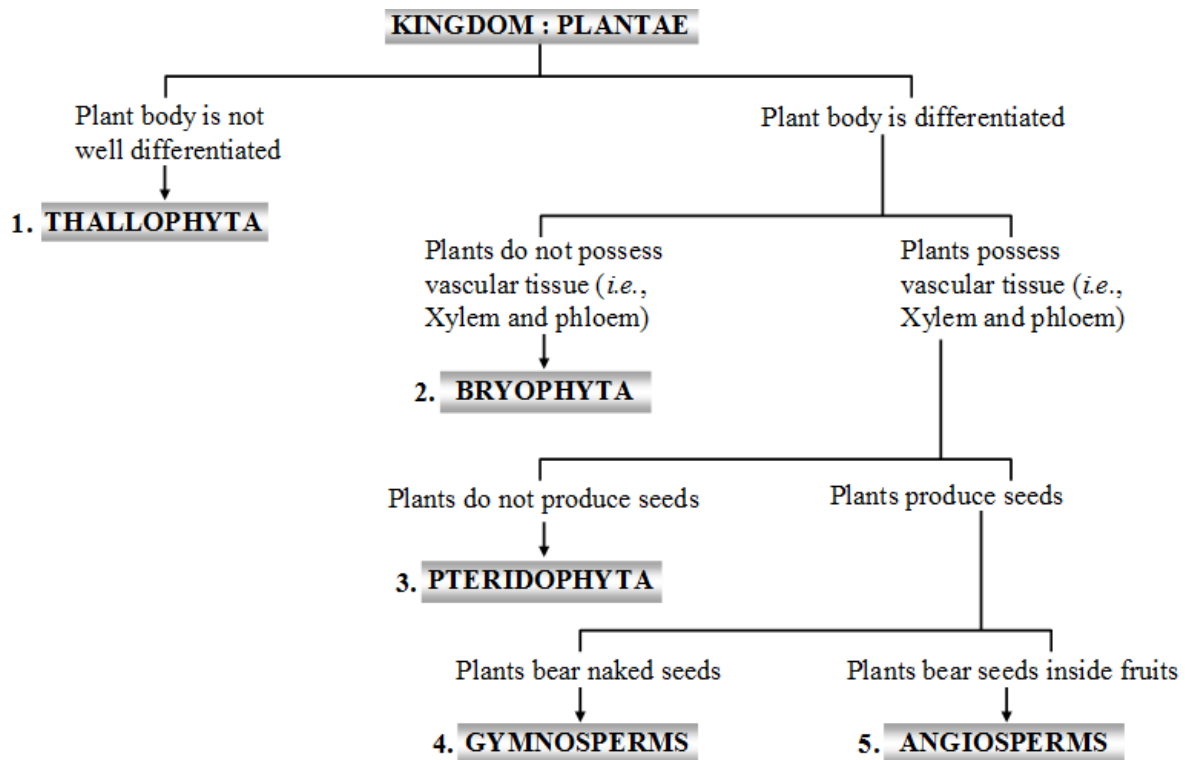


Lesson 3-KINGDOMS PLANTAE AND ANIMALIA

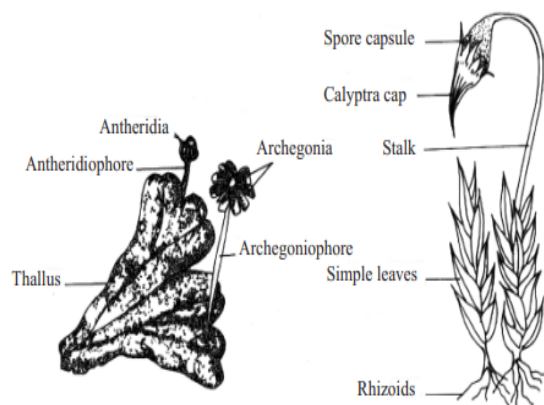
Summary

Both plant and animal kingdoms include a wide variety of organisms which contribute towards the biodiversity on the planet earth. We shall now learn the classification of plants and animals.



