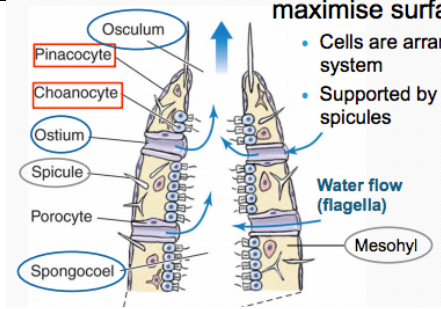
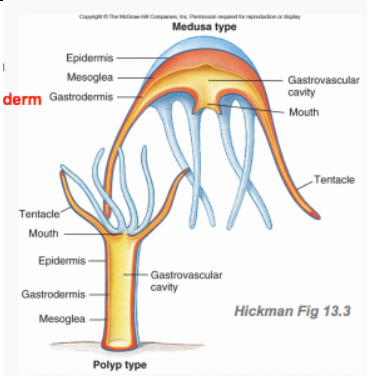
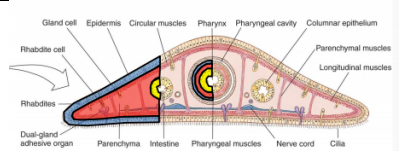
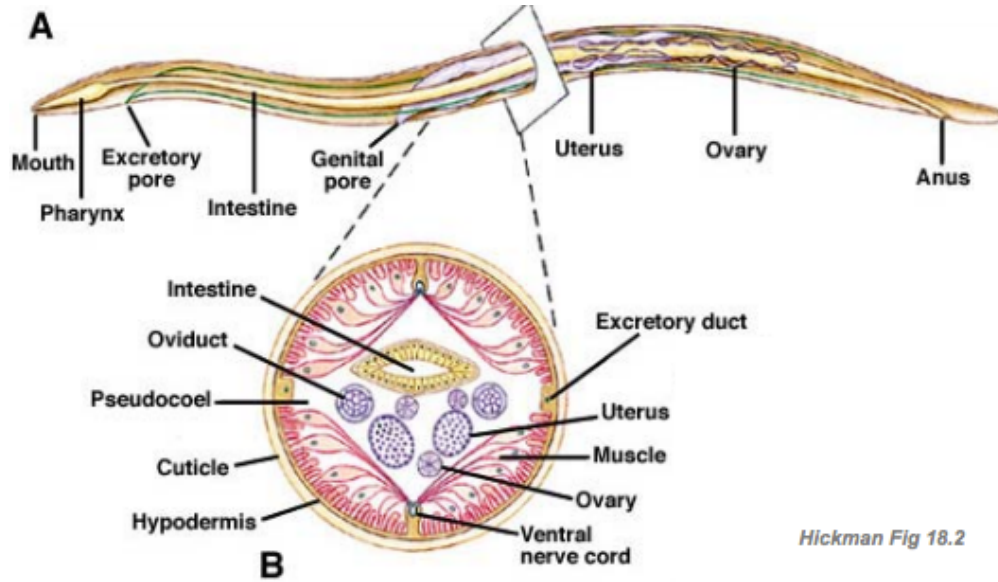
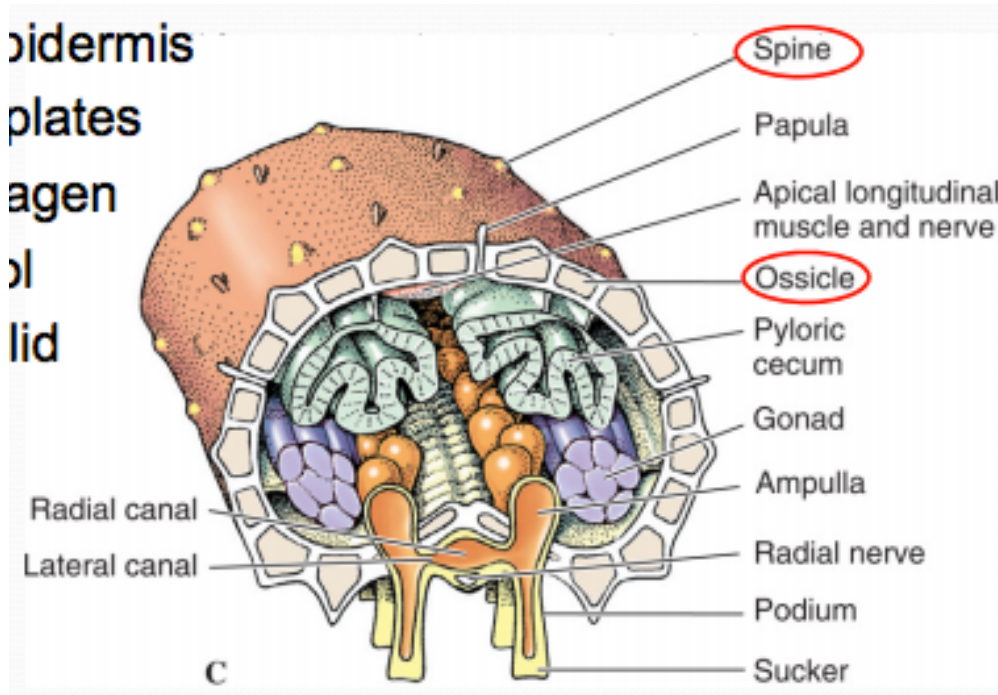


