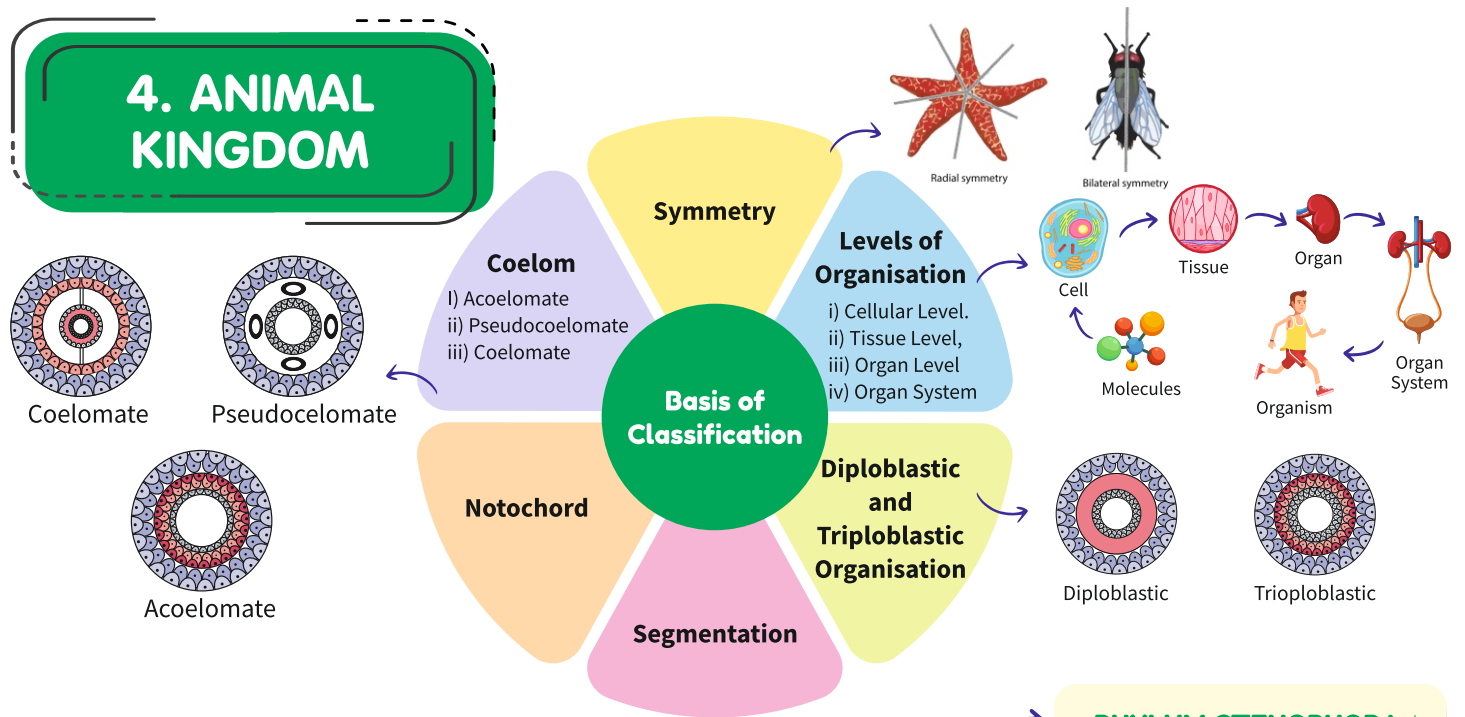


4. ANIMAL KINGDOM



PHYLUM PORIFERA

Porifera

- + Cellular, Acoelomate, Asymmetrical.
- + Body with ostia, spicules and choanocytes and canals in walls.
- + Hermaphrodite.
- + Eg:- Sycon, Spongilla



PHYLUM CNIDARIA

Coelenterate/ Cnidaria

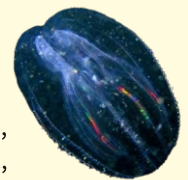
- + Tissue Level, Acoelomate, diploblastic, Radial Symmetry.
- + Cnidoblasts present.
- + Two body forms- Polyp and Medusa.
- + Alternation of generation, metagenesis.
- + Eg:- Sea anemone, Sea fan and Brain Coral.



PHYLUM CTENOPHORA

Ctenophora

- + Tissue level, Acoelomate, Diploblastic, Radial symmetry.
- + Comb plates for locomotion.
- + Bioluminescence.
- + Eg:- Pleurobrachia



PHYLUM ANNEHDA

Annelida

- + Organ system, Coelomate, Bilateral symmetry.
- + Body segmentation- Metamers
- + Parapodia – Lateral appendages.
- + Nephridia for excretion and osmoregulation.
- + Eg:- Earthworm and Leech.



