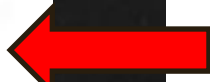
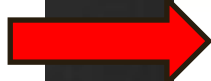
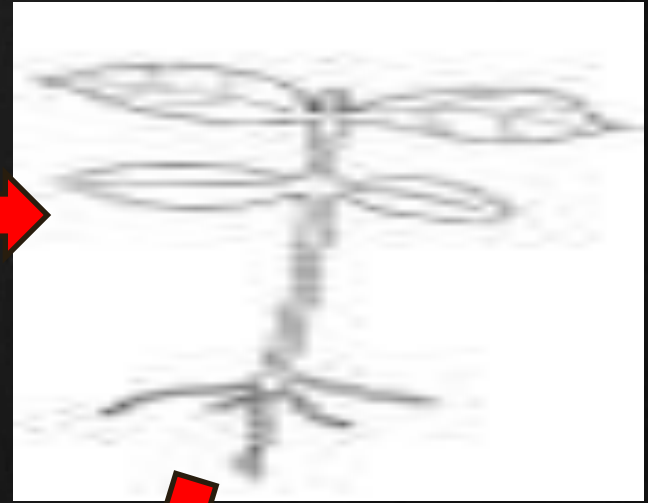
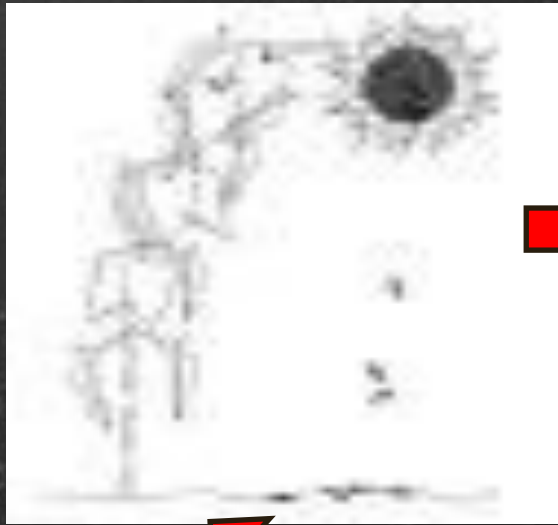


