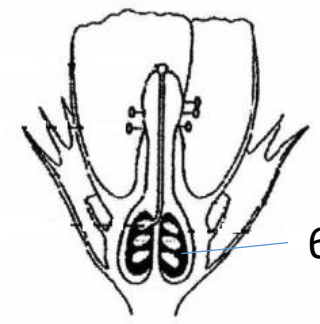
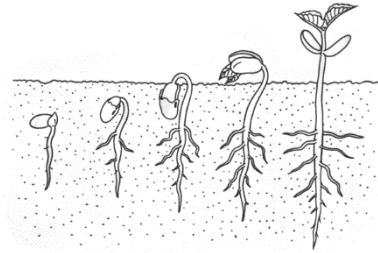


Water Oxygen Warmth (not light)

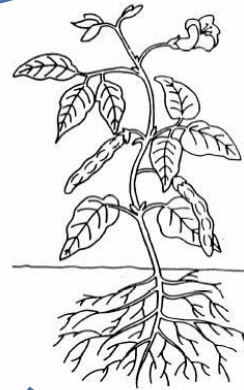


6 ovules=6 seeds

Germination



Growth



Life cycle of flowering plants

Fertilisation

Pollen grain (contains male reproductive cell) grows a pollen tube to reach the ovule (female reproductive cell) in the ovary. Fertilisation occurs when they fused. Petals drop, ovary swell and becomes fruits and ovule becomes seed.

Pollination

Transfer of pollen grain from anther to stigma

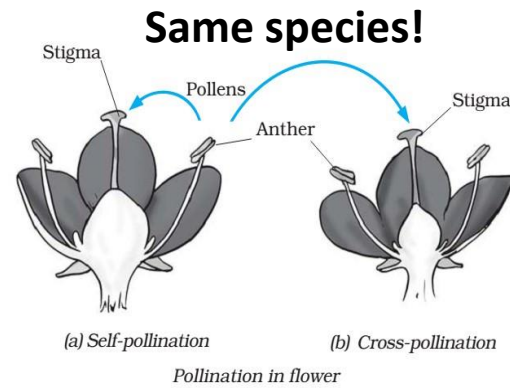
Only flowering plants will bear fruits.

Wind pollinated flowers

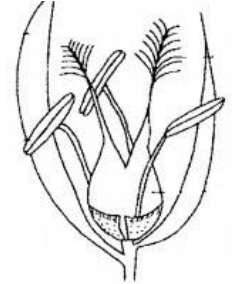
- ❖ Small and dull coloured
- ❖ Feathery stigma
- ❖ Anthers and stigma hang outside flower

Animal pollinated flowers

- ❖ Large and brightly coloured
- ❖ Sticky stigma
- ❖ Sweet fragrance
- ❖ Have nectar



Pollination in flower



Seed dispersal

Water Wind

Animals

Splitting/
explosive
action



Life cycle of plants ensure continuity of their own kind



Seed Dispersal

To prevent overcrowding so that the young plants and parent plants need not compete for water, space, sunlight and nutrients.

Wind

- Dry and light
- Able to float, have wing-like structures
- Have hair-like structures



Angsana



Shorea

Water

- Able to float
- Fibrous husk that traps air
- Waterproof skin



Coconut



pong pong

Splitting/ Explosive Action

- Pod-like



Peas



violet

Animals

- Fleshy fruits, indigestible seeds passed out as droppings
- Have hooks/hair



Burdock fruit



cherry

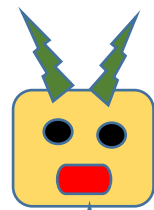
Good plant



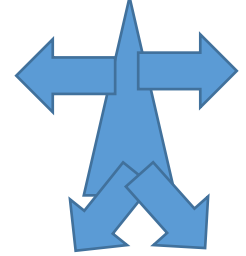
weeds



The weeds do not compete for sunlight with the good plant as the good plant is taller.



