**Plant Reproduction**

* A flowering plant always follow certain steps in its life cycle
* A seed germinates which is essentially respiration, and then grows by mitosis. Mitosis requires energy, which comes from the respiration of starch stored in the seed. The seedling will grow quickly, and magnesium, which is also stored in the seed, will help make chlorophyll so it can start to photosynthesise, which means it can make its own food.
* Providing the plant has got water, minerals and sunlight, and then it will eventually produce flowers- the reproductive organs of the plant.
* Most flowers contain both the male and female parts. The anthers will ripen and produce pollen grains and the ovary will ripen and produce ovules- these are known as gametes.
* Usually the sex cells will ripen at different times to avoid self-pollination and would therefore prevent self-fertilisation as well.
* However, some plants want to self-pollinate, or have been bred to self-pollinate, such as peas.
* Although, most will cross-pollination as it produces more variation in offspring.
* Plants will therefore need to move their pollen grains from one plant or flower to another by either the wind or otherwise by insects.
* Insect pollination often uses bees to transfer the pollen from the anther to the stigma. The pollen grains are large, heavy and sticky.
* Wind pollinated plants have their pollen grains are blown onto the stigma. It helps if the seeds are light, small, smooth and have air bladders.
* Wind-pollination is rather ineffective; so many pollen grains have to be produced. Insect pollination is much more effective, so not as many pollen grains need to be produced.
* The pollen grain lands on the stigma, which is very sticky.
* The pollen grain then grows a pollen tube which travels down the style, into the ovary, and into the ovule through the micropyle. The nucleus from the pollen grain falls down the pollen tube and fertilises the ovule. This makes a seed.
* The seeds are then dispersed inside fruits, so that they start to germinate away from the parent plant. This will reduce competition.





REMEMBER:

Male Gamete (inside pollen grain)

Female Gamete (inside the ovule)

Fertilisation

Seed