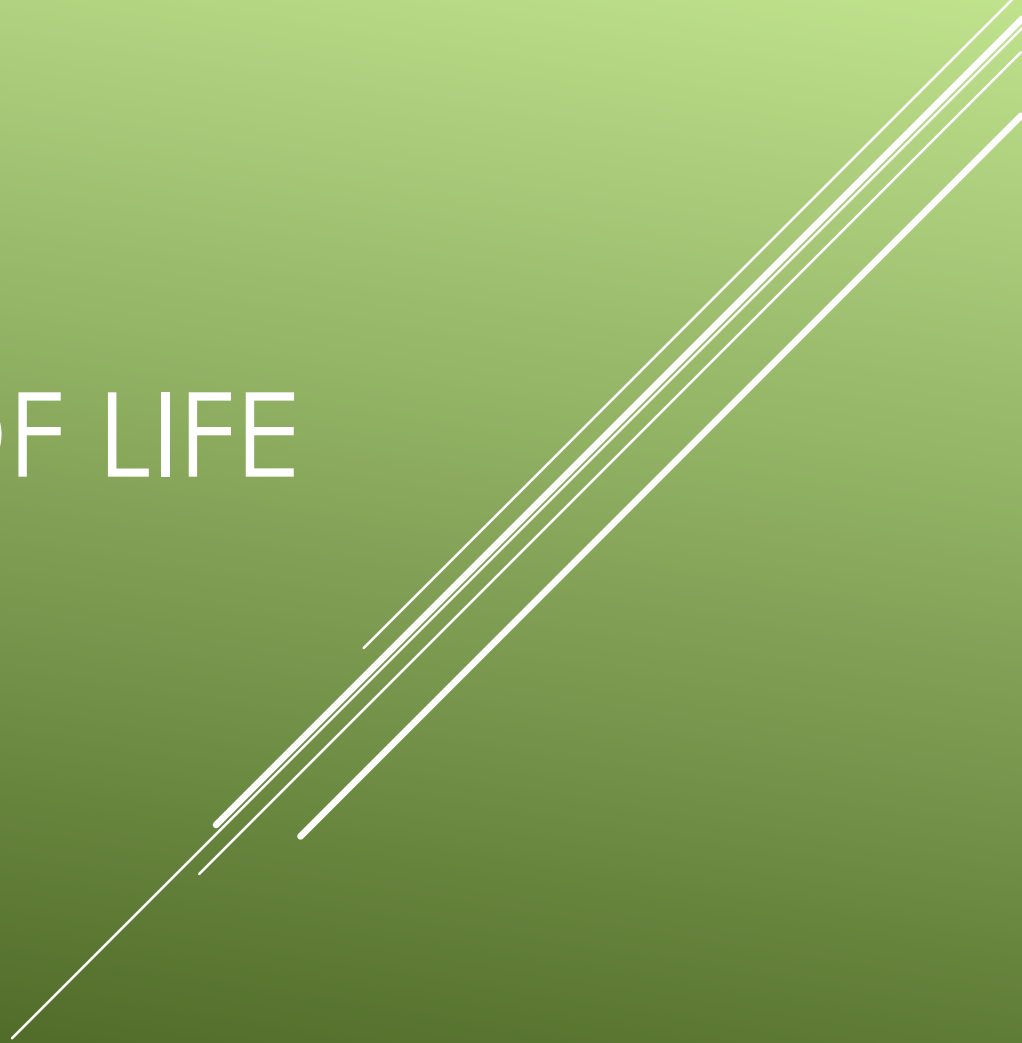


KINGDOMS OF LIFE

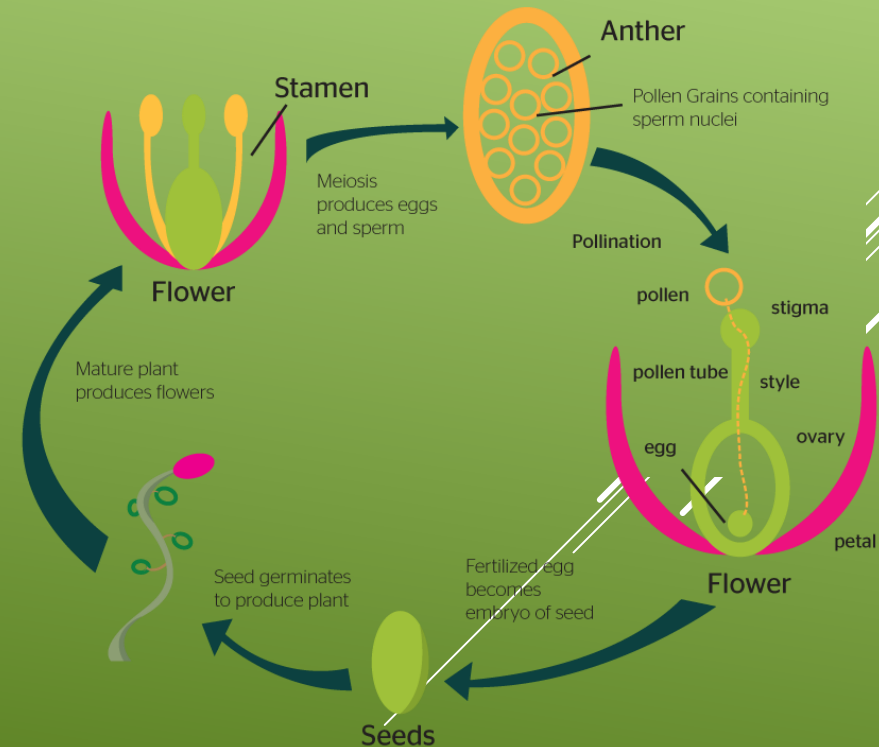
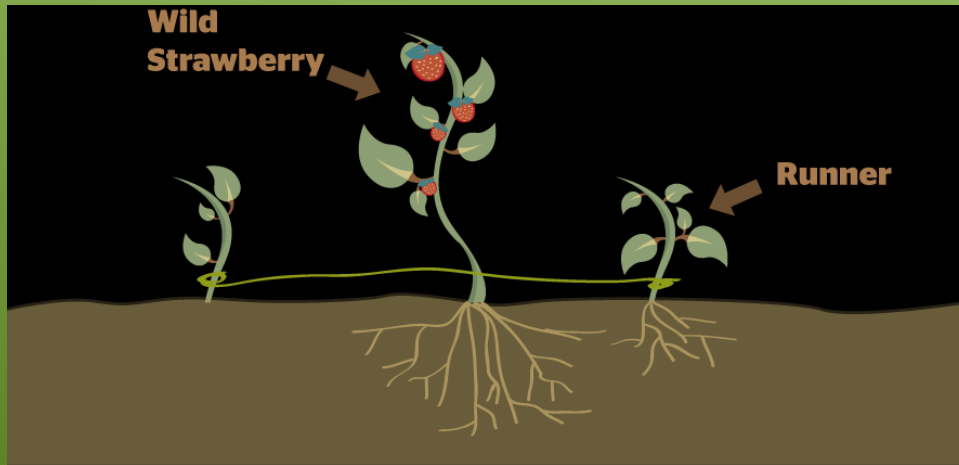
Plants



CHARACTERISTICS OF PLANTS

- ▶ Multi-cellular (Eukaryotic)
- ▶ Autotrophic
- ▶ Reproduction: asexual or sexual

