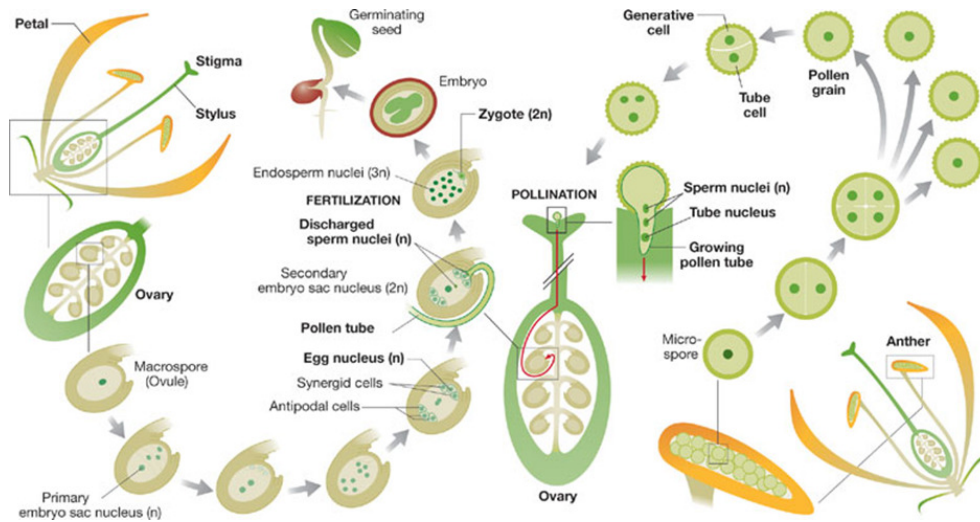
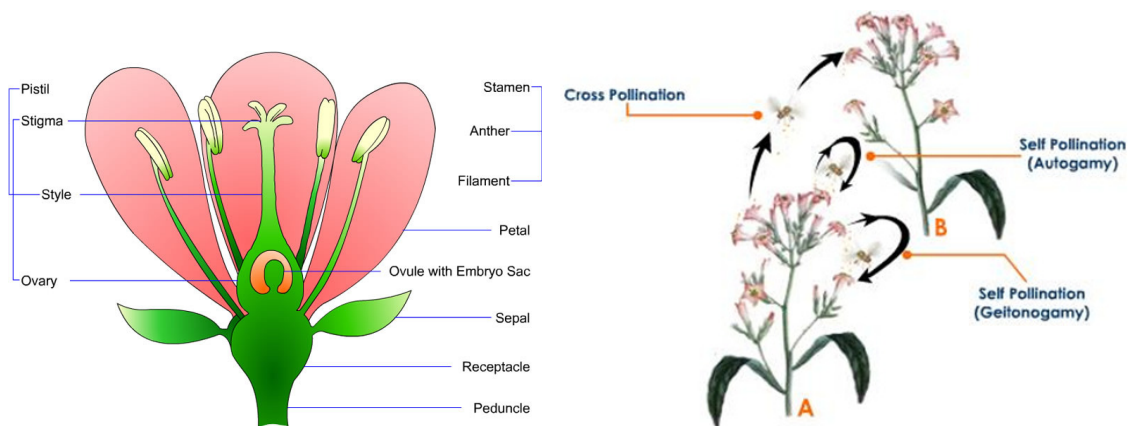


1. **Sexual reproduction** is the process involving (a) the fusion of 2 gametes to form a zygote (b) resulting in the production of genetically dissimilar offspring with more variation.
2. **Asexual reproduction** is the process resulting in (a) the production of genetically identical offspring from (b) 1 parent without the fusion of gametes



3. **Parts of flower**

- Pedicel -Connect flower to plant
- Receptacle -Support the entire flower
- Sepal -Protect flower during bud stage
- Petals -attract insects for pollination & provide platform for insects to land
- Carpel (stigma, style, ovary, ovule) –Female reproductive part develop to fruit
- Stamen (anther, filament)-Male productive part to produce pollen grains



4. **Pollination**: the process of transfer pollen grains from anther to stigma
- **Self-pollination**: pollens grains are transferred to the sigma of the same flower or different flow in the same plant
 - Advantage: Only 1 parent plant needed, pollination is easier.
 - Disadvantage: less genetics variations hence less resistant to diseases.
 - **Cross-pollination**: pollens grains are transferred to the sigma of a flower in another plants of the same kind or species
 - Advantage: More genetics variations, more resistant to diseases.
 - Disadvantage: 2 parent plants needed, pollination is more difficult.

5. **Insects-pollination verses Wind-pollination**

	Insects pollinated	Wind pollinated
Petals	Large & Bright colors	Small and dull colors
Nectar	Presence	Absence
Stigmas	Small sticky and within flower	Large feathery and out of flower
Stamens	Non-pendulous inside flower	Pendulous and outside flower
Pollen	Large & rough surface	Tiny & smooth & a lot

6. **Fertilization Process**

- Pollen grain germinate in response to sugary fluid on the stigma
- Pollen tube grows through the stigma towards the ovary
- Pollen tube nucleus releases enzyme to breakdown the tissues of stigma
- **Generative nucleus** divides into 2 male gametes and the **pollen tube nucleus** breakdown eventually
- 2 gametes enter ovule through the **micropyle**
- 1 male gamete fuse with **definitive nucleus** to form **endosperm nucleus**
- 1 male gamete fuse with **Ovum** to form zygote
-

7. **Fruit and seed development**

- Petals, Stamens, Stigma & style degenerate upon fertilization
- Ovule develop into seeds
- Ovary develop into fruit
- Zygote develop into embryo
- Endosperm develop into seed's food storage

