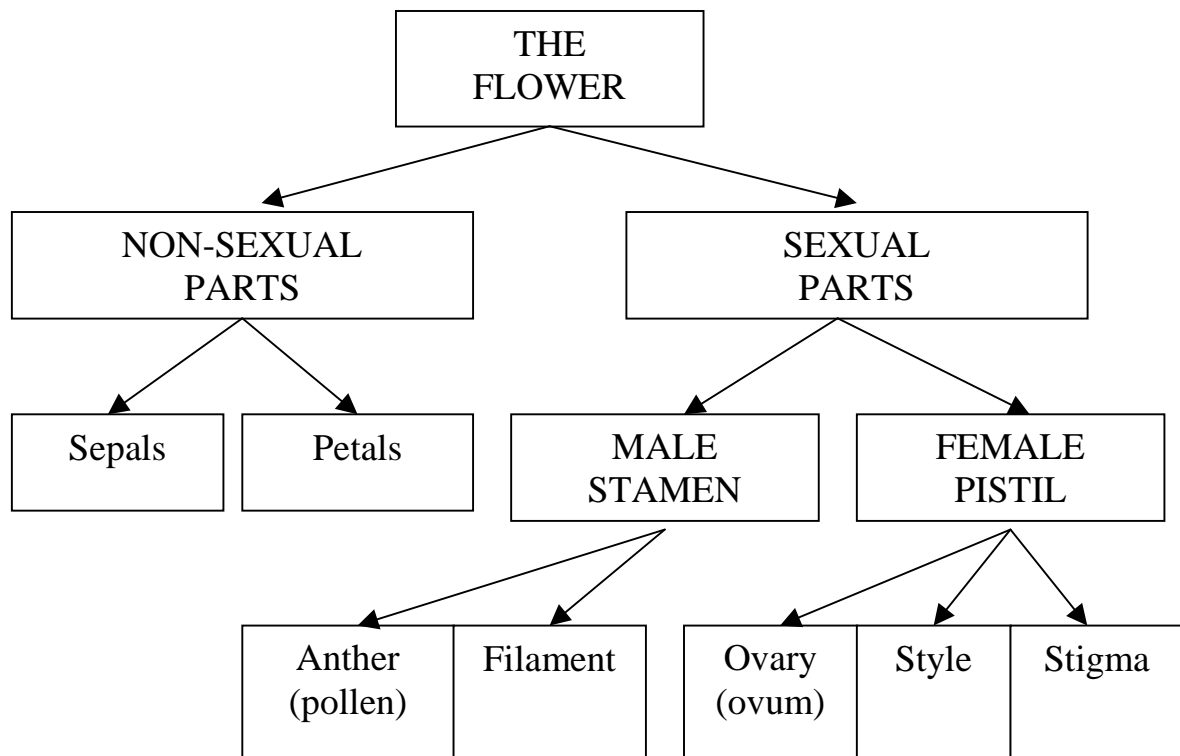




PLANT REPRODUCTION



PARTS OF A FLOWER

Refer to the diagram of the Flower in your textbook.

- ♦ Flower – a modified stem with modified leaves (sepals and petals) and sexual organs (male stamen or female pistil)
- ♦ Flowers may contain only male reproductive organs (staminate flowers), or only female reproductive organs (pistillate flowers), or both.
- ♦ The development of flowers is often following periods of either long or short nights. However, some angiosperms flower at any time of the year.

POLLINATION AND FERTILISATION

- ♦ Pollination is the transfer of the male pollen grain from the anther to the stigma of the female pistil. Pollination may occur by means of the wind or by animals such as bees.
- ♦ Self-pollination – pollination within the same plant
- ♦ Cross-pollination – pollination with another plant

- ◆ [Fertilisation](#) – the process when a male pollen grain enzymatically ‘drills’ a pollen tube down the style to the ovary, and then fuses with or fertilises a female ovum to form a single-celled zygote

THE FRUIT

- ◆ [Fruit](#) – the enlarged fleshy ovule (part of the ovary) which contains the seed that developed from the zygote

GERMINATION OF THE SEED

- ◆ [Germination](#) – the growth of the seed into a small plant called a [seedling](#)
- ◆ [Water](#) is essential for germination
- ◆ Some Australian native plants also require short periods of high temperatures resembling bushfires in order to germinate.
- ◆ Seeds may be [dispersed](#) or spread by wind (e.g. pine seed), by water (e.g. coconut) or by animals (e.g. bird).

THE SEEDLING

- ◆ After germination of the seed, the shoot grows upward and the root grows downward ([geotropism](#)).
- ◆ The first leaf/leaves to grow are called seed-leaves or [cotyledons](#).
- ◆ [Monocotyledons](#) are plants, such as grasses and irises, that have one cotyledon or seed-leaf.
- ◆ [Dicotyledons](#) are plants, such as roses and carrots, that have two cotyledons or seed-leaves.

ALTERNATION OF GENERATIONS IN PLANTS

- ◆ [Gametophyte](#) – the haploid / monoploid organism; usually the smaller plant
- ◆ [Sporophyte](#) – the diploid organism; usually the larger plant
- ◆ [Alternation of generations](#) is the alternating forms of organism produced – gametophyte and sporophyte.