Sunlight



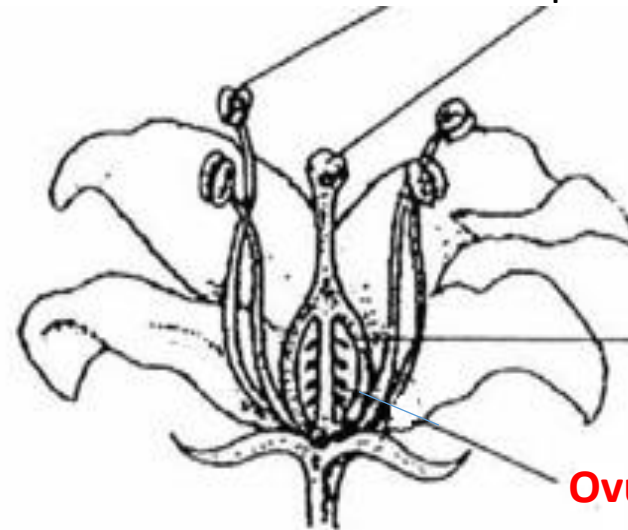
Space

Water

Nutrients

Anther: contain pollen grains

Stigma: to trap pollen grains



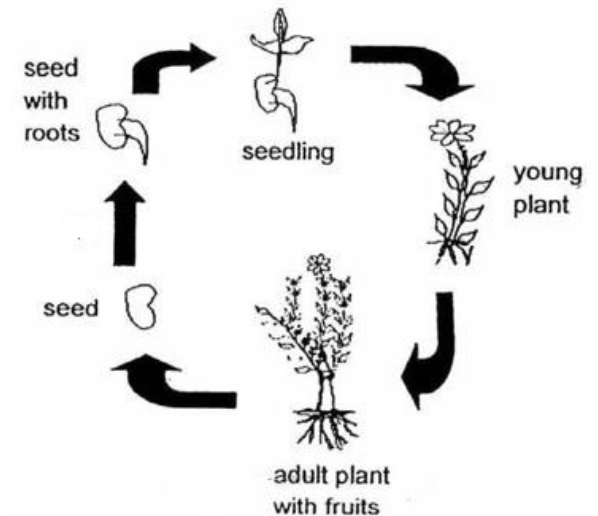
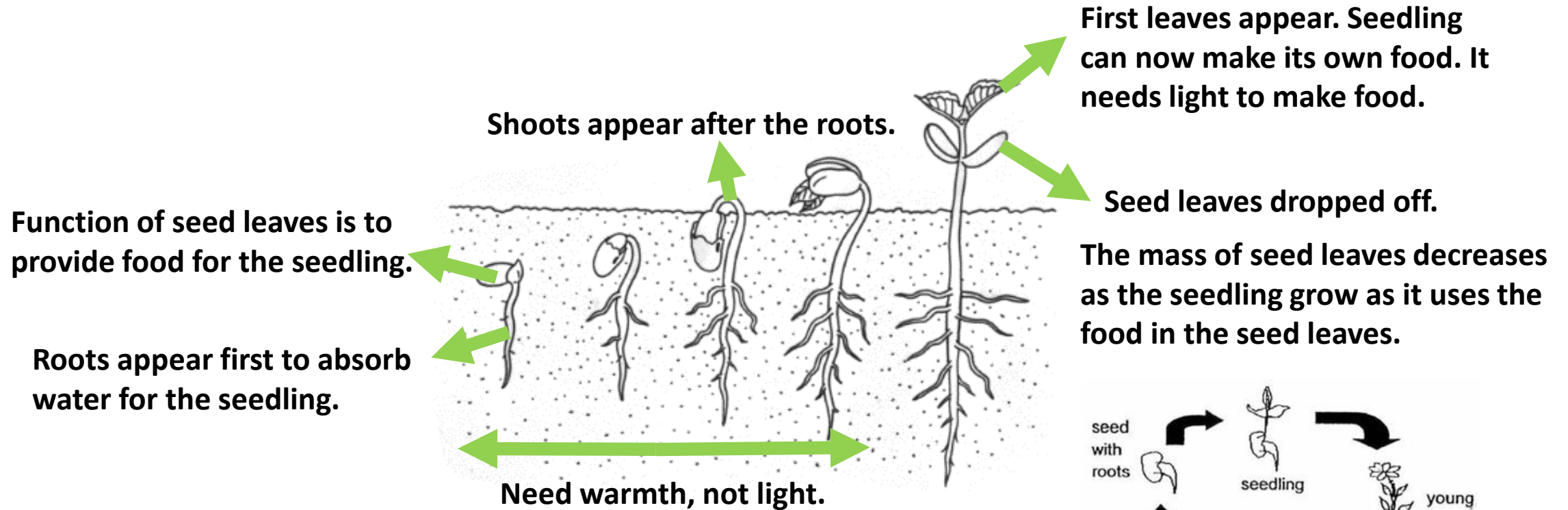
Ovary: become fruit

Ovule: become seeds

Germination

Conditions needed for germination:

Water Oxygen Warmth (not light)



Fruits produced by Plant Z has many seeds. Birds help to disperse the seeds by eating its fruits and passing the undigested seeds out through their droppings.

Suggest and explain two benefits for Plant Z to disperse its seeds this way.

Benefit 1:

The seeds would be able to be dispersed far away from parent plant to reduce overcrowding and competition for sunlight, water, space and nutrients.

Benefit 2:

The droppings acts as fertilisers so when the seeds germinate and grow, the seeds will grow well as they absorbed nutrients from the droppings.

