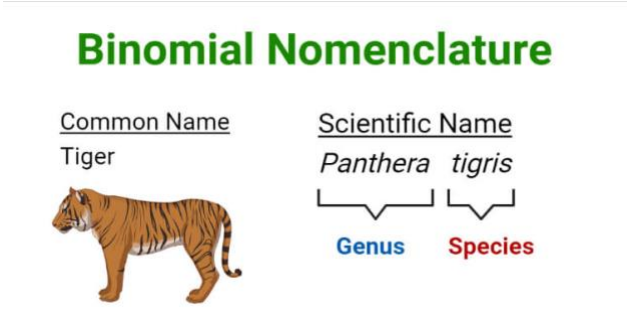
Taxonomy

In biology, classification is the process of arranging organisms, both living and extinct, into groups based on similar characteristics. The science of naming and classifying organisms is called taxonomy.

THE BENEFITS OF ANIMAL CLASSIFICATION ARE AS FOLLOWS :

1. Studying the different animals becomes easy when they are placed under different groups.
2. When few representative animals of the particular group are being studied then the idea about other animals belonging to that group also becomes clear.
3. Animal evolution becomes easier to follow after studying classification.
4. The identification of animals can be done accurately.
5. Relationship of the different animals with each other and with other groups can be understood clearly.
6. Habitat of each animal and its role in nature is understood by classification.
7. Various adaptations are understood by learning classification

animal kingdom classification was developed by Swedish botanist **Carolus (Carl) Linnaeus** in the 1700's. The Linnaeus Method, also known as Linnaean Taxonomy, as well as binomial nomenclature that gives each animal species a two-word scientific name .This method of giving scientific names to animals is typically rooted in Latin by combining the genus and species. For example, ***humans*** are classified as *homo sapiens* while **wolves** are *canis lupus.*



LEVELS OF CLASSIFICATION

The classification system commonly used today is based on the Linnean system and has seven levels of taxa, from the most general to the most specific, these are kingdom, phylum, class, order, family, genus, and species. Animals have been categorized into two primary categories in the animal kingdom based on the presence or absence of a backbone or spinal column.

Following are overviews of each taxonomic level in modern biological classification:-

KINGDOM

the kingdom ranked as the highest taxonomic level in classification. Most scientists today recognize six kingdoms: Archaea, Bacteria , Protista , Fungi , Plantae (plants), and Animalia (animals).

PHYLUM

The phylum ranks below the kingdom and above the class in taxonomy. Scientists generally use the term *phylum* for archaea, bacteria, protists, fungi, and animals, but they substitute the term *division* for plants.

CLASS

The class ranks below the phylum and above the order in taxonomy. Members of a class share more characteristics with each other than they do with other organisms in the same phylum. Amphibians and reptiles both belong to the Phylum Chordata, but each belongs to a different class.

ORDER

The order ranks below the class and above the family in the taxonomic hierarchy. The groups in an order have more in common with each other than they do with other members of the same class.

FAMILY

In taxonomy, the family ranks below the order and above the genus. Members of the same taxonomic family are more closely related to each other than they are to other members of the same order.

GENUS

The genus is the taxonomic rank between family and species. The groups of organisms in a genus share many structural similarities and are very closely related. Members of a genus are more closely related to each other than they are to other genera in the same family.

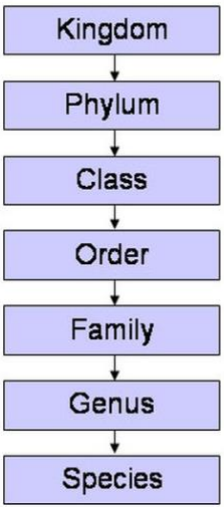
SPECIES

The species is the most fundamental unit in taxonomy and ranks at the base of the biological classification hierarchy. Members of the same species share the same evolutionary history and are more closely related to each other than they are to any other organisms, including other members of the same genus.

