

1. What is Biology

Biology is a branch of science that deals with the origin and development of living organisms, that is study of living things like plants and animals.

BOTANY : The branch of biology that deals with the study of Plants.

ZOOLOGY : The branch of biology that deals with study of Animals.

Existing living species are classified into 5 kingdoms. They are:

1. **MONERA** : The kingdom of Prokaryotes (Those without having a definite nucleus)

Eg. Bacteria

Moneran cells are Microscopic and do not contain nucleus and other membrane-bound organelles. They have rigid cell wall:

2. **PROTISTA** : The kingdom of Unicellular Eucaryotes

These are primarily aquatic (living in water). Protists are chief producers in oceans and many fresh water environment. They are collectively called PHYTOPLANKTON (or) Microscopic floating photosynthetic organisms. Some protists are predatory, feeding on other protists - those are called Protozoans.

Eg : Protozoans and some Algal Members.

3. **PLANTAE** : Multicellular Producers with Complex body, organisation

Eg : All Photosynthetic Plants.

4. **FUNGI** : Kingdom of Multicellular decomposers. Predominantly Multicellular heterotrophic organisms. Mode of nutrition is absorption of organic matter made soluble by decay.

5. **ANIMALIA** : Multi cellular consumers with complex body organisation, they are also known as METAZOA: The mobile way of life is made possible by the development of cells with ability to contract (or) to transmit impulses.

Before going into the details of the above 5 kingdoms' we should know the basic difference between Prokaryotic cell and Eukaryotic cell.

In Prokaryotic cell (Bacterial cell) Hereditary Material is not surrounded by a membrane. But in the cells of Eukaryotes the Hereditary Material is surrounded by a membrane to form the 'NUCLEUS'.

Eggs are single celled and the egg of Ostrich is probably the largest Eukaryotic cell.

Until the discovery of Electron Microscope, all the living organisms were believed to be composed of either Eukaryotic (or) prokaryotic cells. But the Electron Microscope has revealed the existence of a third type of organisms which cannot be called either Prokaryotes or Eukaryotes. They are nothing but VIRUSES which are much smaller than Bacteria, infecting plants, animals, and Fungi.

It is not yet clear, whether viruses are early forms (Primitive) of living things or highly evolved super parasites.

