

Reproduction in Flowering Plants



Reproduction in flowering plants

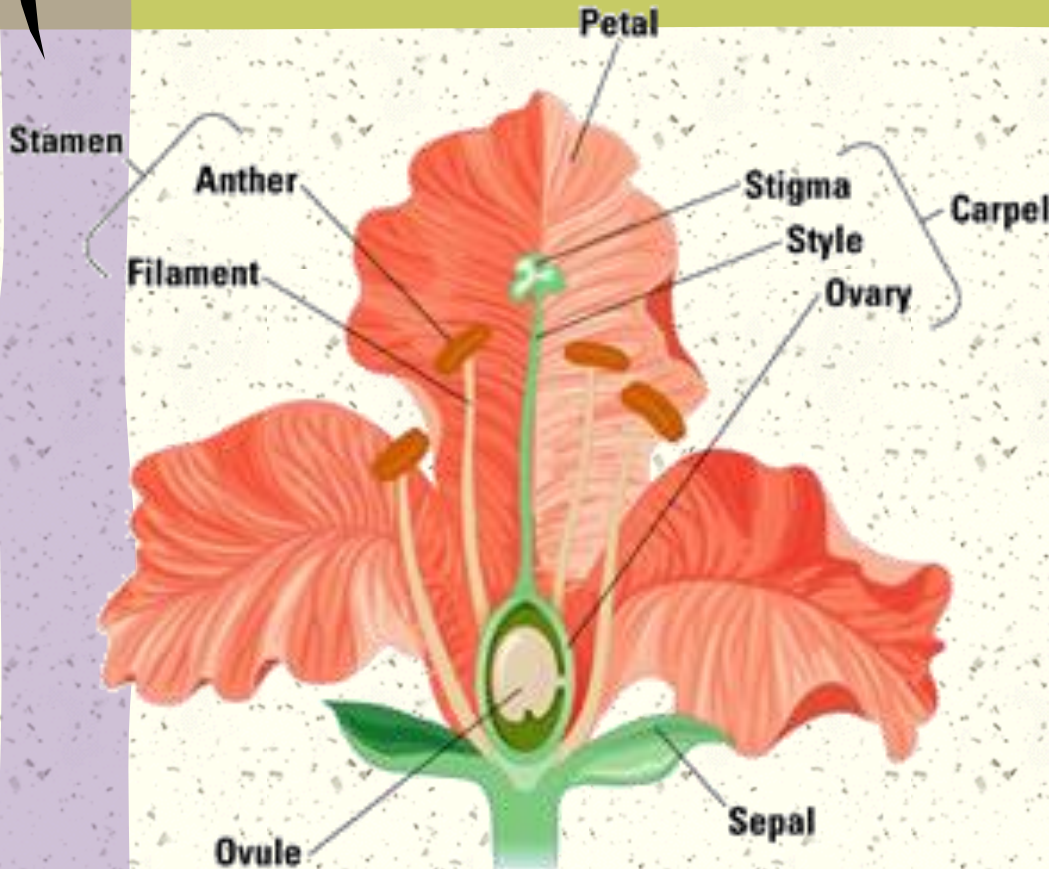
KEY CONCEPT

Reproduction of flowering plants takes place within flowers.

