

Classification of Animal kingdom

Classification: Is arranging organisms into groups or sets based on similarities and differences. In fact, to understand the living world classification.

1. Gives a picture of all life forms briefly
2. Makes the study of a wide variety of organisms easy.
3. It is also essential to understand the interrelationship among different groups of organisms.

Animals : 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.

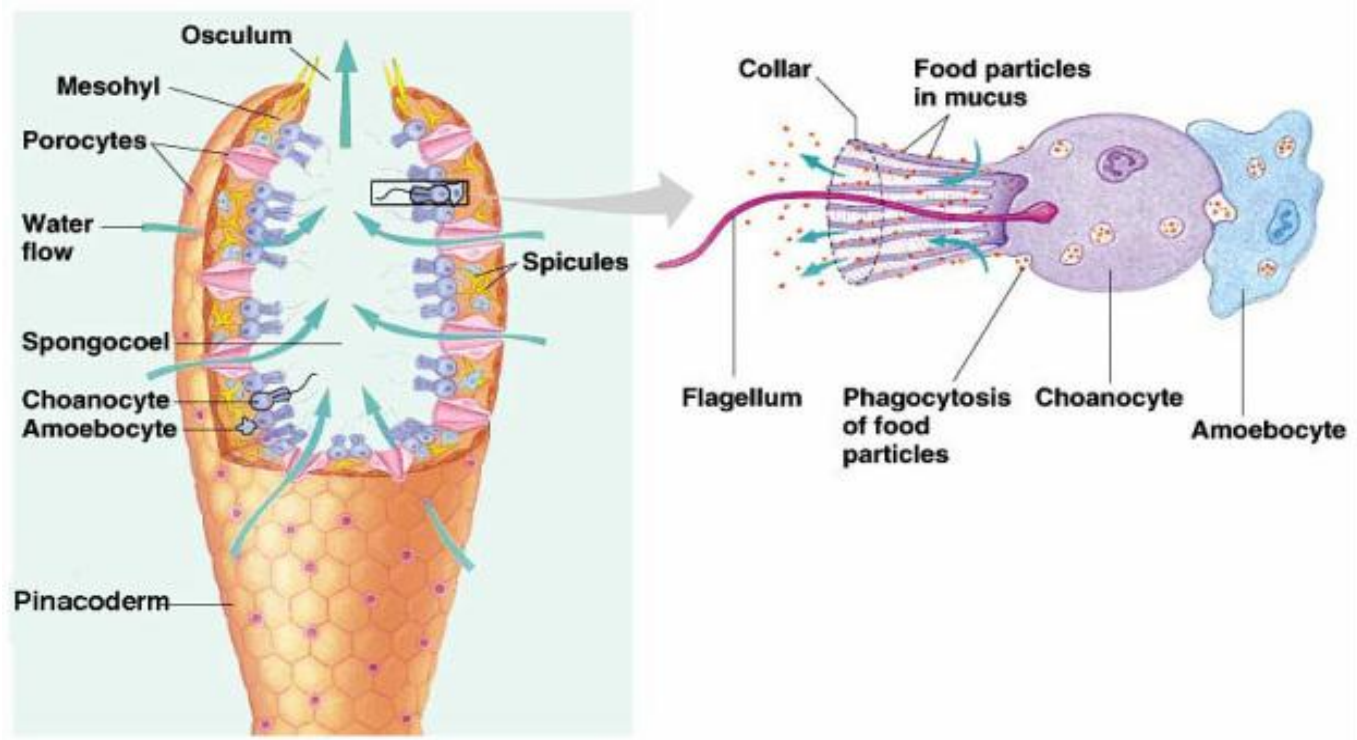
Kingdom Animalia is divided into two subkingdoms:

1. Subkingdom: Parazoa: Which lack symmetry and no tissues or organs. They include one phylum is:

Phylum: Porifera: They include the sponges.

Sponges are simple invertebrate animals that live in aquatic habitats. Although the majority of sponges are marine, some species live in freshwater lakes and stream.

Sponges are unique in the animals kingdom have choanocytes, These specialized cells are tightly packed and cover the entire internal surface of the sponge and it has a single flagellum whose beating drives water through the body cavity.



