

## Scientist



[Ahmed Mumin Warfa](#)  
(Somali Botanist)



[Maria Sibylla Merian](#)  
(1647-1717)  
documented the relationship between plants and insects

## Skills

I'm taking accurate measurements using equipment, like a horticulturist.

I'm using scientific enquiries to answer questions like an irrigation engineer

## Careers

Horticulturist (an expert in garden cultivation and management)  
Irrigation engineer

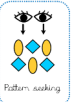


## Enquiries



How does the length of the carnation stem affect how long it takes for food colouring to dye the petals?

How do flowers in a vase change over time?

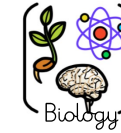


What colour flowers do pollinating insects prefer?

How many different ways can you group our seed collection?

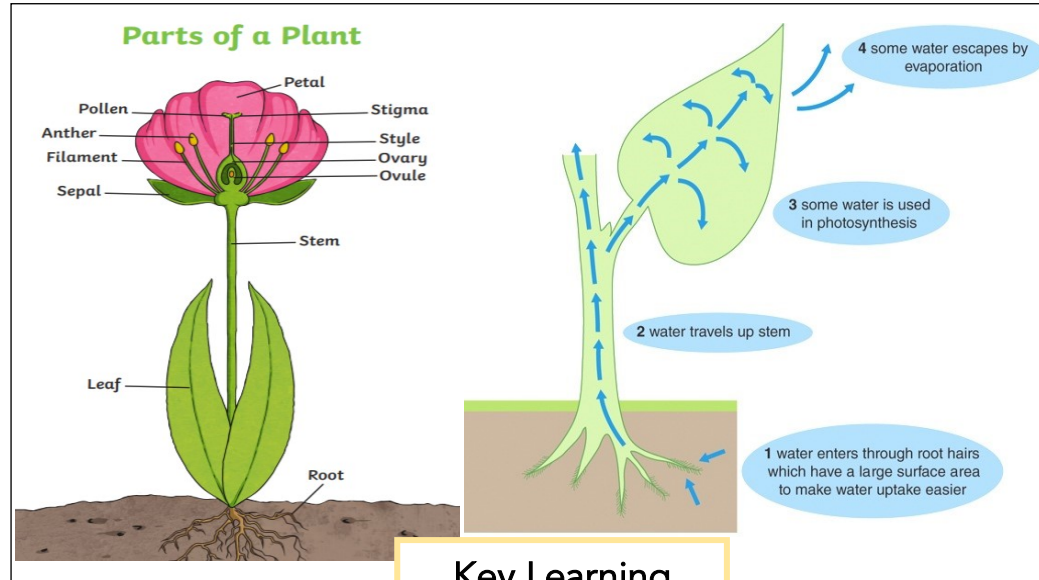


What are all the different ways that seeds disperse?



## Main idea

Understand the function of different parts of a flower and understand its needs to grow. Plants are different from other animals and humans in that they are able to produce their own food from photosynthesis. The main parts of a plant include the roots, stem and leaves.



## Key Learning

- To grow a healthy plant you need: sunlight, water, nutrients
- 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

## What you should already know

Plants can grow.

Names of common garden plants (e.g. poppy, rose) and the names of some common wild plants (e.g. daisy, dandelion, nettle).

The parts of a plant include: petals, fruits, roots, bulbs, seeds, stem, trunks and branches.

Deciduous trees lose their leaves in the autumn, and evergreen trees have green leaves all year round.

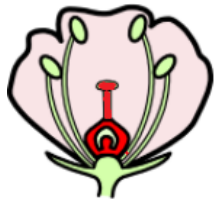
## What comes next?

Year 5 –describe the life process of reproduction in some plants

## Key vocabulary

|                |                |
|----------------|----------------|
| Carpel         | Pollen         |
| Flower         | Pollination    |
| Germinate      | Root           |
| Leaves         | Root hairs     |
| Life cycle     | Seed dispersal |
| Nutrients      | Sepals         |
| Ovary          | Stamen         |
| Ovule          | Stem           |
| Petal          | Style          |
| Photosynthesis | Stigma         |