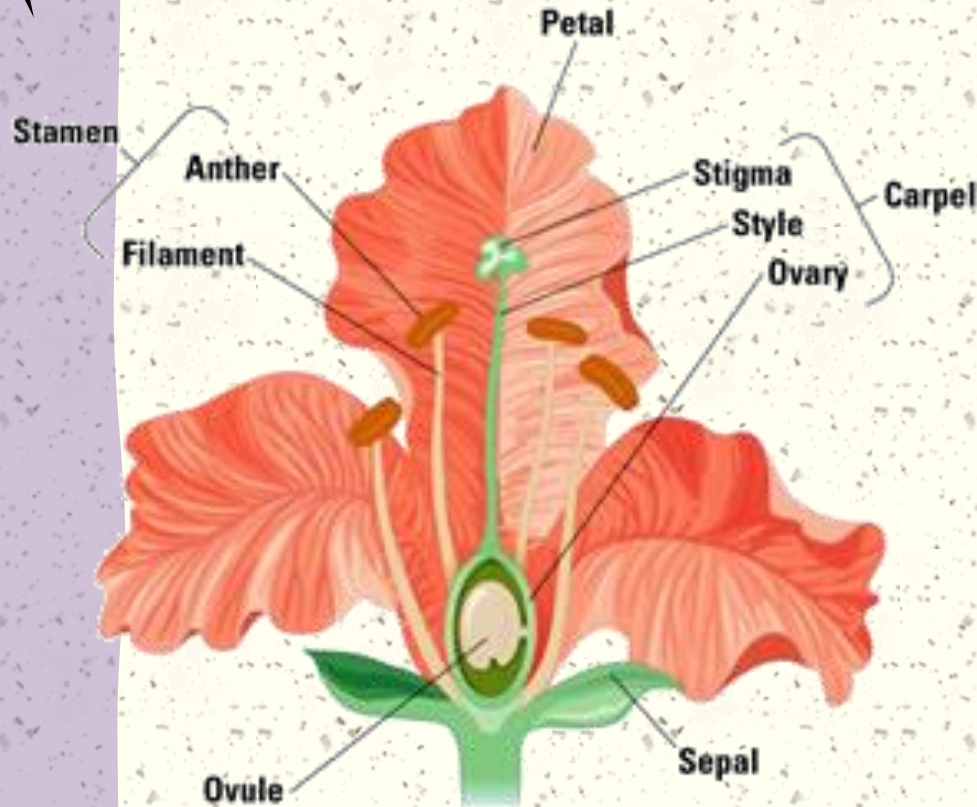


Flowers

Flowers contain reproductive organs protected by specialized leaves.



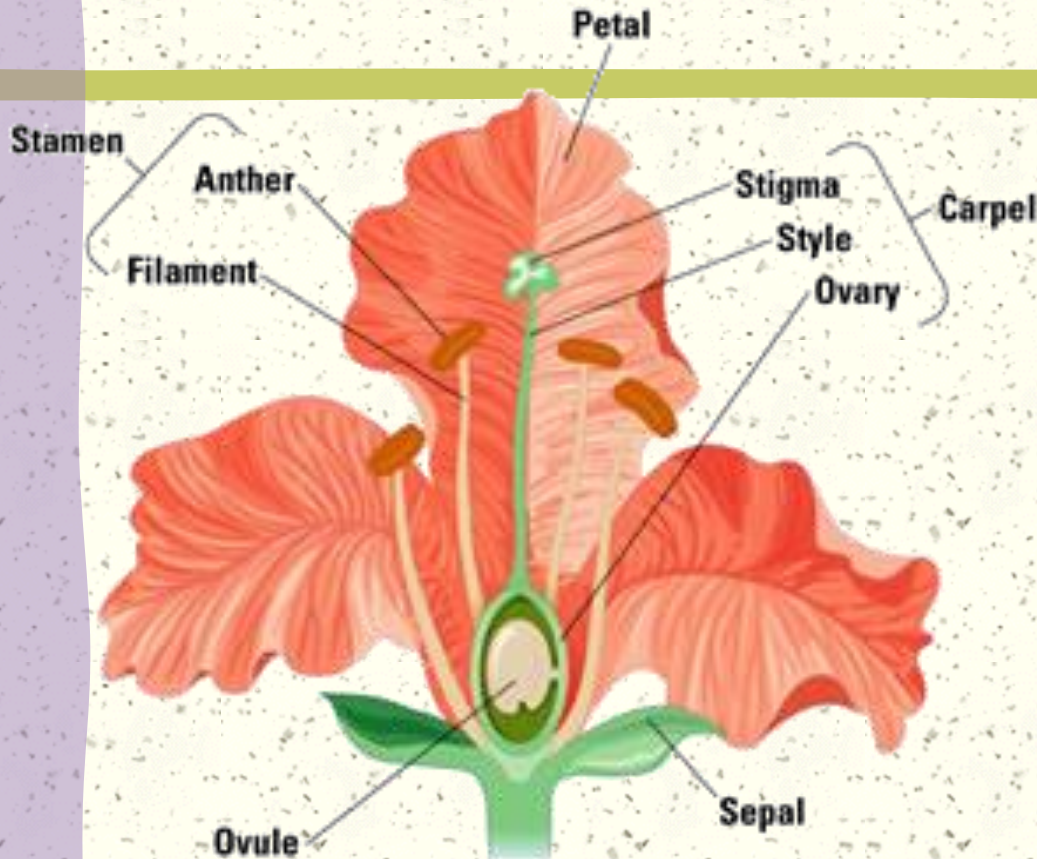
Flowers



✚ Sepals and petals are modified leaves.

