

TENDER HEART HIGH SCHOOL, SEC - 33B, CHD

Class - VII Subject - Biology
Chapter - 2 Classification of Plants
Teacher - Ms. Nidhi Rana

There is a diversity of living organisms on earth. Biologists have identified, named and grouped more than a million types of plants and animals living on this earth. To make their study easy, they are classified into separate categories depending on the similarities they exhibit.

★ Warm up activity : Below are the images of different living organisms. Name them and classify them as microorganisms, insects, plants and animals.



Well done! You all know these living organisms

- | | |
|-----------------------------|-------------------------|
| 1. Microorganism - Bacteria | 4. Animal - Frog |
| 2. Insect - Cockroach | 5. Plant - Lotus |
| 3. Animal - Fish | 6. Insect - Grasshopper |

★ The grouping of things on the basis of certain common characteristics is called classification.

It is a system of putting organisms with similar characteristics into one group.

⇒ All living things are broadly classified into two main groups - plants and animals.

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Based on their similar characteristics, both plants and animals are further divided into various divisions or classes.

In biology, classification is a system of arranging living organisms into groups based on their similarities and differences. On the basis of this grouping the living organisms can be studied systematically.

★ Advantages of classification

1. Classification helps us to identify different organisms and place them in particular groups.
2. It helps us to study the organisms more easily and systematically.
3. It highlights the relationship between different organisms.
4. The characteristics of all the members of a group can be studied by studying the characteristics of a few members only.
5. Classification also helps in studying the process of evolution from simple to complex organisms.

★ Systems of Classification

artificial system

natural system.

The system of classification based on one or a few characteristics of a group like size,

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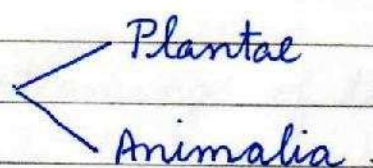
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body parts and life span is called artificial system of classification.

- ★ Aristotle, a Greek philosopher, was the first person to classify animals.
- ★ Theophrastus was the first person to classify plants on the basis of their size.

Natural System - The system of classification based on comparison of many characteristics of a group is called natural system of classification. It conveys a lot of information about the group. It takes into account many characters such as external structure, internal structure, growth, development, reproduction, life processes.

- ★ One of the earliest natural system of classification was the two kingdom system proposed by Carolus Linnaeus in 1758.

The two kingdom system 

Plantae - The kingdom of plants or organisms that did not move and could prepare their own food.

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Animalia - The kingdom of animals or organisms that could move but could not prepare their own food.

This system of classification got considerable recognition from biologists and remained in use for a long period of time. However, as more and more information started emerging on the various groups of plants and animals, the two kingdom system was found to be inadequate.

It was criticized as it failed to correctly classify organisms like *Euglena* which possess characters of animal and have chlorophyll also.

Similarly, fungi and moulds which were placed in kingdom Plantae possess many characters which are not common to plants.

The five kingdom system - R. H. Whittaker

To overcome all the shortcomings of the two kingdom system and to come up with a better system of classification, R. H. Whittaker proposed a five kingdom of classification in 1969. This made the study of living organisms easy.

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Whittaker arranged all organisms into five kingdoms based on three criteria which are as follows.

- Cell structure of the organism
- Body structure of the organism
- Mode of nutrition of the organism.

The five kingdoms

- 1 Monera
- 2 Protista
- 3 Fungi
- 4 Plantae
- 5 Animalia.

Dear Parents,

Kindly assist your child in reading the chapter and the written notes so that he/she can thoroughly understand the content of the chapter. Your sincere effort is highly appreciated.

Home Assignment

1. Define classification.
2. Why was there a need to classify organisms?
3. Name the scientist who proposed a five kingdom classification. Also name the five kingdoms.