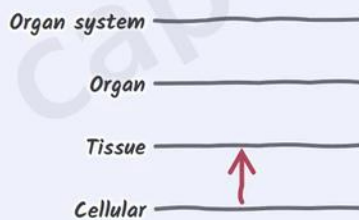


phylum by body plan, symmetry and coelom, never by looks



Levels of organisation *

- cellular level: cells work as a loose aggregate, little coordination, seen only in Porifera
- tissue level: similar cells form true tissues with division of labour, first seen in Cnidaria
- organ level: tissues combine into organs performing a specific function, seen from Platyhelminthes onward
- organ system level: organs work as one system, open or closed, seen from Aschelminthes onward



four levels of organisation stacked, cellular at the bottom up to organ system at the top. The arrow marks the first step up, cellular to tissue: Porifera never takes it, most other phyla climb the whole ladder

Other criteria for classification

Symmetry

asymmetrical, radial or bilateral, the body plan around a centre or a plane

Germ layers

diploblastic (two layers, no true mesoderm) or triploblastic (three, with a true mesoderm)

Coelom

acoelomate (no cavity), pseudocoelomate (cavity not fully mesoderm-lined) or coelomate (fully lined)

Segmentation

metameric segmentation repeats similar body units along the main axis, from Annelida onward

Notochord

- ✓ Notochord
- ✓ Dorsal hollow nerve cord
- ✓ Paired pharyngeal gill slits
- ✓ Post-anal tail

the four features every true chordate shows at some stage of its life

a supportive rod along the back, present at some stage in chordates, absent in non-chordates