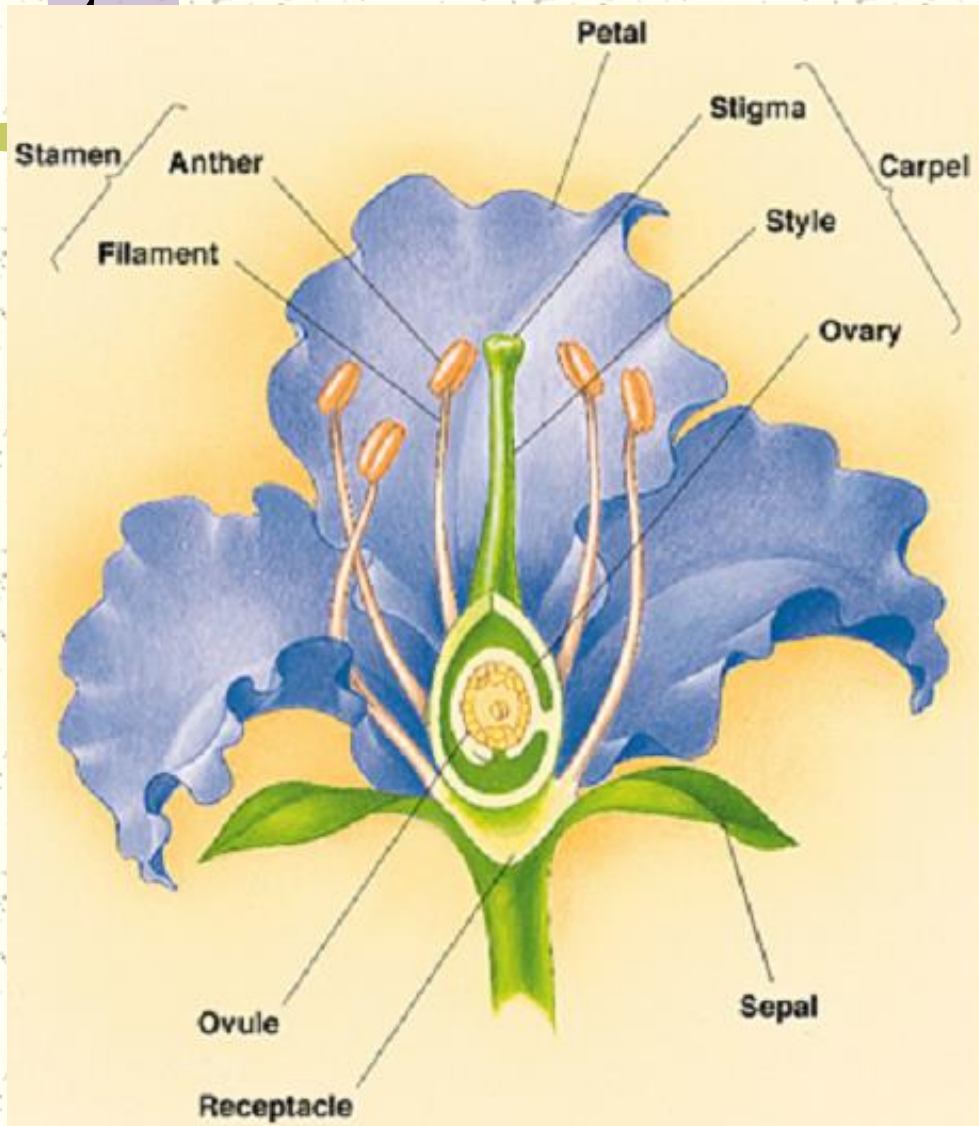
✚ Sepals are outermost layer that protects developing flower.

