

# \* The living world \*

- ⇒ Biology :- study of life and living organisms.
- ⇒ Organisms differ in size, shape, Habitat, structure.
- ⇒ Biodiversity :- Variety of living organisms on earth.
  - ⇒ Around 1.7-1.8 million species identified.
  - ⇒ New species are continuously discovered.

## \* Need for classification :-

- ↳ Make study easier
- ↳ Helps identify organisms.
- ↳ Avoid confusion due to local names.
- ↳ Shows relationship among organisms.

## " = Nomenclature :-

- ↳ Scientific naming.
- ↳ Organisms have universal scientific names.
- ↳ International codes : ~~the~~ ICBN, ICZN.

## " = (Binomial Nomenclature) :-

- ⇒ Introduced by Carolus Linnaeus.
- ⇒ Each name has : generic name & specific epithet.
- ⇒ Example : Mangifera Indica.

## " = Rules of Binomial ~~et al~~ Nomenclature :-

- ⇒ Names are written in Latin.
- ⇒ Printed in Italics.

- ⇒ Genus start with Capital letter.
- ⇒ Species with small letter.
- ⇒ Handwritten names are underlined separately
- ⇒ EX. Homo sapiens.

## "I" Identification

- ⇒ correct recognition of organisms.
- ⇒ Based on : morphology, structure, characteristics.

## "II" Systematics :

- ⇒ study of diversity and relationship among organisms.
- ⇒ Includes :
  - Taxonomy
  - Evolutionary Relationships.

## \* Taxonomy

- ↳ Branch of Biology dealing with :
  - nomenclature
  - Identification
  - Classification

⇒ Father of Taxonomy :- Carolus Linnaeus.

## \* Taxonomic Hierarchy

⇒ Hierarchy from lower to higher

Species ⇒ Genus ⇒ family ⇒ order ⇒ class ⇒ phylum / kingdom  
division

\* Scientific Name :- Panthera leo leo.

Kingdom :- Animalia

Phylum :- Chordata

Class :- Mammalia

Order :- Carnivora

Family :- Felidae

Genus :- Panthera

Species :- Panthera leo

Subspecies :- Panthera leo leo

\* Species :-

⇒ Basic unit of classification.

⇒ Organisms with similar features belong to same species.

\* Genus :-

⇒ Group of closely related species. ||  
• Panthera leo  
• Panthera tigris } Genus Panthera.

\* Family :-

⇒ Group of related genera

⇒ Genus Panthera & Felis

⇒ Family → Felidae

\* Order :-

⇒ Group of related families.

⇒ Family :- Felidae

Family :- Canidae

⇒ belongs to order Carnivora.

\* Class :-

⇒ Group of related orders.

⇒ Order :- Primates

Order :- Carnivora

⇒ belong to class : mammalia.

\* phylum / division :

⇒ Group of related classes

⇒ Mammalia, birds, reptiles ⇒ chordate (phylum)

⇒ Division used in plants classification.

\* kingdom :

⇒ Highest Taxonomic category.

→ Two major kingdoms: plantae  
Animalia.