PHYLUM ASCHELMINTHES

Aschelminths

- + Organ system, Pseudocoelomate Bilateral symmetry.
- + Body round, dioecious.
- + Digestive system Complete.
- + Muscular pharynx.
- + Eg:- Round worm & Filaria worm



PHYLUM PLATYHELMINTHES

Platyhelminthes

- + Organ level, triploblastic, Acoelomate, Bilateral symmetry.
- + Flat body, hooks & suckers.
- + Flame Cells.
- + Eg:- Liver fluke & Tape worm



PHYLUM ARTHROPODA

Arthropoda

- + Largest Phylum.
- + Organ system, Coelomate, Bilateral.
- + Respiratory organs present.
- + Body divided into – head, thorax and abdomen.
- + Jointed appendages.
- + Excretory organ - Malpighian tubules.
- + Eg:- Scorpio, Butterfly, Prawn, etc.



PHYLUM MOLLUSCA

Mollusca

- + Second Largest phylum.
- + Organ system, Coelomate, Bilateral symmetry.
- + Body segmented having head, muscular foot & Visceral hump.
- + Mouth has radula.
- + Eg:- Apple snail, Octopus, squid, etc.



PHYLUM ECHINODERMATA

Echinodermata

- + Organ system, Coelomate, Radial Symmetry.
- + Spiny bodied.
- + Endoskeleton of Calcareous Ossicles.
- + Water Vascular system present.
- + Eg:- Starfish, Sea urchin etc.



PHYLUM HEMICHORDATA

Hemichordate

- + Organ System, Coelomate, Bilateral symmetry.
- + Worm - like with proboscis, collar and trunk.
- + Excretory organ - proboscis gland.
- + Eg:- Balanoglossus & Saccoglossus



PHYLUM CHORDATA

- + Dorsal Notochord.
 - + Dorsal hollow nerve Cord present.
 - + Paired pharyngeal gill slits present, post anal tail.
- Sub - Phyla
- + Urochordata/ Tunicata
 - + Cephalochordata.
 - + Vertebrata.



Branchiostoma
(Cephalochordata)



Hardmania
(Urochordata)

VERTEBRATA [Notochord replaced by bony/
cartilaginous Vertebral Column]

VERTEBRATA

AGNATHA

CYCLOSTOMATA

Class Cyclostomata

- + Jawless sucking & Circular mouth without jaws.
- + Cartilaginous cranium & Vertebral Column.
- + Gill Slits present.
- + Eg:- Lamprey & Hagfish



GNATHOSTOMATA

Pisces (bear fins)

Class

1. Chondrichthyes
2. Osteichthyes

Tetrapoda (bear limbs)

Class

1. Amphibia
2. Reptilia
3. Aves
4. Mammals

CHONDRICHTHYES

Class Chondrichthyes

- + Cartilaginous fishes.
- + Gill slits without operculum.
- + Placoid Scales on skin.
- + Electric organ (Torpedo) & (sting ray)
- + Poison sting present.
- + Eg:- Dog fish, Saw fish, electric ray, etc.



OSTEICHTHYES

Class Osteichthyes

- + Bony Fishes.
- + Gill slits covered by operculum.
- + Air bladder present.
- + Eg:- Flying fish, Rohu, Sea horse, etc.



AMPHIBIA

Class Amphibia

- + Live in aquatic & terrestrial habitats.
- + Body divided into head & trunk.
- + Heart- 3 Chambered.
- + Poikilotherms.
- + Eg:- Toad, frog, salamander



REPTILIA

Class Reptilia

- + Body Covered with scales and scutes.
- + Heart - 3 chambered [except crocodile].
- + Poikilotherms.
- + Eg:- Cobra, Alligator, Tortoise, chameleon, etc.



MAMMALIA

Class Mammalia

- + Mammary glands present.
- + Skin have hair homoiotherms.
- + External ear or pinna present.
- + Eg:- Platypus (oviparous), Kangaroo, Blue Whale, Common Dolphin (Viviparous)



AVES

Class Aves

- + Presence of feathers, beak & wings.
- + Bones long & hollow - Pneumatic.
- + Heart - 4 Chambered.
- + Homoiotherms.
- + Eg:- Crow, Pigeon, Penguin, Peacock etc.