2. Subkingdom: Eumetazoa: Animals that have a definite shape and symmetry and they have many phyla.

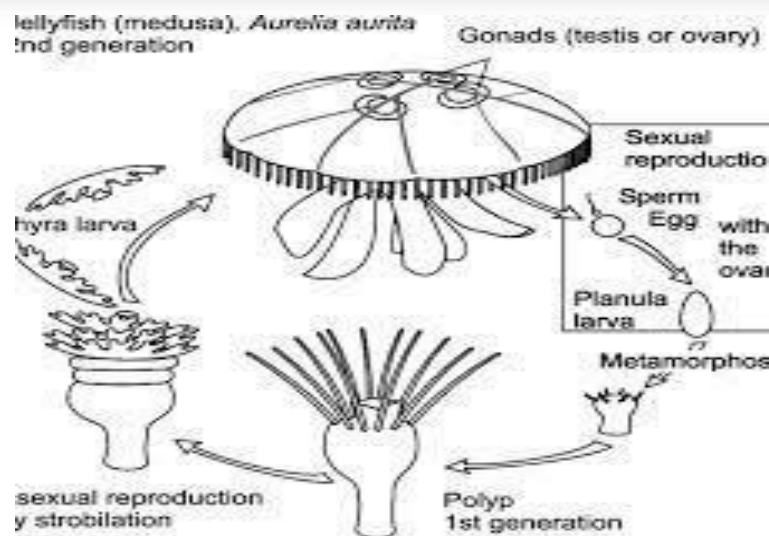
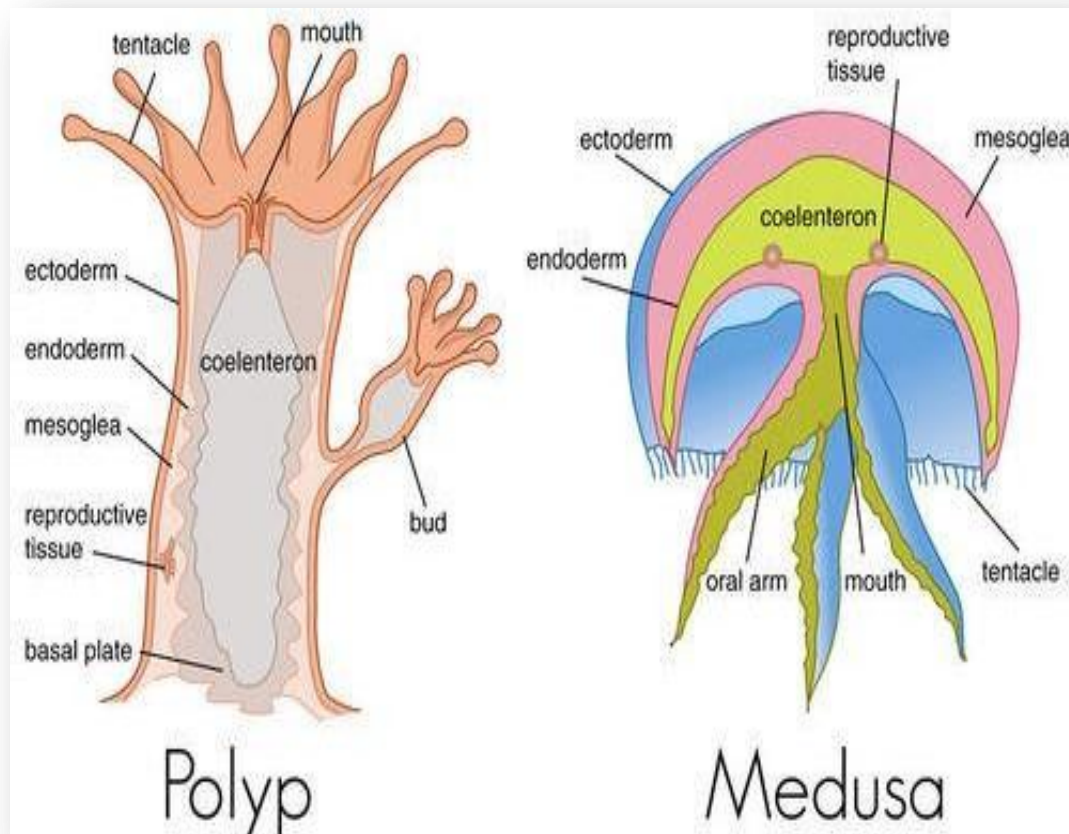
Phylum: Cnidaria: Include Jellyfish, Corals, Sea Anemones and Hydra.

