

Bilaterally symmetrical
acoelomate

Platyhelminthes
(flatworms)

Radially symmetrical
acoelomate

Coelenterata,
Ctenophora

Bilaterally symmetrical
pseudocoelomate

Aschelminthes
(roundworms)

Choanocytes

Porifera

Nematocyst

Cnidaria

Polyp

Hydra

Medusa

Aurelia

Metagenesis

Obelia

Flame cells
(solenocytes)

Platyhelminthes
(Osmoregulation)

Nephridia

For osmoregulation and excretion in Annelida

Malpighian Tubules

Arthropoda

Haemocyanin

Copper protein present in the haemolymph for oxygen transport

Water vascular system

Echinodermata

Urochordata

Notochord in the larval tail
(*Ascidia*, *Salpa*, *Doliolum*)

Cephalochordata

Notochord exist throughout the life
(*Amphioxus* or Lancelet)

Vertebrata

Notochord is replaced
by vertebral column
in the adult

Cyclostomata

Jaw-less marine
fishes, move to
fresh-water for
spawning
(*Petromyzon, Myxine*)

Torpedo

Cartilagenous fish,
electric organ

Chondrichthyes

cartilagenous
ventral mouth
placoid scales
no air bladder
gill slits without operculum

Osteichthyes

bony endoskeleton
terminal mouth
cycloid/ctenoid scales
air bladder
gill slits with operculum

**Cellular level of
organisation**

Porifera

Tissue level of
organisation

Coelenterata,
Ctenophora

Diploblastic

Coelenterata,
Ctenophora

Radially
Symmetrical,
coelomate

Echinodermata
(adult)

Cuttle fish

Phylum- Mollusca
Genus- *Sepia*

Silverfish

Phylum- Arthropoda
Genus- *Lepisma*

Parapodia

Annelida