Flowers



■ Petals can help to attract animal pollinators

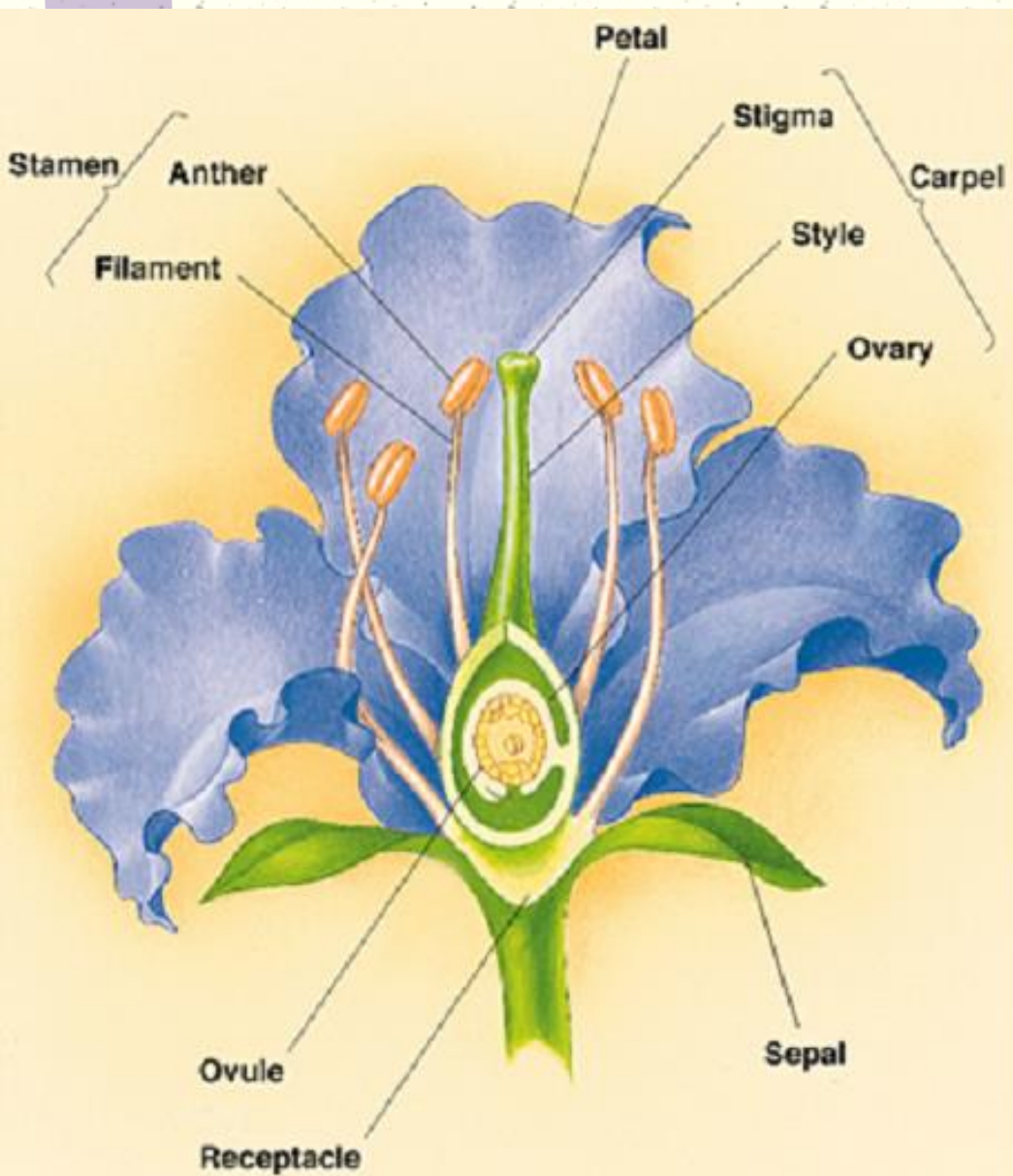
Flowers



✦ A stamen is the male structure of the flower.

- anther produces pollen grains
- filament supports the anther .

Flowers



The innermost layer of a flower is the female carpel.