	<b>Porifera</b>	<b>Cnidaria</b>	<b>Platyneimintne</b>
<b>Level of Organisation</b>	Cell aggregate	Cell-tissue	Tissue-organ
<b>Body layers:</b>	None	Diploblastic	Triploblastic
<b>Coelom:</b>	None	None	Acoelomate
<b>Symmetry:</b>	None	Radial	Bilateral
<b>Segmentation:</b>	None	None	None
<b>Lifestyle:</b>	Sessile	Sessile or mobile	Mobile – free or parasitic
<b>Body form:</b>			
<b>Gut:</b>	None	Blind	Blind (excretion through flame cells)
<b>Feeding:</b>	Flagellum on choanocytes creates current to suck water in through ostium in body wall, with micro particles being trapped in microvilli and moved through mesohyl	Prey captured in tentacles and moved towards mouth	Muscular pharynx inserts into prey and pumps to bring in food fragments in free living, through oral sucker in parasitic
<b>Gas exchange:</b>	Diffusion	Diffusion	Diffusion
<b>Circulation</b>	None	None	
<b>Nervous system</b>	None	Net-like	Ladder shaped
<b>Skeletal system</b>	Coarse sponging fibres and/or needle-like spicules of calcium carbonate (chalk) or silicon dioxide (glass)	Hydrostatic skeleton	None
<b>Asexual reproduction:</b>	Budding	Asexual polyp	Budding or self-fertilisation
<b>Sexual reproduction</b>	Hermaphroditic – sperm carried to nearby sponges to fertilise eggs – larva are free swimming with flagellated cells	Sexual medusa (dioecious)	Hermaphroditic
<b>Example of species:</b>	<p>Class Calcarea – calcareous spicules, with pinacoderm</p> <p>Class Hexactinellida – siliceous spicules, syncytial body wall (cells fuse to form one wall with many nuclei)</p> <p>Class Demospongiae – siliceous spicules with pinacoderm</p>	<p>Class Anthozoa – sea anemones and corals</p> <p>Class Scyphozoa – true jellyfish</p> <p>Class Hydrozoa – Hydra and obelia</p>	<p>Class Turbellaria – free living, movement by ciliated epidermis and mucous</p> <p>Class Trematoda – parasitic, tegument, oral and ventral sucker</p> <p>Class Cestoda – parasitic, tegument, anterior sucker, no digestive system</p>

