

**ATOMIC ENERGY CENTRAL SCHOOL**

**BIOLOGY  
STANDARD XI**

**UNIT 1  
DIVERSITY IN THE LIVING  
WORLD**

**Chapter 2  
BIOLOGICAL CLASSIFICATION**

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# BIOLOGICAL CLASSIFICATION

Biological classification is the scientific procedure of arranging organisms in a hierarchical series of groups and sub-groups on the basis of their similarities and dissimilarities.

1. Aristotle classified organisms for the first time.

2. Two kingdom system includes – Plantae & Animalia.

✚ He used simple morphological characters to classify plants as trees, shrubs and herbs.

✚ He also classified animals into two groups, i.e., enaima (with red blood) and anaima (without red blood).

➤ **Living organisms need to be classified because of the following reasons**

(i) The study of one or two organisms is not sufficient to know the essential features of the group.

(ii) All kinds of organisms do not occur in one locality.

(iii) Classification helps in knowing the relationship among-different groups of organisms.

(iv) It helps in knowing the evolutionary relationship between organisms.

○ **Types of Classification System**

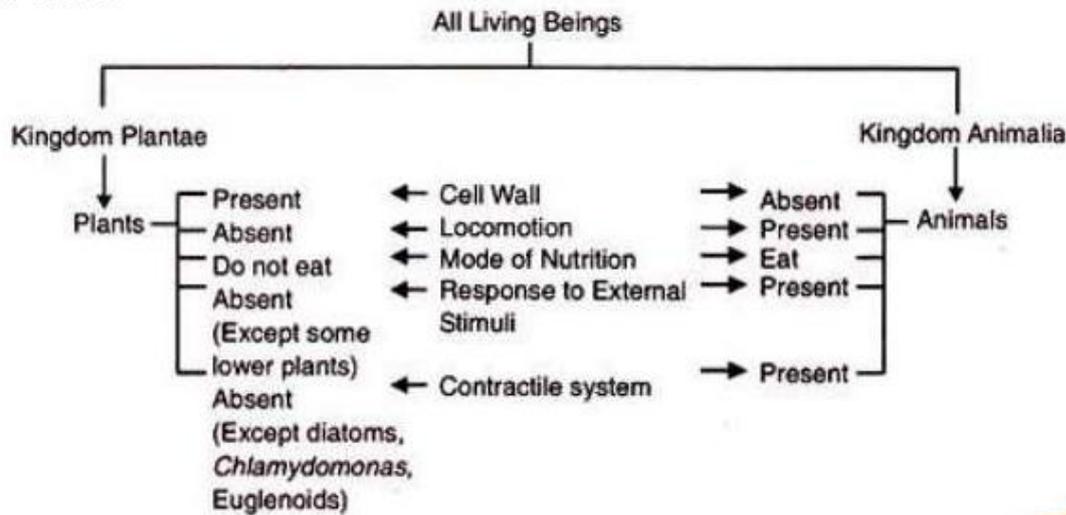
Depending upon the types of system of classification, organisms are classified into following kingdoms

○ **Two Kingdom Classification System**

Linnaeus (the father of taxonomy system) divided all the living organisms into two kingdoms in 1758.

These are Plantae and Animalia.

•The two kingdom classification system was given by **Carlous Linnaeus** in 1758.



### Objections Against Two Kingdom Classification System

Some of these difficulties are mentioned below

- (a) The first formed organisms were neither plants nor animals.
- (b) Fungi do not show similarity with structure, physiology and reproductive system of plants.
- (c) It is not easy to recognise the lower organisms as plants or animals. For example, Euglena has mixotrophic (dual) mode of nutrition, while sponges are fixed, branched and irregular creatures like plants.
- (d) Slime moulds, a group of fungi, are wall-less in vegetative phase. They develop cell wall in the reproductive phase. Slime moulds can neither be placed in fungi, nor plants.
- (e) Lichens are formed by the symbiotic association of an alga and a fungus. They neither resemble plants nor animals.
- (f) Prokaryotes do not have an organised nucleus.
- (g) Unicellular algae like diatoms, euglenoids, dinoflagellates and Protozoa resemble each other.

References:

1. Text book of NCERT Class – XI.
2. Concepts of Biology RL Kotpal and KN Tyagi.