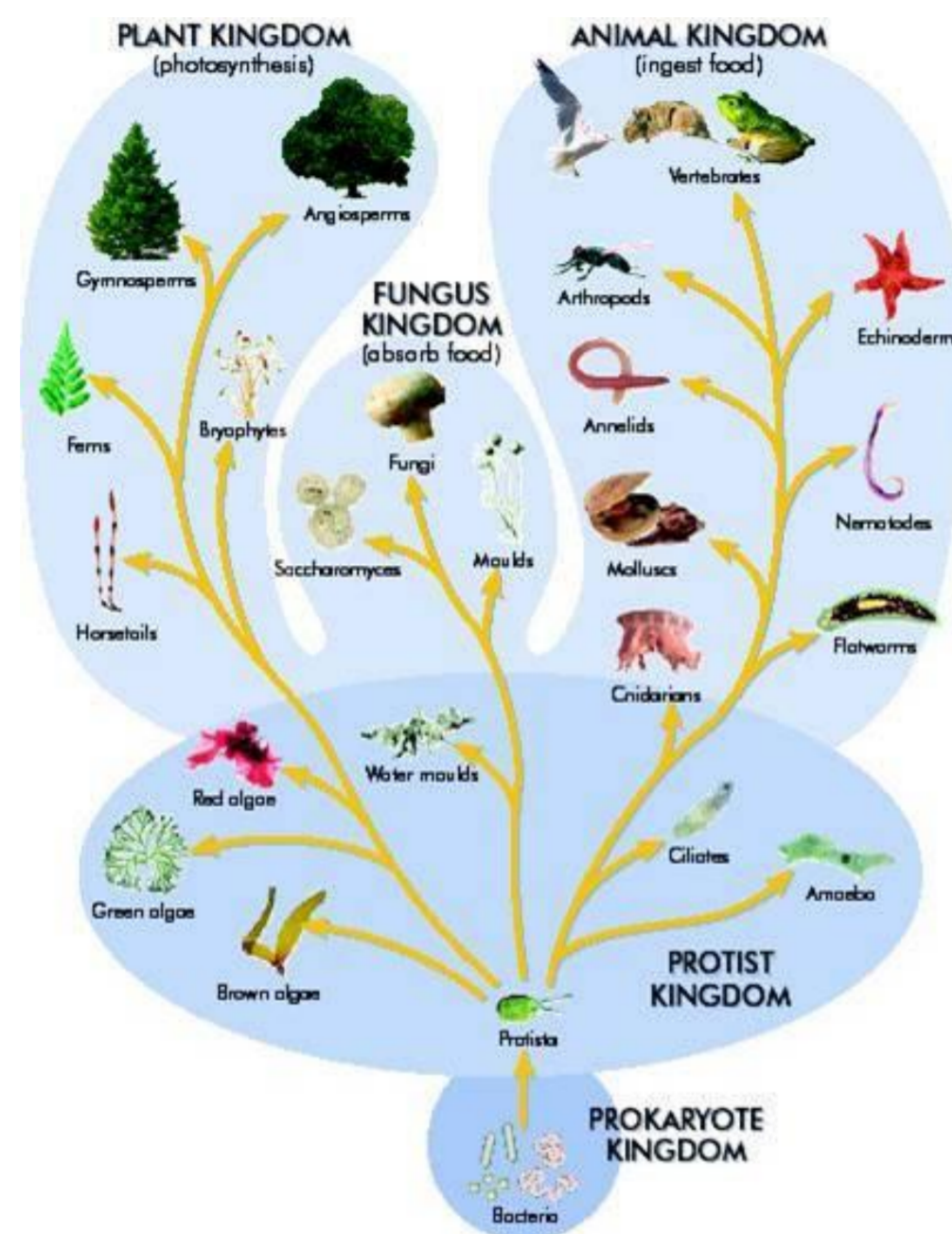


Classification

Taxonomy is the study of classification.

Five kingdom system of classification

- Monera
- Protista
- Fungi
- Plantae
- Animalia



Five kingdom system of classification

Each kingdom subdivided into smaller categories.

Each successive category contains organisms that are more and more similar.

The final category into which organisms can be placed is the **species**.

Members of the same species are capable of interbreeding to produce fertile offspring.

Monera (Prokaryotae)

This kingdom contains about 10,000 identified species of bacteria.



It is estimated that there are many more. Bacteria were the first organisms on earth. They are by far the most numerous organism on the planet.

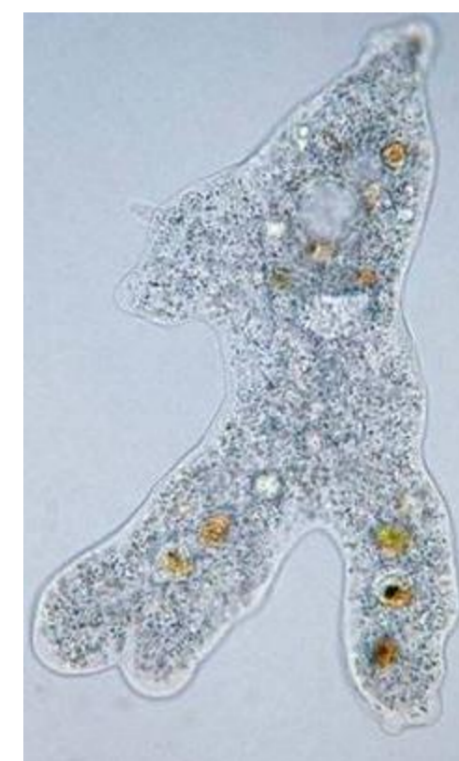
Monera – main features

- microscopic and single celled organisms
- do not have a membrane enclosed nucleus
- have membrane enclosed organelles such as mitochondria and chloroplasts
- normally reproduce asexually

Protista (Protoctista)

Contains a wide variety of organisms from large plant-like algae seaweeds to single-celled organisms such as Amoeba.

Protists are found almost anywhere water is present.



Protista – main features

- single celled (Amoeba) and simple multicellular organisms (Algae)
- have a membrane-enclosed nucleus
- some feed by absorbing organic substances through the cell wall
- others photosynthesise

Fungi

Examples of fungi include mushrooms, mildews, moulds and yeasts.

Fungi play a vital role in that they break down dead organisms and allow minerals to be recycled.



Fungi - main features

- are mainly multicellular
- are composed of threads called hyphae
- a Hypha consists of one or more cells surrounded by a tubular cell wall
- cell walls are made of a carbohydrate called chitin
- are unable to make their own food
- their reproduction involves spores

Plants

This kingdom includes the mosses, ferns and seed-producing plants.

Seed producing plants can be further sub-divided into flowering and non-flowering.



Plants – main features

- are multicellular
- cells have cell walls made of cellulose
- cells have large vacuoles
- are eukaryotic, i.e. they have a true nucleus and membrane enclosed organelles
- cells have chloroplasts containing chlorophyll which enables photosynthesis. Plants are autotrophs
- reproduce asexually and sexually

Animals

This kingdom includes jellyfish, flatworms, snails, roundworms, segmented worms, frogs, lizards, birds and humans.

The first animals evolved in the sea about 700 million years ago.



Animals – main features

- are multicellular
- are eukaryotic, i.e. have a nucleus and membrane enclosed organelles
- cells have no cell walls
- are heterotrophic – they cannot produce their own food
- reproduce sexually

