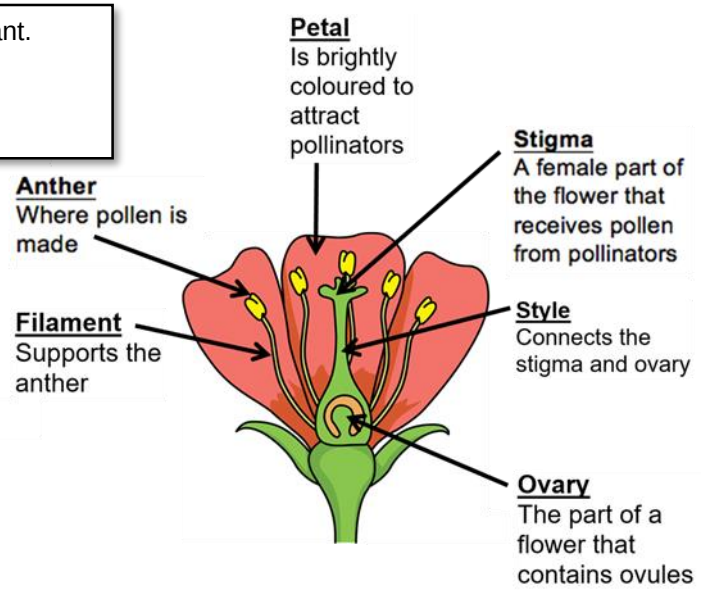
KNOWLEDGE ORGANISER
BIG IDEA: ECOSYSTEMS
TOPIC: PLANT REPRODUCTION

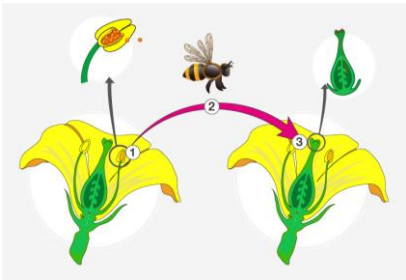
Flowers contain the reproductive organs of a plant.
Flowers have male and female parts.
Male: anther and filament
Female: stigma, style and ovary



Key Word	Definition
fertilisation	Joining of a nucleus from a male and female sex cell.
gamete	A sex cell (pollen and ovule in a flower)
germination	a process in which the seed begins to develop into a new young plant.
ovules	Female sex cells in plants found in the ovary.
pollen	Contains the plant male sex cells found on the stamens.
pollination	Transfer of pollen from the male part of the flower to the female part of the flower on the same or another plant.
seed	Structure that contains the embryo of a new plant.

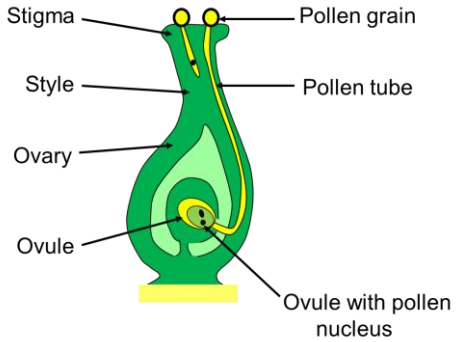
Pollination

Pollination is when **pollen** is transferred from the anther to the stigma. This can be within one flower or between different flowers. Pollen from the anther can be carried by insects such as bees or can be carried by the wind. The stigma is sticky to make sure that pollen sticks to it.



Fertilisation

Fertilisation is when the nucleus of the male sex cell (**pollen**) and the female sex cell (ovule) join together. After **pollination** has occurred, the nucleus of the pollen has to travel down the style until it reaches the ovary. It then joins with the nucleus of an ovule and the plant is said to be fertilised. The ovary then becomes a **fruit** and the ovules become **seeds**.



Seed dispersal

Seeds develop into new plants. They are dispersed (moved away) from the parent plant so that they have enough room and nutrients to grow. Seeds can be dispersed by:

- The wind
- Animals
- Explosions
- water

Dandelion seeds have parachute like structures so they are easily moved by the wind.

Sandbur has hooks so that it clings to animal fur

Coconuts have air spaces so they can float on water

Pea pods split open and the seeds are thrown out

Knowledge organiser
Big idea:

Y7 topic: Plant reproduction

I have already learned:
In KS2: The part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.

This topic links to:
Y7: Dependence on other organism topic – looking at food chains
Y7: Cells topic – looking at the nucleus of a cell
Y8: Inheritance topic - looking in more detail at what is in the nucleus

It is important to study about plant reproduction because…

Plants are vital for keeping all other living things alive (animals and you!). They are the start of every food chain, and without them we wouldn't have any food. We need to understand how they reproduce so we can keep growing more plants.

Possible careers involving plant reproduction are…
Cell biologist
Teacher
Researcher
Ecologist
Biologist
Conservationist