- stigma is sticky tip
- style is tube leading from stigma to ovary
- ovary produces female sex cell (ovum).

Flowers

- # Flowering plants can be pollinated by wind or animals.
 - Flowering plants pollinated when pollen grains land on stigma.
 - Wind pollinated flowers have small flowers and large amounts of pollen.

Animal pollinated flowers have larger flowers and less pollen.



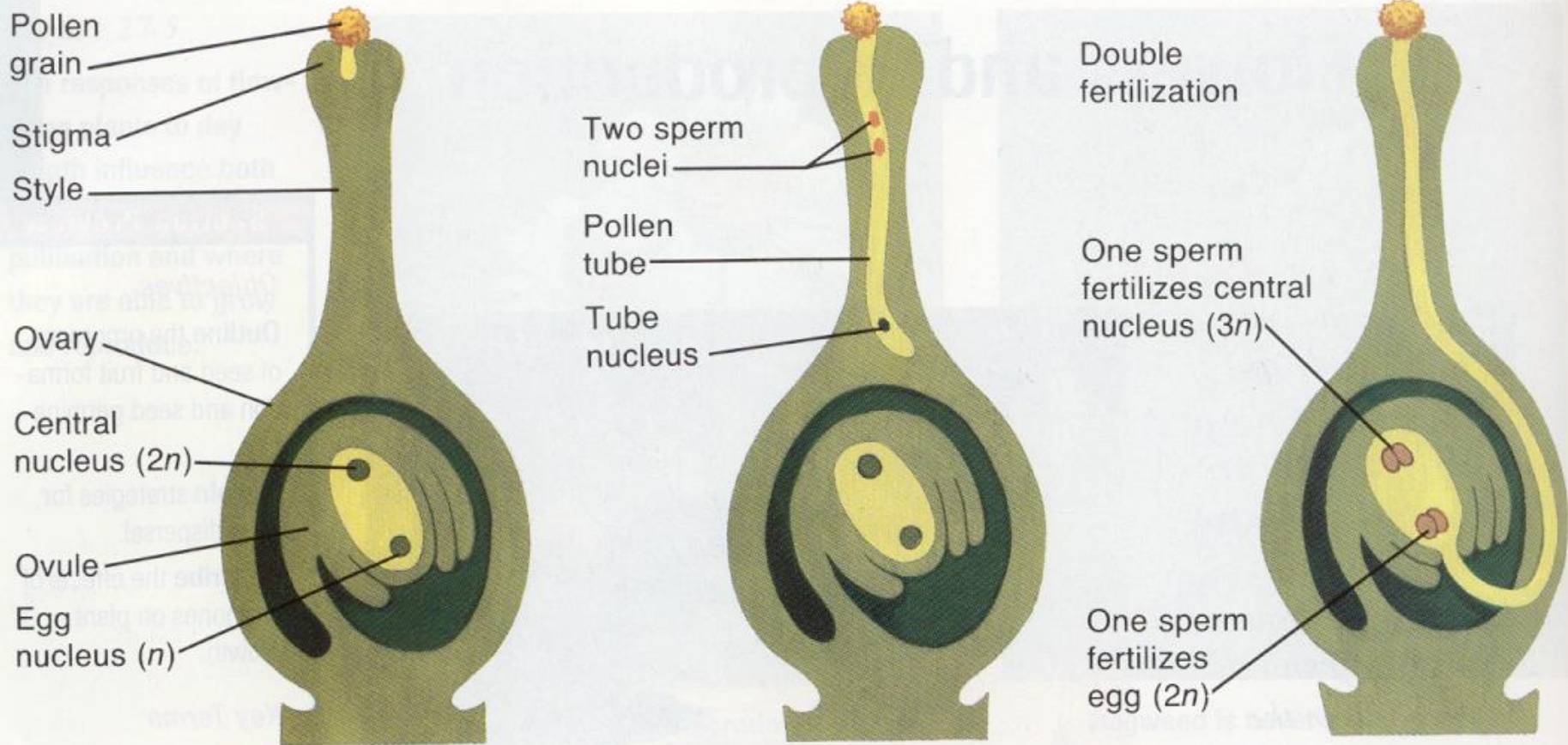
- many flowering plants pollinated by animal pollinators
- pollination occurs as animal feeds from flower to flower
- animal pollination more efficient than wind pollination

Fertilization takes place within the flower.

