Biology chapter 7; Flowers, Fruits and seeds
Paragraph 1 till 3, page 84-91

**Paragraph 1; Flowers**

Organs of plants: roots, stems, leaves and flowers

Seed plants: plants that flower

Corolla: other word for petals

Calyx: other word for sepals

Stamens: the male sex organs (consisting of anther and filament)

Carpels: the female sex organs (consisting of an ovary, style and stigma)

Anther: part of the stamen that contain the pollen

Pollen grains: contain the male sex cells of the plant

Pistil: if 2 or more carpels are fused together

Egg cell: the female sex cell of the plant

Nectar: a sweet juice that attracts insects. Bees use it to make honey; honey is used to feed their larvae.

Honey: used as a sweetener and as food for larvae.

\*Sepals are leaf-like structures.

\*Calyx encloses and protects the inner part of a flower when it is in bud stage.

\*when pollen grains are ripe the anthers split open and the pollen grain are released. Ripened pollen grains have a solid wall to protect them from drying out.

**Paragraph 2; Pollination**

Pollination = the transfer of pollen from anther to stigma

Self-pollination = when pollen is carried to a stigma in the same flower

Cross-pollination = pollen carried to the stigmas of other flowers

Insect-pollinated flowers = flowers that need insects to carry the pollen from flower to flower.

Wind-pollinated flowers = pollen is carried by the wind

-Insects are attracted to insect-pollinated flowers due to the large, brightly coloured and scented petals. Insect get their food from these flowers.

-Wind-pollinated flowers are often small and inconspicuously coloured, the petals are often green.

-pollen is transferred when an insect goes into a flower to feed on the nectar. When doing this the insect touches the stamen and the carpel. Pollen is sticky, so it sticks to the insect’s body. The insect then goes into another flower etc. now the pollen sticks to the carpel.

-in wind-pollinated flowers the wind is needed to blow the pollen away from the anthers. They produce large amounts of pollen to increase the chance of pollination. Pollen grains are smooth and light so easily carried in the air, some pollen grain have air bubbles to prevent them from falling to the ground too soon.

-in wind-pollinated flowers anthers hanging outside the flower are exposed to the wind. The large, feathery stigmas catch pollen grain, this increases the chance of pollination.

Paragraph 3; Fertilization

Pollen tube = when pollen grain lands on a stigma of a plant of the same species and a tube starts to grow.

(it transports the pollen nucleus with it)

Fertilized egg cell = when 2 sex cells join to make 1 single cell. (< this is fertilization.)

Embryo = when the fertilized egg cell starts to grow.

The ovule starts to grow and dorms the seed. (synonym for seed is germ)

Life circle: Fertilized egg cell > Embryo > Seed (germ) > Germ > seedling