Zoological Classification of Sheep and Goats

- Kingdom: Animal
- Phylum: Chordata
- Class: Mammalia
- Order : Artiodactyla
- Family: Bovidae
- Genus and species
  - Ovis Aries
  - Capra Hircus

Linnaeus's System of Classification

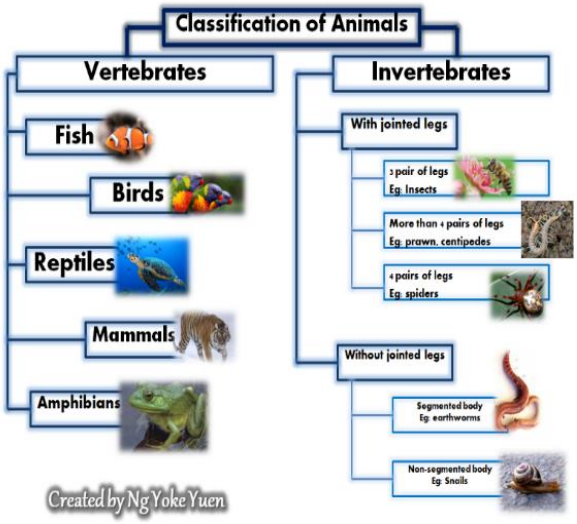


Animal kingdom

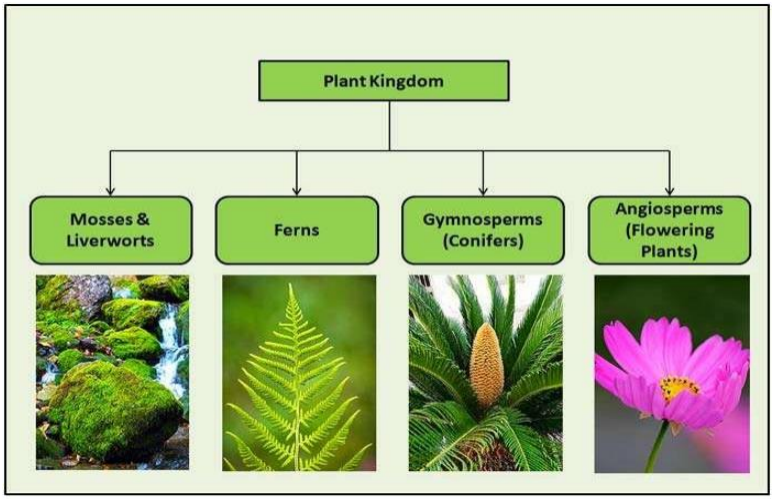
All living organisms can be placed in one of six different animal kingdom classifications. The characteristics of each animal kingdom are:

1. **Animal** – A kingdom of complex multi-celled organisms that do not produce their own food. This kingdom contains all living and extinct animals.

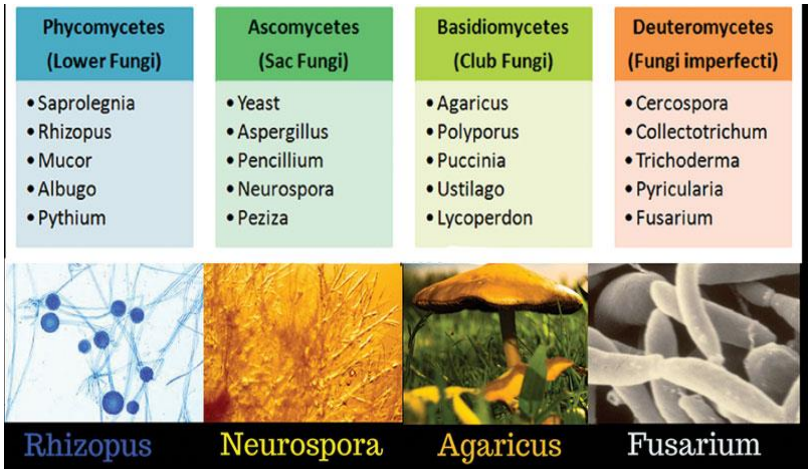
Examples include elephants, whales, and humans. Amongst the all kingdoms, the largest kingdom is the animal kingdom. However, like plants, they do not possess chlorophyll or a cell wall. Therefore, members of the animal kingdom exhibit a heterotrophic mode of nutrition. If we take a closer look at kingdom Animalia, we can see that biologists have classified this kingdom into two different groups: **Vertebrates** and **Invertebrates**