- Male sex cells, or pollen grains, are produced in the anthers.
 - each spore forms two haploid cells.
 - two cells form a single pollen grain

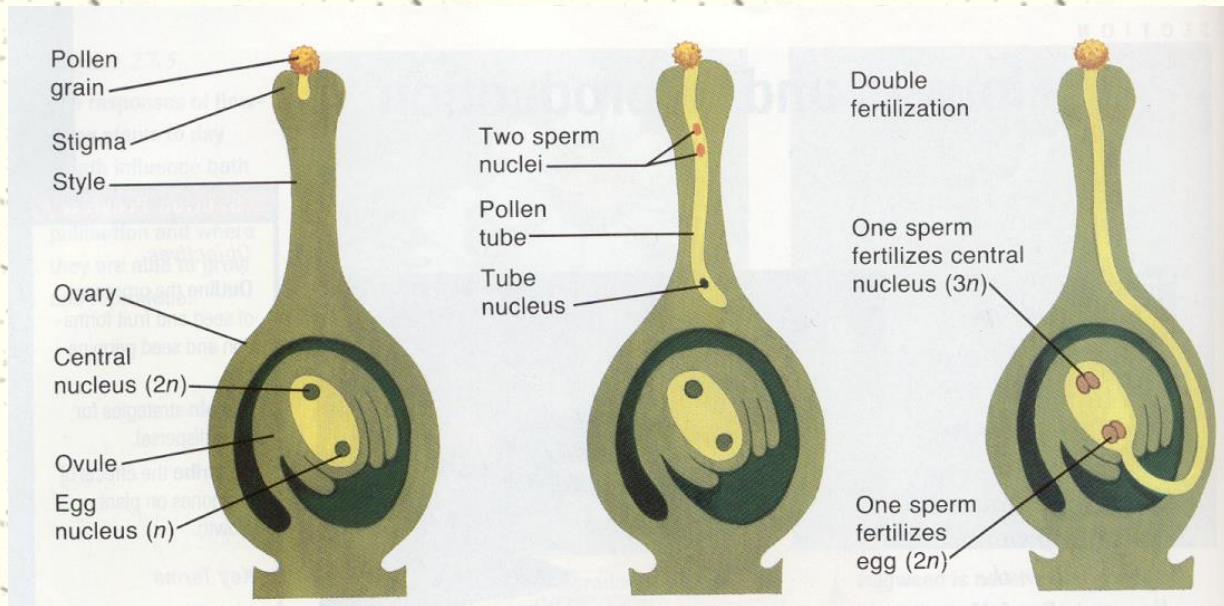


Flowering plants go through the process of double fertilization.

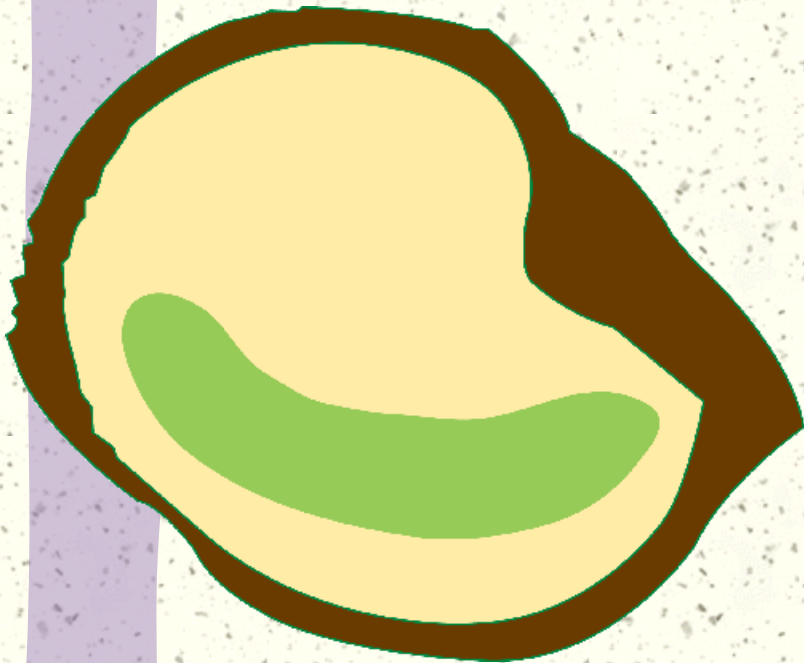


Flowering plants go through the process of double fertilization.

