



# PLANTS

## KNOWLEDGE ORGANISER



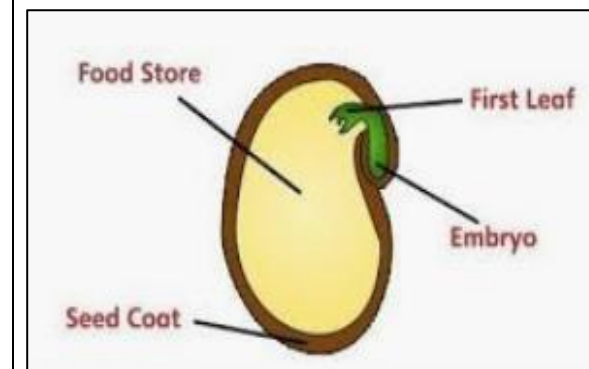
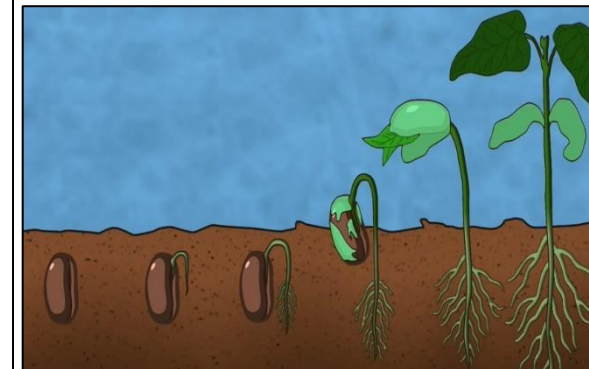
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### What you should already know...



- 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

#### Water and Nutrients



Like animals and humans, plants need water and nutrients to survive.

- Plants are able to get water from the soil through their roots.
- They can also catch water on their leaves.

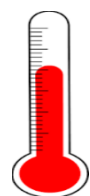
#### Light



Plants need lots of sunlight to help them grow.

- Plants do not eat food. They instead 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 less plants at the poles and the deserts.

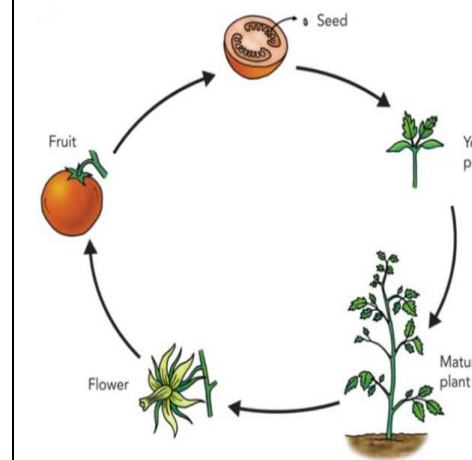
#### Space and Time



-Plants need room for their roots and stems to be able to grow. Without enough room, they may not grow large enough.

- Plants also need time – it can take days, months or even years for them to grow.

### 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

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

#### Taller Plants

Giant Redwood Tree – 100 metres +