Pollination and Seed Dispersal

The life cycle of a plant

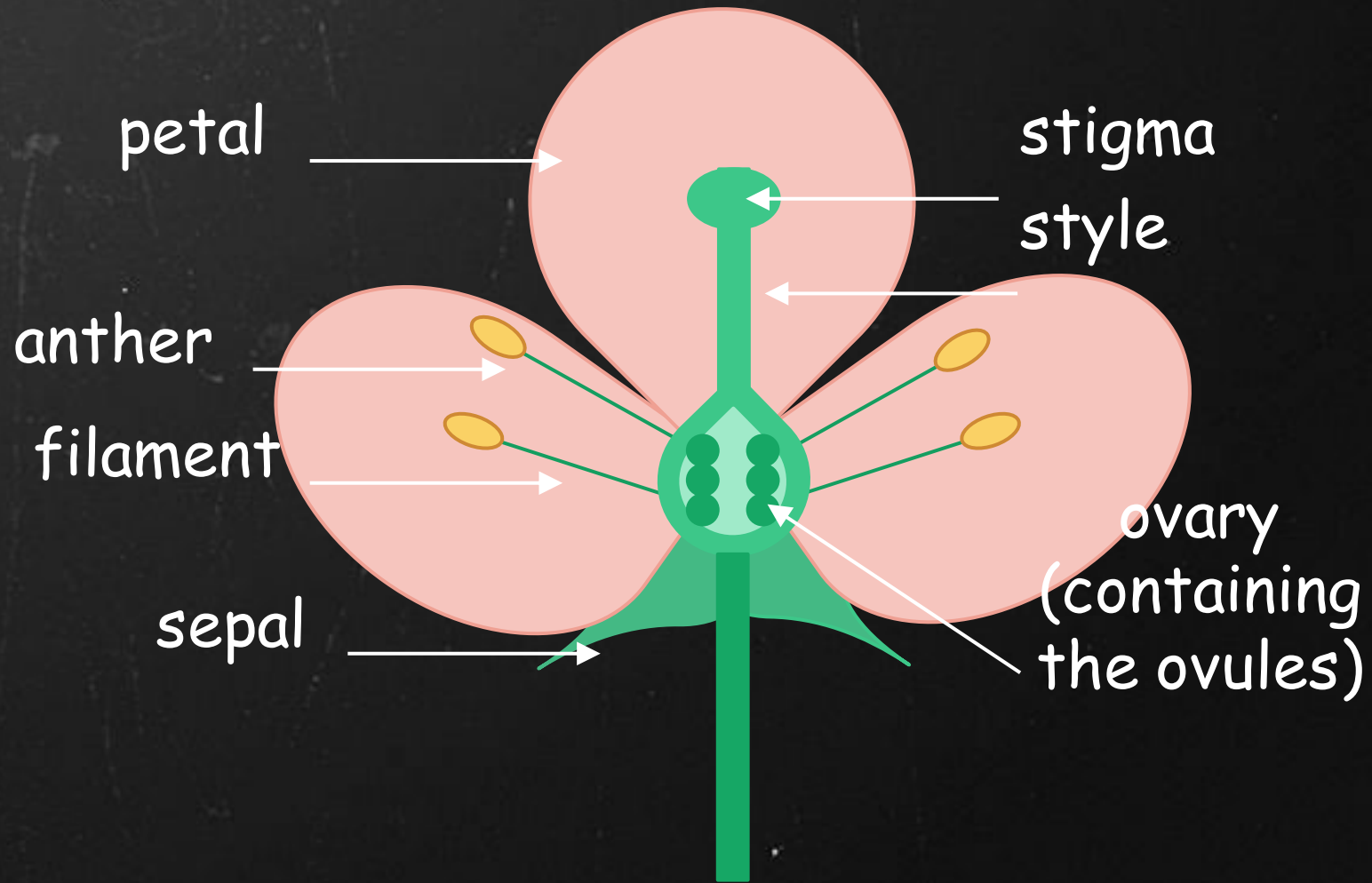


Flowering plant life-cycle

There are 4 stages to the life-cycle of a flowering plant:

1. POLLINATION
2. FERTILISATION
3. SEED DISPERSAL
4. GERMINATION

Parts of a flower



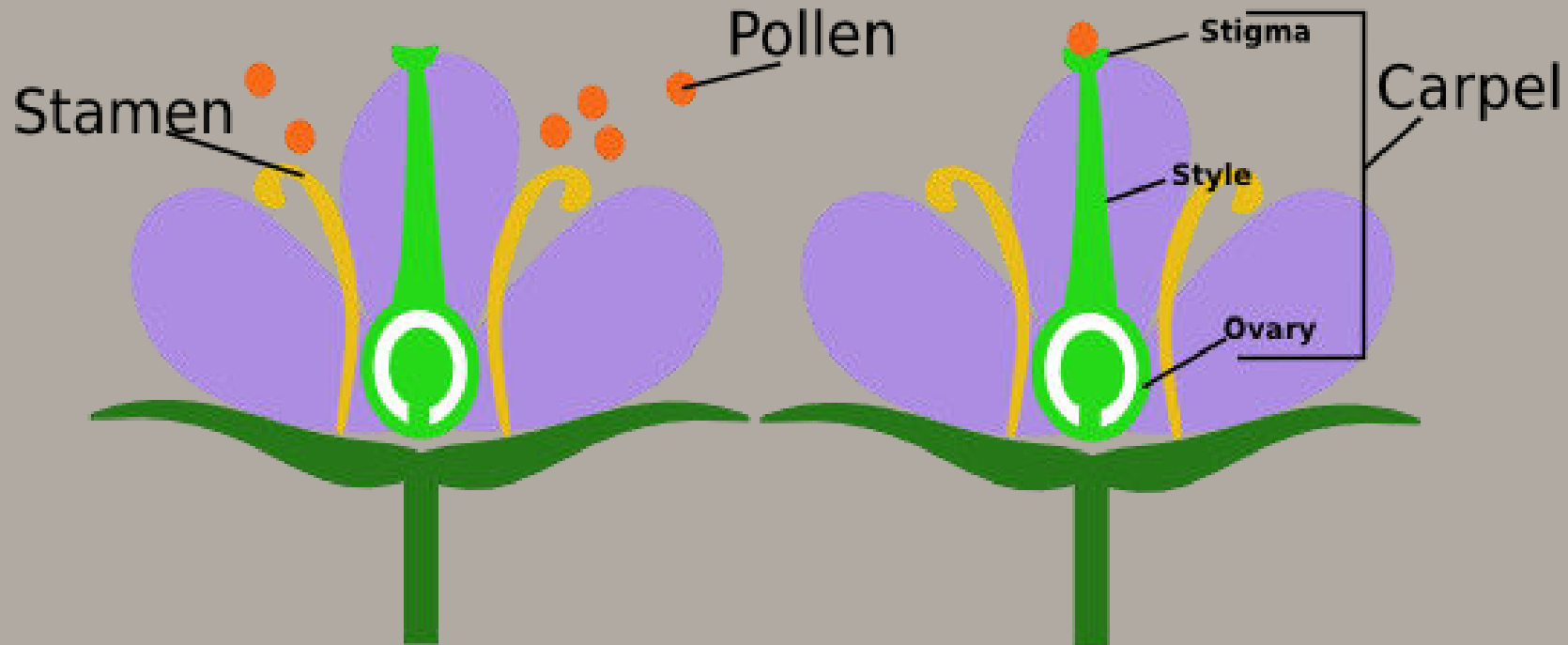
Parts of a flower

Male part:

The anther carries pollen which contains the male germ cell.

Female Part:

Inside the ovary are ovules which contain the female germ cell.



The **male** and **female** parts are involved in a process called **pollination**.

What is pollination?

<https://www.youtube.com/watch?v=V5yya4elRLw>

What **animals** are involved in **pollination**?

Birds - Hummingbirds

Insects - Bees, Butterflies and Ants.

Mammals - Bats and Kinkajous.



Pollination

1) Pollen is taken from the anther



2.a) Wind can carry pollen between flowers



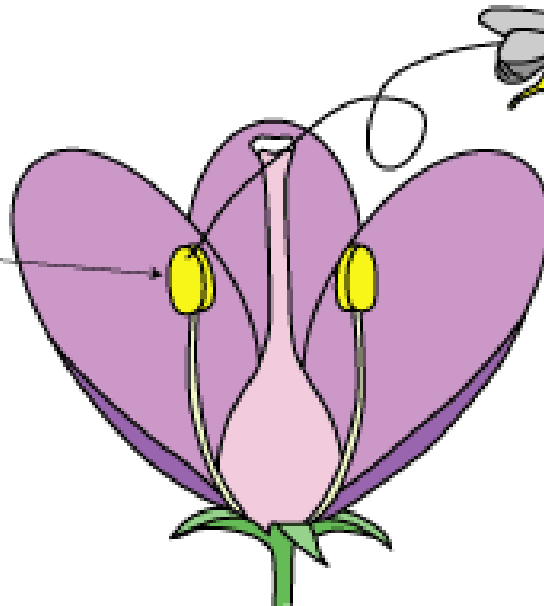
2.b) Insects can carry pollen between flowers

