

8B Plants and their Reproduction

1. Classification and Biodiversity

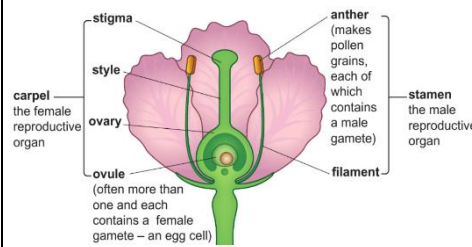
Classification	Sorting organisms into groups based on their characteristics.
Kingdoms	The five largest groups (each can be split into smaller groups)- <i>animals, fungi, protocists, prokaryotes and plants.</i>
Plants	Members of the plant kingdom have cellulose cell walls, are multicellular and make their own food.
Scientific Name	We give organisms scientific names using the names of the last two groups- the genus and the species.
Scientific Name Advantages	Scientific names are agreed around the world so there is no confusion. Some species have the same common name in different places.
Biodiversity	The number of difference species in an area.
Advantages of High Biodiversity	Recover faster from disasters and useful substances can be found (medicines).
Extinct	When an organism dies out completely.

2. Types of Reproduction

Sexual Reproduction	Two organisms breeding to produce offspring.
Hybrids	The offspring of two different species- they are not fertile.
Fertile	Can produce offspring.

Inherited Variation	Characteristics inherited from parents (due to DNA).
Gametes	Sex cells
Zygote	The fertilised egg cell formed when the male and female gamete join.
Asexual Reproduction	Reproduction involving only one parent- produces offspring identical to the parent (clones).
Runners	An example of asexual reproduction used by strawberry plants. They spread over the ground and sprout roots to grow new identical plants.
Tubers	An example of asexual reproduction used by potato plants. They are underground stems (potatoes) that contain a store of food that can grow into a new plant.
Using Asexual Reproduction	Gardeners take cuttings of leaves/stems to grow new plants quickly and cheaply.

3. Pollination

Plant Reproductive System	
	
Pollen	Male gamete that ripens inside the anthers.
Pollination	The pollen grain carried away and transferred to the stigmas of another plant can be by animals/wind/water/

Plant Adaptations for Animal Pollination	Brightly coloured petals, nice scent and nectar attract animals (mainly insects). The structure also makes it easier for animals to pick up / leave pollen grains.
Plant Adaptations for Wind Pollination	Pollen is smooth and light to float through air. large anthers and stigmas hang outside the flower to catch the wind.
Self-Pollination	Pollen grains from a plant land on the stigma of the same plant.
Cross-Pollination	Pollen transferred from one plant to another.

4. Fertilisation and Dispersal

Pollen Tube	Formed when a pollen grain reaches a stigma of the same species. It grows down to the ovule.
Fertilisation	The egg cell and the male gamete from the pollen grain join together to form a zygote.
Cell Division	The process by which the cell splits into two.
Embryo	Formed when the cells divide again and again.
Seed	The ovule becomes a seed. Inside the seed is the embryo and a food source.
Seed Coat	Hart outer coating of seed to protect it.
Germinate	The seed starts to grow.
Fruit	The ovary swells up and forms the fruit around the seed.
Seed Dispersal	The spreading of seeds away from the parent plant.

Attracting Animals	Fruits are fleshy, soft, juicy and taste good to attract animals for seed dispersal.
Egested	Seeds are passed out by animals in their faeces.
Other Seed Dispersal Methods	Wind, water and explosions- useful so that new plants aren't in competition with the parent plant.

5. Germination and Growth

Resources	What a plant needs to grow/germinate.
Respiration	The process of releasing energy from glucose.
Respiration Word Equation glucose + oxygen → carbon dioxide + water	
Dormant	Slow life processes but still alive- such as in a seed.
Photosynthesis	A process that plants use to make their own food.
Photosynthesis Word Equation carbon dioxide + water → glucose + oxygen	
Starch	Glucose is converted to starch to store it.
Chloroplasts	Traps light energy needed for photosynthesis.
Interdependent	Organisms that depend on one another.

Lesson	Memorised?
1. Classification & Biodiversity	
2. Types of Reproduction	
3. Pollination	
4. Fertilisation & Dispersal	
5. Germination & Growth	