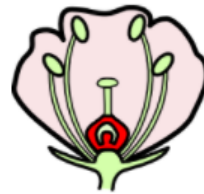
Year 3: Parts of a flower



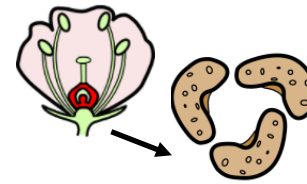
Carpel



Leaves



Ovary



Ovule



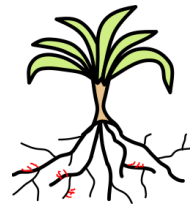
Petal



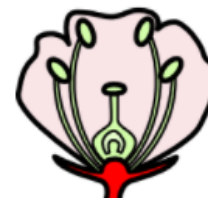
Pollen



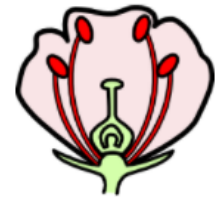
Root



Root hairs



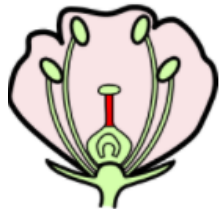
Sepals



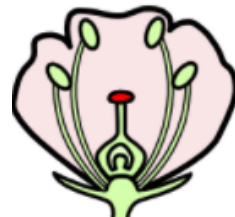
Stamen



Stem

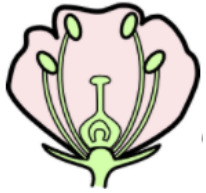


Style

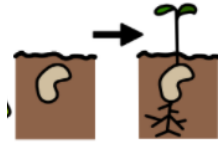


Stigma

Year 3: Plants



Flower



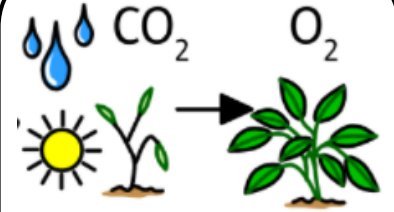
Germinate



Life cycle



Nutrients



Photosynthesis

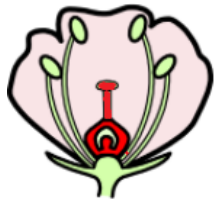


Pollination



Seed dispersal

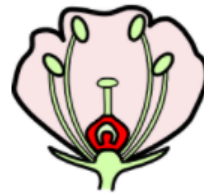
# Year 3: Parts of a flower



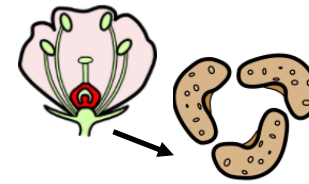
carpel: female part of the flower – made of stigma, style and ovary



leaves: catch sunlight and use this to make food



ovary: the part of the flower that contains the ovules



ovule: these are like eggs; they develop into seeds



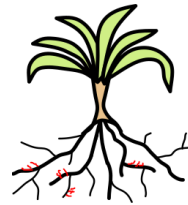
petal: part of the flower that attracts insects, often brightly coloured



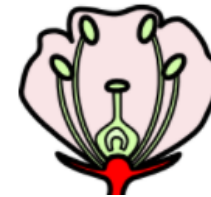
pollen: dust-like powder made in the stamen of a flower



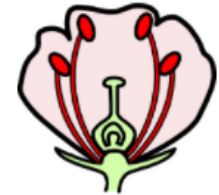
root: helps anchor the plant into the soil; takes up water and nutrients



root hairs: tiny hairs on a root that take water and nutrients from the soil



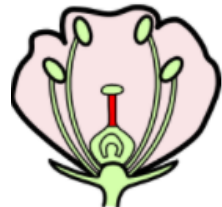
sepals: protect the rest of the flower as it grows



stamen: the male part of the flower which produces pollen



stem: holds the plant upright and supports the leaves; it contains tubes that allow water to travel from the roots to the rest of the plant

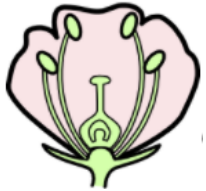


style: the middle part of the carpel, connecting the ovary to the stigma

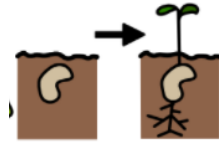


stigma: part of the carpel that pollen grains attach to during pollination

# Year 3: Plants



flower: the part of the plant where seeds are made



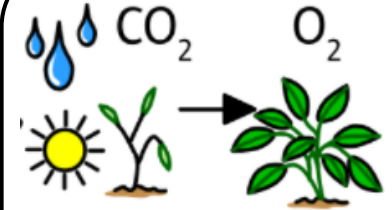
germinate: when a seed starts to grow and produce a root and shoot



life cycle: the stages a living thing goes through during its life



nutrients: materials in the soil that help to nourish plants



photosynthesis: how green plants make their own food



pollination: transferring pollen grains from the male anther of a flower to the female stigma so that new plants can be made



seed dispersal: the way seeds get from the parent plant to a new place so that they can grow