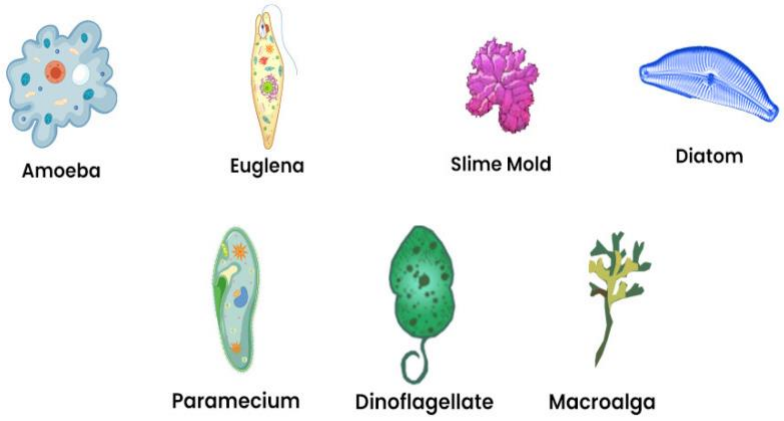
2. **<u>Plants</u>** – Complex and multi cellular autotrophic organisms, meaning they produce their own food through photosynthesis. Examples include trees, flowers, and grass.



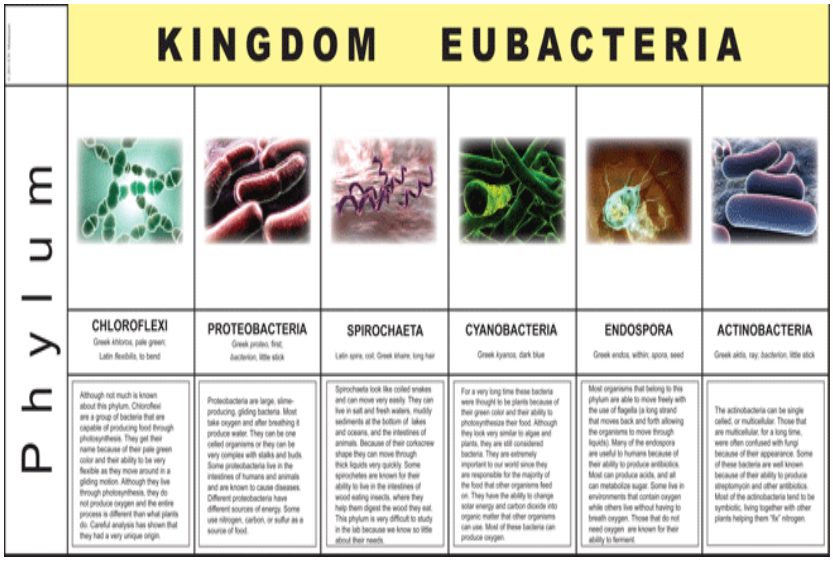
3. **<u>Fungi</u>** – Multi-celled organisms that do not produce their own food, unlike plants. Examples include molds, mushrooms, and yeast.



4. **<u>Protista</u>** – Single celled organisms with more complexity than either eubacteria or archaebacteria. Examples include algae and amoebas



5. **<u>Eubacteria</u>** – Single celled organisms found in everything from yogurt to your intestines. This kingdom contains all bacteria in the world not considered archaebacteria.



6. **<u>Archaebacteria</u>** – The oldest known living organisms. Single-celled and found in hostile and extremely hot areas like thermal vents or hot springs