



Kingdom Animalia



ten non-chordate phyla plus Chordata, sorted by body plan, symmetry and coelom



Criteria for animal classification

- **grade of organisation** : cellular (Porifera), cell-tissue (Cnidaria, Ctenophora), tissue-organ, organ-system (Platyhelminthes onward)
- **body symmetry** : asymmetrical (sponges), radial (Cnidaria, Ctenophora, Echinodermata), bilateral (rest)
- **body cavity** : acoelomate (none), pseudocoelomate (not fully lined by mesoderm), coelomate (fully lined)
- **germ layers** : diploblastic (ectoderm + endoderm, Cnidaria, Ctenophora) or triploblastic (+ mesoderm, Platyhelminthes onward)
- **segmentation** : unsegmented, or metameric from Annelida onward

Three body plans *

Cell aggregate

no tissues, no division of labour. Porifera

Blind sac

one opening, ingestion and egestion share it. Cnidaria, Ctenophora, Platyhelminthes

Tube within tube

mouth and anus at opposite ends. Aschelminthes onward

Aschelminthes is the first phylum with a complete gut

Animal body plans



the three plans, in the order the gut opens: none, one, two