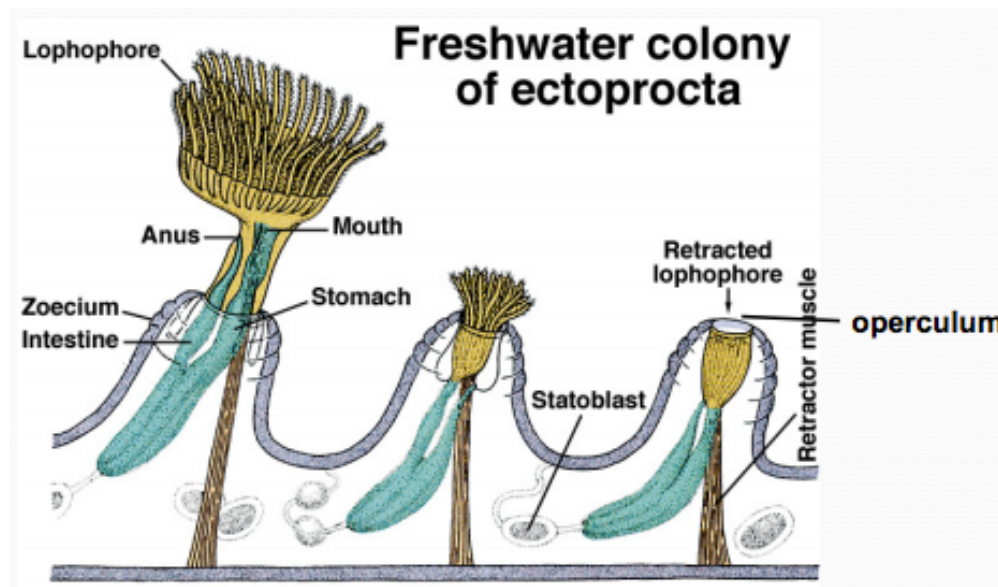
Nematoda



Echinoderm



Bryozoa



<b>Practical 2 – Sponges and Cnidaria</b>	
<b>Sponges</b>	
Cellular level of organisation	Cells work together to form one whole organism, but are not organised into tissues or organs
Leuconoid sponge	Irregular shapes, may be very large, folded walls form small flagellated chambers, lack spongocoel, series of excurrent openings
Asconoid sponge	Small, tube shaped, water enters through ostium and exits through the osculum
Syconoid sponge	Vase shaped, with invaginated walls (allows for greater surface area), more choanocytes
Choanocytes	Collared cells with flagella which create water currents and collect food
<b>Cnidarians</b>	
Metazoa	Animals that have a body composed of differentiated cells and feature a digestive cavity
Tissue level of organisation	Multicellular organisms with cells differentiated into specialised tissue types
Diploblastic	Two embryonic tissue layers (endoderm and ectoderm)
Radial symmetry	Symmetry about a central axis
Gastrovascular cavity	Primary organ of digestion and circulation in cnidaria
Epidermis	Outer layer of cells covering an organism
Ectoderm	Outermost layer of cells or tissue of an embryo in early development
Gastrodermis	Inner layer of cells that serve as a lining membrane of the gastrovascular cavity in cnidarians
Mesoglea	Translucent, non-living jelly-like substance found between the two epithelial cell layers in the bodies of cnidarians – functions as a hydrostatic skeleton
Polyp	Sessile, cylindrical shaped individual living either in solitary (attached via a pedal disc to substrate) or in colonies (connected to other polyps directly or indirectly)
Medusa	Free swimming sexual form of cnidarians, typically having an umbrella-shaped body with stinging tentacles around the edge
Nematocyst	Specialised cell in the tentacles of cnidarians, containing a barbed or venomous coiled thread that can be projected in defense or prey capture
Gastrozoid	Feeding polyp
Gonozoid	Sexual zooid
<b>Ctenophoria</b>	
Biradial symmetry	Body components are arranged with similar parts on either side of a central axis, and each of the four sides of the body is identical to the opposite side but different from the adjacent side
Collenchyme	Tissue strengthened by the thickening of cell walls