Their bodies have two cell layers, and they have tissues, but no organs. Cnidarians have two basic body forms: **Polyp** and **Medusa**. Polyp and Medusa which often occur alternatively within the life cycle in single Cnidarian.

Medusa (Sexual form): Such as adult jellyfish, are free-swimming or floating. They usually have bell or an umbrella-shaped bodies with tetramerous (four-part) or radial symmetry. The mouth is usually on the concave side, and the tentacles originate on the rim of the umbrella.

Polyps (asexual form): Are usually sessile. They have tubular or hollow cylinder-shaped bodies; one end is attached to the floor or substrate.

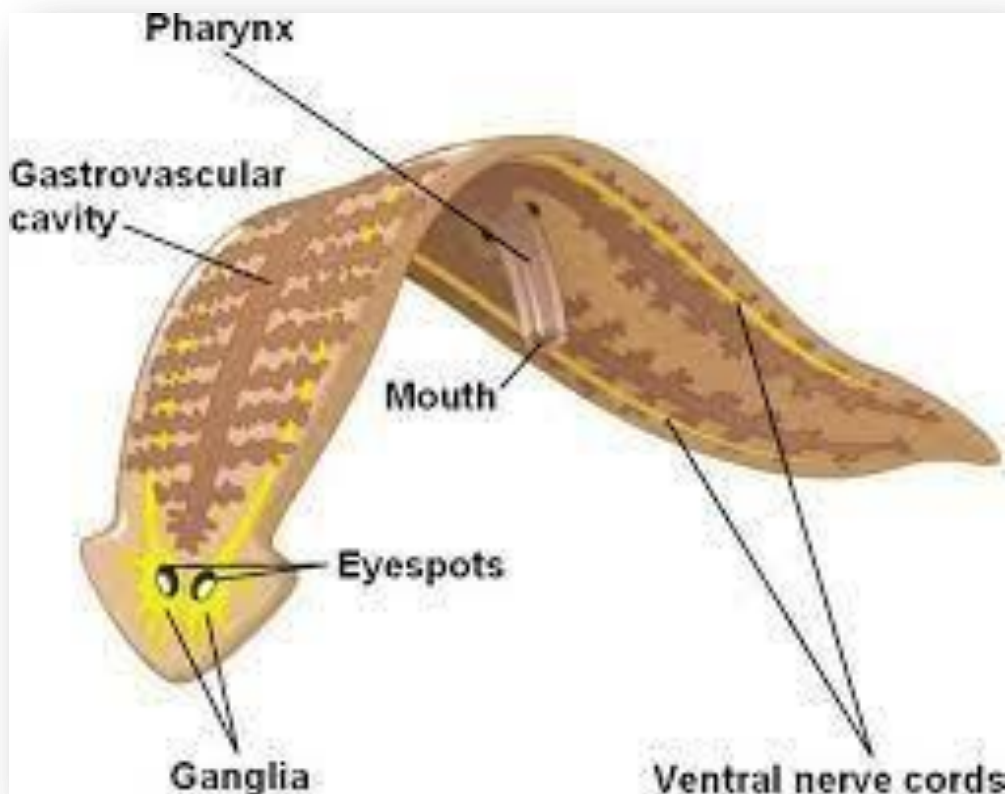
(ex. docks, boats, and rocks), and a mouth (usually surrounded by tentacles) is found at the other end that leads to a central body cavity which is called the gastrovascular cavity. No excretory or respiratory system



Phylum: Platyhelminthes: As planarians, flukes. Flatworms.

are unsegmented and the most primitive bilaterally symmetrical animals (Both left and right sides from body are similar), and flat in both sides of body. Tissue is organized into organs.