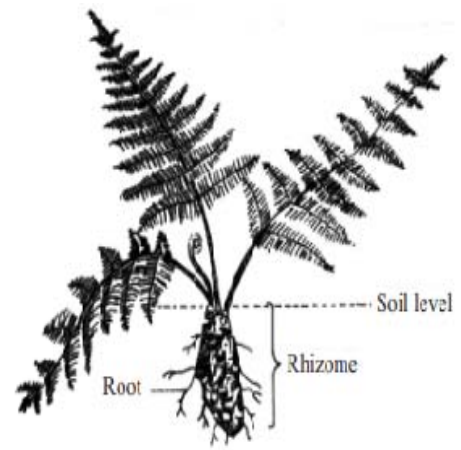
Characteristics of Bryophytes

- Bryophytes are **amphibians of plant kingdom** as they complete their life cycle in both water and on land
- These mainly grow in damp, shady places, especially in the hills
- They are embryophytes that do not have vascular tissues. (neither xylem nor phloem),
- No true leaves and roots, as their independent plant body is gametophytic
- The male sex organs are antheridia and female sex organs are archegonia.



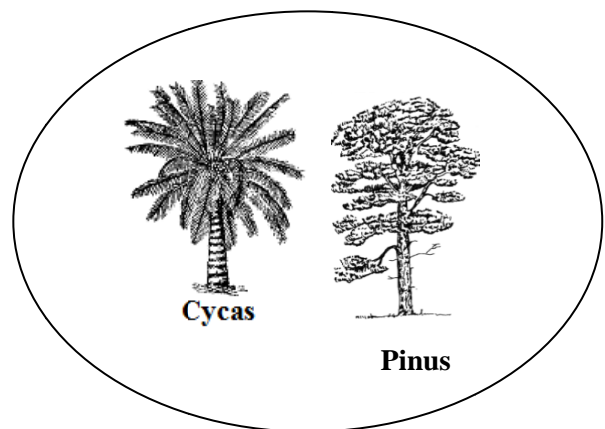
Characteristics of Pterido-phytes

- Ferns are lower vascular plants. They contain vascular tissue which is made up of xylem and phloem and helps in conduction of water and nutrients to all parts of the plant body.
- Pteridophytes are usually found in damp, shady places or in the gardens, and on the hills where
- The leaves (fronds) of sporophyte grow on thick, horizontal underground stem or rhizome which bears adventitious roots. Temperature is low.
- The main plant body represents a sporophytic (diploid) generation and has roots which penetrate the soil to absorb water, and minerals.



Gymnospermae (Gymnos; Naked, Sperma; Seed) Characteristics of Gymnosperms

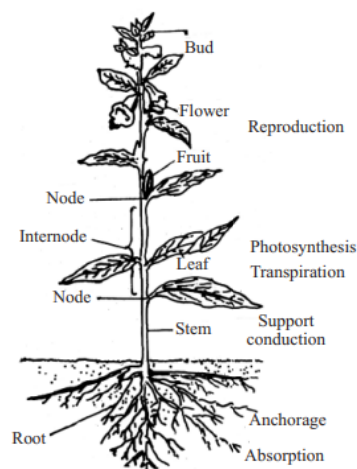
- The adult plant (sporophyte) is a tall, woody, perennial tree or shrub mostly evergreen.
- The stem is usually branched, but rarely unbranched as in, Cycas.
- Leaves may be simple (Pinus) or compound (Cycas)
- Vascular bundles in stem are arranged in a ring and show secondary growth.
- Gymnosperms bear cones which are usually unisexual (either male or female).



Important Note:- Thallophyta, Bryophyta and Pteridophyta are called cryptogamia because they don't bear seeds whereas Spermatophyta are called Phanerogamia as they bear seeds.

