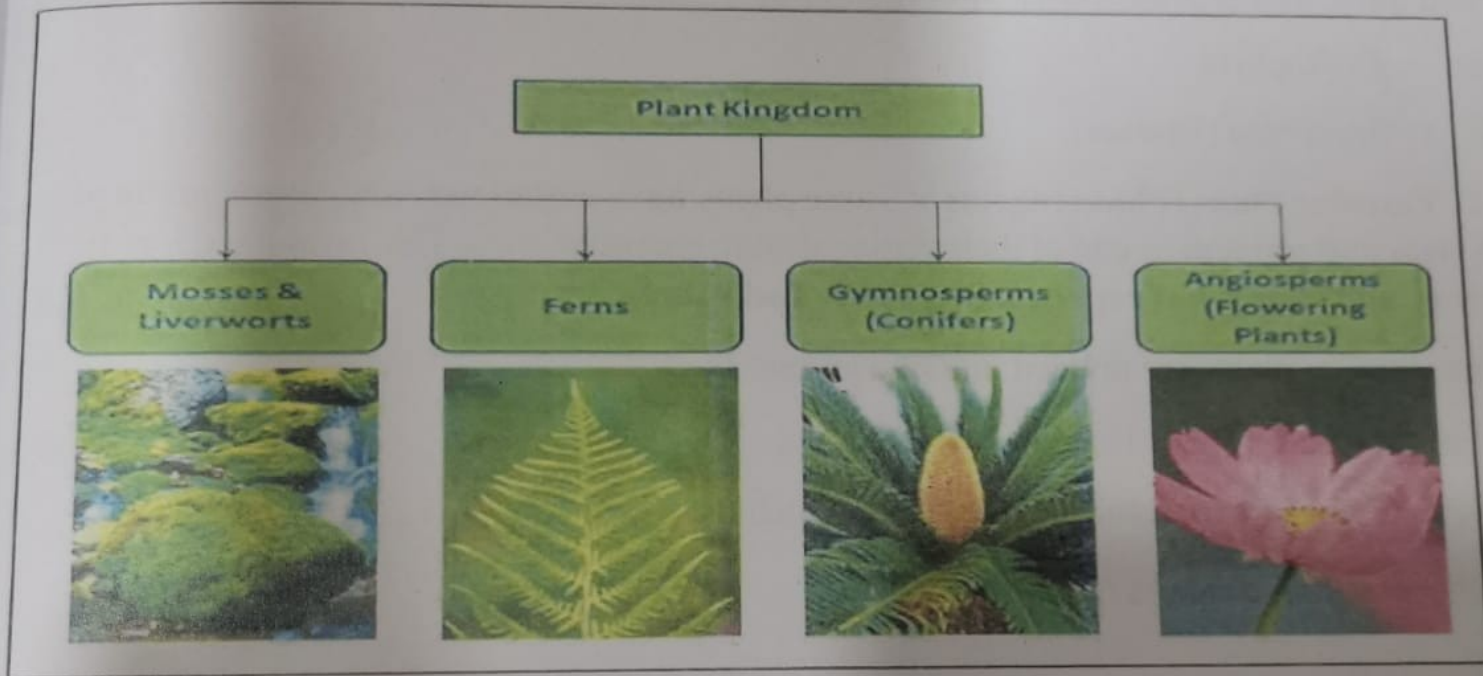


Introduction in Plant groups

Introduction

Plants are multicellular Eukaryotes, that consider primary producers in the food chain. All the members of the plant kingdom can make their own food by utilizing sunlight, carbon dioxide, and water. They have photosynthetic pigments such as **chlorophyll a, b**, and carotenoid pigments. This process is known as **photosynthesis**. Only plants can make their food. **All other living organisms are dependent on plants to derive food and energy.**



Kingdom Plantae was first separated from heterotrophic fungi and unicellular prokaryotic cyanobacteria by **Whittaker in 1969** while proposing a five-kingdom classification system. According to this classification, all the known living organisms on the earth were divided into five categories:

1. **Kingdom Monera**
2. **Kingdom Protista**
3. **Kingdom Fungi**
4. **Kingdom Animalia**
5. **Kingdom Plantae**

Classification of Kingdom Plantae

There are **270,000** species of plants identified and classified to date. A.W. Eichler (1883) gave a system of classification of the plant kingdom. It is the phylogenetic system of classification. He divided plants **according to the presence of specialized tissues that transfer water and nutrients in plants**. Into two sub-kingdoms, **Cryptogams** and **Phanerogams**.

1- Non-Vascular Plant (Cryptogams): These plants **lack composed vascular tissue**, which is one of their characteristics. **The root, stem, and leaves, as well as from wood and bark, and reproduces by spores.**

- a. Thallophyta
- b. Bryophyta (**Mosses**)

2- Vascular Plant (Phanerogams): These plants **have actual vascular tissue made Xylem and phloem** as one of their distinguishing characteristics. They also have **leaves, roots, and stems that reproduce by seeds and spores.**

The vascular plants are divided into two groups :

- a) Seedless

They are plants that reproduce by spores, which are carried on leaves. It is divided into **Lichens & Pteridophyta (ferns)**

- b) Seedling

They are plants that reproduce by seed It is divided into:

1. Gymnosperms:
2. Angiosperms: divided into Dicotyledonous and monocotyledonous plants