Asexual: Vegetative Propagation

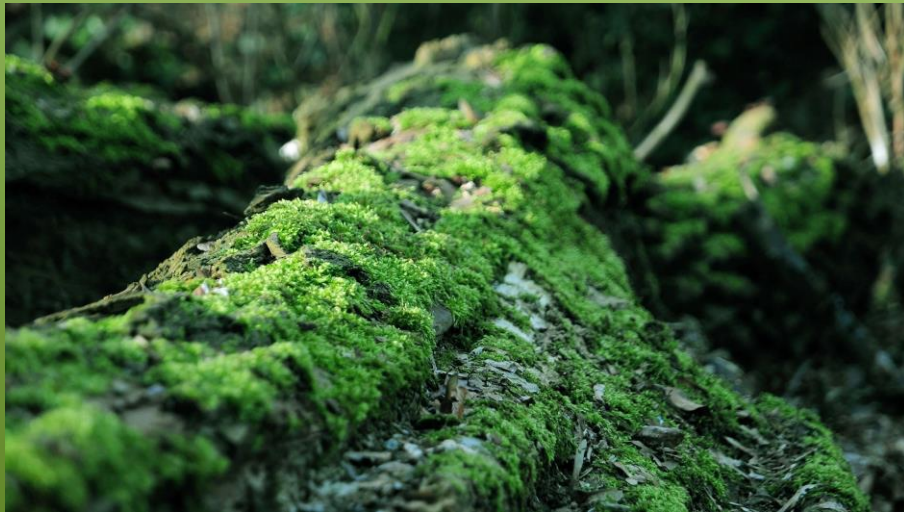


4 PHYLUMS OF PLANTS:

1. Bryophyta
2. Pteridophytae
3. Angiosperms
4. Gymnosperms

PHYLUM BRYOPHYTA

- ▶ Non-vascular
- ▶ Seedless
- ▶ Non-flowering
- ▶ E.g. Mosses, Liverwort, and Hornwort