Characteristics of Angiospermae

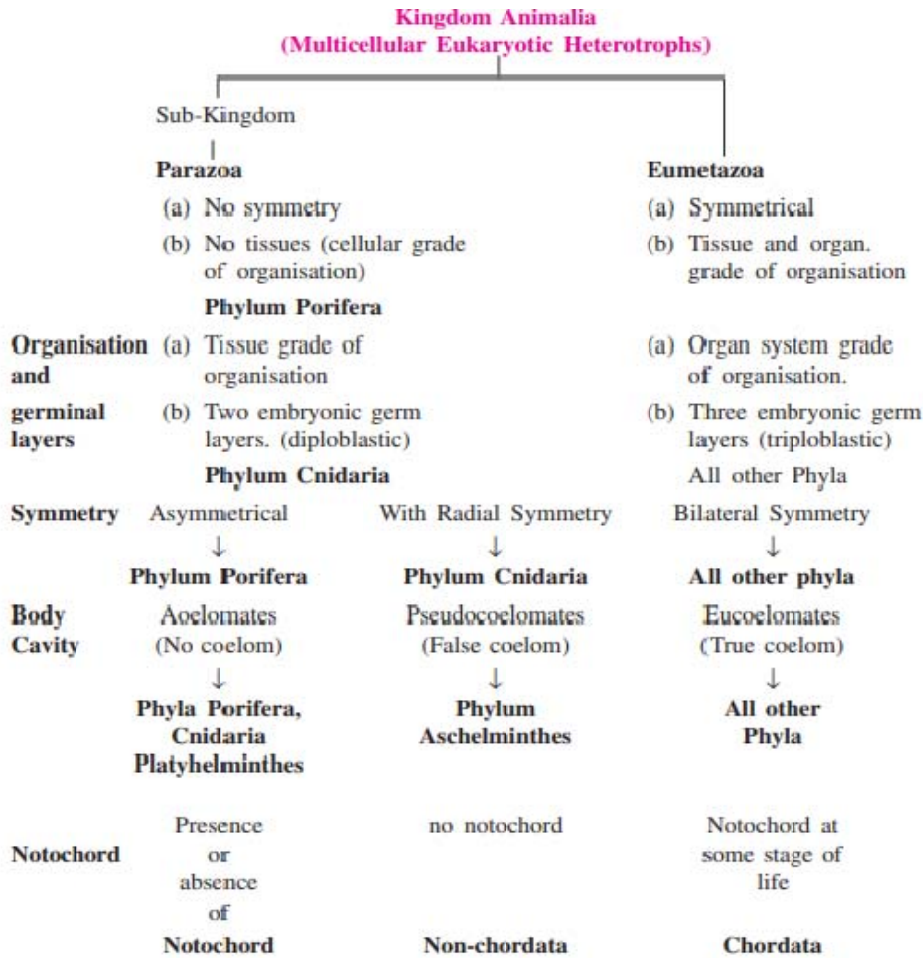
- Pea, mango, coconut, wheat and rice come under the group called Angiosperms
- Seeds are always enclosed in the fruit, which is a mature, fertilized ovary.
- The angiosperms are divided into two groups: 1. Dicotyledons. 2. Monocotyledons
- Dicot plants have two cotyledons in seeds whereas Monocots have only one cotyledon within the seeds.



KINGDOM ANIMALIA

Kingdom Animalia includes the animals which show a wide variety yet have some common features.

General Features: 1. These are multicellular eukaryotes 2. They have digestive, heterotrophic nutrition. 3. They have the power of locomotion. 4. They show increased sensitivity through nervous system.



Test Yourself

- 1. Which group of plants are called as "amphibians of plant kingdom and why?"
- 2. Write down the difference in characteristic features of pteridophytes and gymnosperms.
- 3. Is there any difference between the characteristic features of Porifera and Cnidaria? If yes, mention in detail.