3) The pollen sticks to the stigma

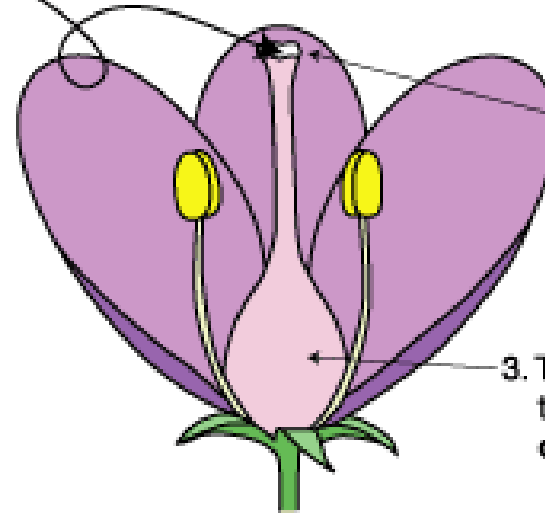


POLLINATION

1. The pollinator receives **pollen** from the **stamen** of the first flower.



2. And deposits it on the **stigma** of the next flower.

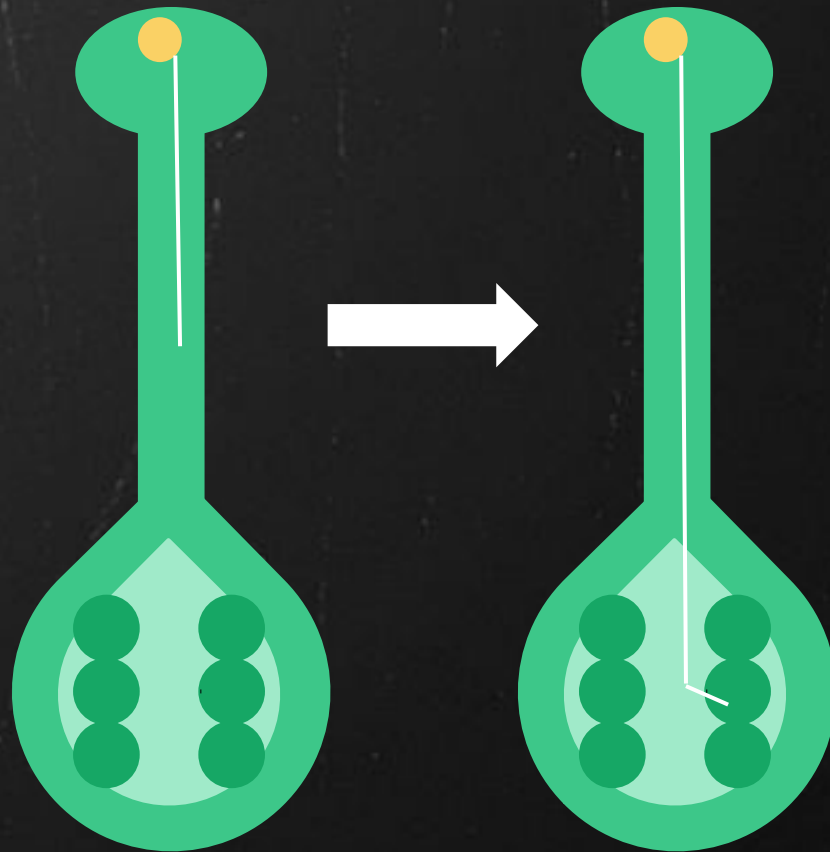


3. The pollen moves down the **style** to join with the **ovules** in the **ovary**.



Fertilisation

Once the pollen has landed on the stigma, a pollen tube grows down the inside of the style.



When the tube reaches an ovule, fertilisation takes place and a seed forms.

Seed dispersal

Once an ovule has been fertilised it will become a seed. To avoid competition (for light, water, etc.) with the parent plant the seed will be dispersed.

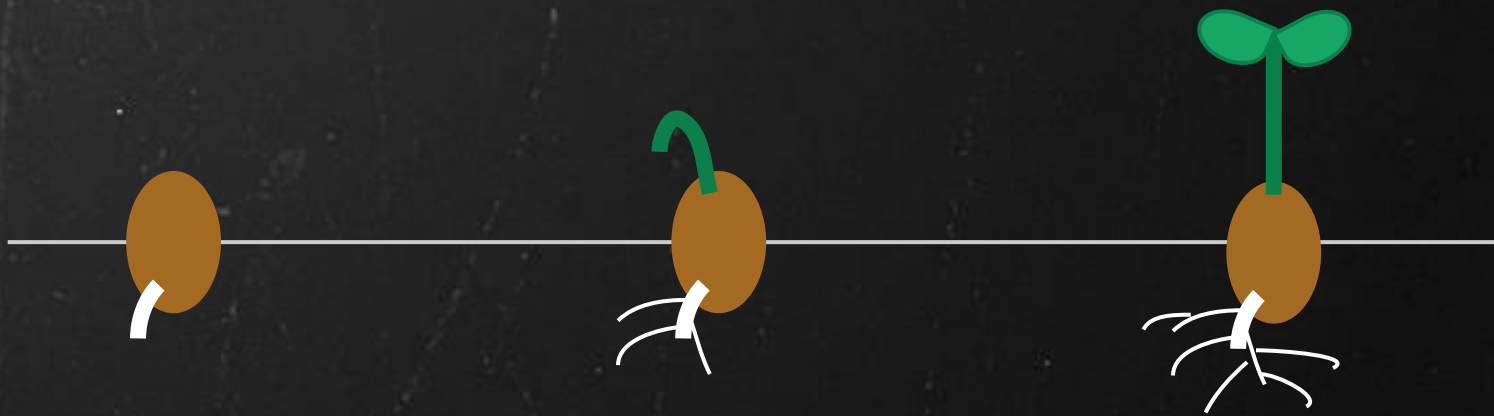
- **Dispersed by animals** - seeds can be contained within a fruit or attach to fur/skin
- **Dispersed by wind** - seeds can be very small and light or have an adapted fruit that catches the wind.
- **Dispersed by 'explosion'** - seeds are thrown from the parent plant.

http://www2.bgfl.org/bgfl2/custom/resources ftp/client ftp/ks2/science/plants_pt2/dispersal.htm



Germination

When the conditions are suitable (e.g. warmth and moisture), a seed will germinate. Germination is the first stage of growth.



1) a root emerges from the seed coat.

2) Using energy stores, the seed produces a shoot

3) Seed leaves appear allowing the plant to start photosynthesis