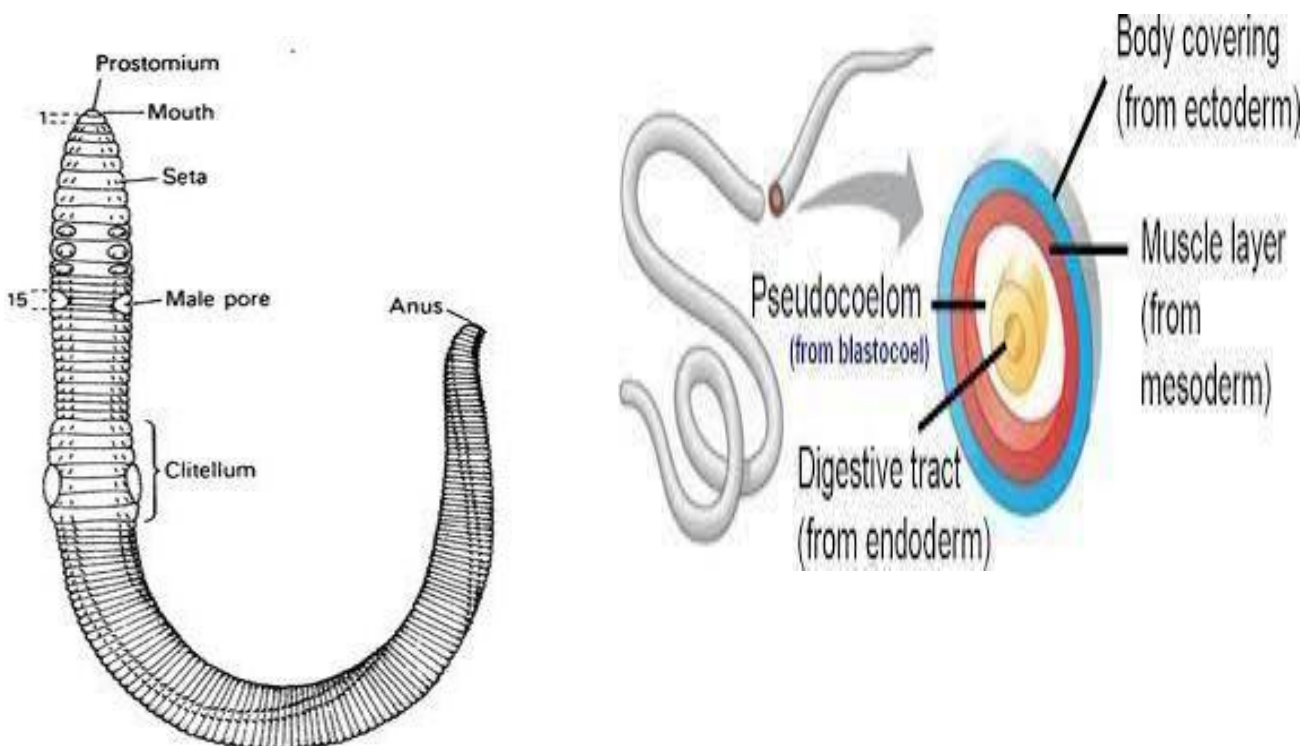
Flatworms lack circulatory system. Digestive system represents mouth and gastrovascular cavity (gut). They excrete wastes directly from the gut, represent of a network of fine tubules with ciliated (flame cells) of the side branches, it functions like kidney removing waste material. Their nervous system is simple. Respiratory system diffuses by skin.



Phylum: Nematoda: They are more commonly known Roundworms (Appear round). They have three basic body characteristics:

1. Unsegmented (no divided into segments).
2. Bilaterally symmetric.
3. Triploblastic (they have three primary germs layer the ectoderm, endoderm, and mesoderm).

Their body has a cavity or **pseudocoelom**, fluid-filled cavity. Roundworms can be free living or parasitic. Free living forms live in the soil, or water, they have complete digestive system. All are separate sexes. The body are covered with high cover which is called cuticle.



Phylum : Mollusca: Animal have soft body e.g., Snails, slugs, clams, octopuses. Their body are bilaterally and without vertebrae. All mollusks have a visceral mass, mantle, and foot. Most of them are protected by a hard shell made of calcium carbonate and secreted by mantle. They have true coelom that is hollow, a fluid- filled cavity containing visceral mass that develop within mesoderm, and they act as a skeleton. Digestion, excretion, and nervous system are complete. Also, an open circulatory system is present.