- # Pollination occurs when a pollen grain lands on a stigma.
 - one cell from pollen grain forms pollen tube
 - other cell forms two sperm that travel down tube

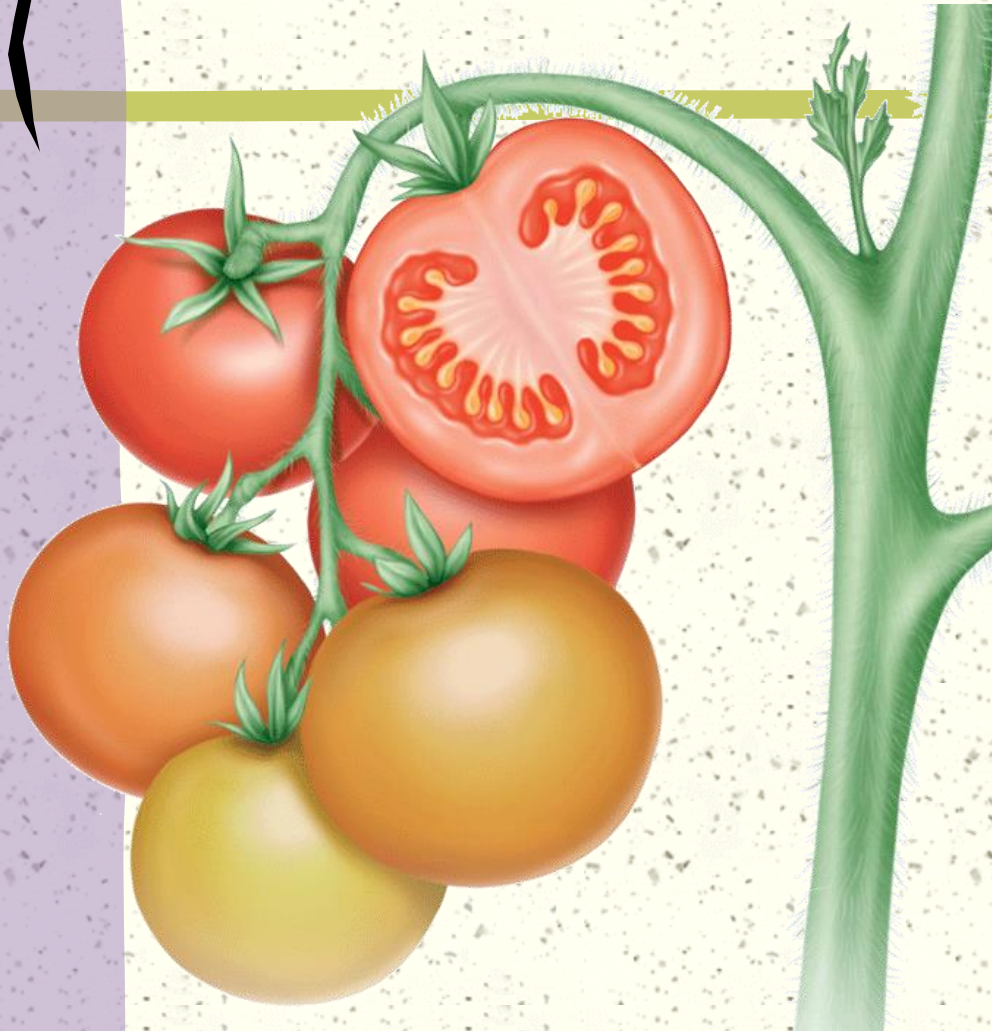


Flowering plants go through the process of double fertilization.



- one sperm fertilizes the egg (becomes embryo)
- other sperm unites with polar nuclei, forming endosperm
- endosperm provides food supply for embryo

Reproduction in flowering plants



-- Each ovule becomes a seed.

– The surrounding ovary grows into a fruit.