their leaves.</li> </ul>	<p><b>Light</b></p>  <p>Plants need lots of sunlight to help them grow.</p> <ul style="list-style-type: none"> <li>-Plants do not eat food. They instead use sunlight to make their own food.</li> <li>-Too little light will leave plants weak.</li> </ul>
<p><b>Temperature</b></p>  <p>-Plants need the temperature to be just right for them to grow properly.</p> <ul style="list-style-type: none"> <li>-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 less plants at the poles and the deserts.</li> </ul>	<p><b>Space and Time</b></p>  <p>-Plants need room for their roots and stems to be able to grow. Without enough room, they may not grow large enough.</p> <ul style="list-style-type: none"> <li>-Plants also need time – it can take days, months or even years for them to grow.</li> </ul>

### Plant Life Cycle

Plants have a clear life cycle that helps them to keep reproducing:



- Seeds/bulbs** – Plants begin life as seeds or bulbs. They need soil, air and water to grow.
- Seedling** – Plants grow into young plants. They now need light, temperature, water, space and time to keep growing.
- Flowering/Fruit** – Plants grow flowers and fruits. These produce seeds. When the plant dies or is pollinated, the seeds find their way to the soil. The process starts again!

#### Smaller Plants

#### Taller Plants

Dandelion – about 25 centimetres

Dwarf Evergreen Shrub – about 1 metre

Sunflower – 1-3 metres

Titan Arum Flower – up to 3.5 metres

Spruce (Christmas Tree) – up to 30 metres

Giant Redwood Tree – 100 metres +