PHYLUM PTERIDOPHYTAE

- ▶ Vascular
- ▶ Seedless
- ▶ Non-flowering
- ▶ E.g. Ferns



PHYLUM ANGIOSPERM

- ▶ Vascular
- ▶ Seeds
- ▶ Flowering
- ▶ E.g. Trees, Flowers



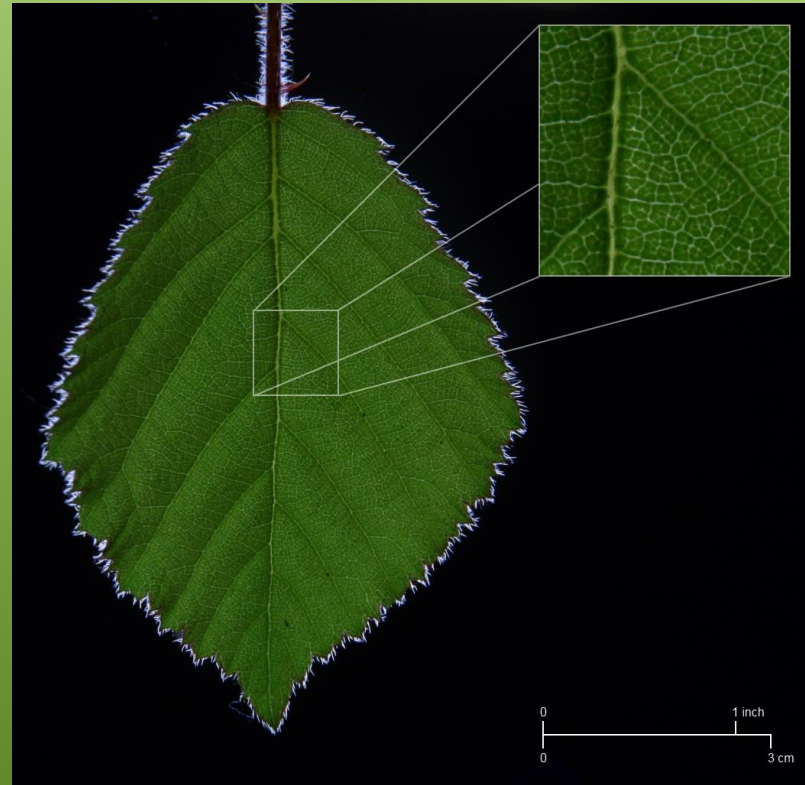
PHYLUM GYMNOSPERMS

- ▶ Vascular
- ▶ Seeds
- ▶ Non-flowering
- ▶ E.g. Palms



WHAT DOES VASCULAR MEAN?

- ▶ Consisting of vessels or veins
- ▶ Vascular tissue in plants help in **TRANSPORTING** substances throughout the plant
 - ▶ Water
 - ▶ Minerals
 - ▶ Sugar



TWO MAJOR TYPES OF VASCULAR TISSUE

1. **Xylem** – carries water and dissolved minerals UPWARD from the roots through the stem and leaves
2. **Phloem** – responsible for distributing the products of PHOTOSYNTHESIS (amino acids, carbs) from the LEAVES to the rest of the plant

SEEDS ARE PART OF SEXUAL REPRODUCTION

- ▶ **Seeds** – structures that contain EMBRYOS that help nourish the embryo by storing food



PLANT STRUCTURES AND FUNCTIONS

- ▶ **Root** – beginning of vascular pipeline that moves WATER and minerals from the soil up to the leaves and fruits
 - ▶ Function – anchor and SUPPORT plants, absorb and conduct water and minerals
- ▶ **Stem** – part of a plant that bear leaves and FLOWERS, continuation of vascular system
 - ▶ Function – FRAMEWORK for leaves, flowers, and seeds
 - ▶ Green stems also manufacture food (photosynthesis)
 - ▶ Food storage
- ▶ **Leaf** – the principle structure, produced on stems, where PHOTOSYNTHESIS takes place
- ▶ **Cuticle** – protective film covering the epidermis of leaves
 - ▶ Function – prevent water loss

PLANT BEHAVIORS

- ▶ Tropism – grows towards or away from a stimulus
 - ▶ Negative tropism – grows **AWAY** from stimulus
 - ▶ Positive tropism – grows **TOWARDS** stimulus

PHOTOTROPISM

- ▶ Growth response to light



GRAVITROPISM (GEOTROPISM)

- ▶ Growth response to gravity

Example



THIGMOTROPISM

- ▶ Growth response to touch

