	Key invertebrate phyla							
Characteristics		Cnidaria	Platyhelminthes	Nematoda	Annelida	Molllusca	Arthropoda	Echinodermata
Examples of Organisms	*Sponges*		Flatworms, planarians	roundworms	earthworm	Clams,slugs	Spiders	Starfish deuterostome
Number of Tissue layers in Embryo	*Doesn't Apply*	*2; ectoderm and endoderm*	3, triploblastic	3	3	3	3	3;
Tissue versus organ level development	*Quasi tissue level*	*Tissue level*	Tissue level development	Organ level	Organ level	Organ level	Organ Level	Organ Level
True muscle cells?	*No*	*No; have epithelio-muscular cells*	No	Longitudinal	Longitudinal; circular	Yes Increased Complexity	yes	Yes
Symmetry? Cephalization?	No, Asymetrical No	Yes, radial	Bilateral; cephalization	Bilateral; yes	Bilateral; yes	bilateral; cephalization	Bilateral; cephalization	PentaRadial, no cephalization
Coelom? Type?	None	no	No coelom	pseudocoelom	schizocoelom gut not lined with mesoderm embryonically	Schizocoelom formed by splitting of mesoderm	ceolomate	Enterocoelom, outpoking gut
Digestive tract? Type?	No, Intracellular digestion	gastrovascular cavity	Gastrovascular cavity	Alimentary canal, one way tract from mouth to anus	One way tract from mouth to anus, allows more E input per unit of time and evolutionarily allows for specilization along tract	Yes, coiled in visceral mass	Yes, one opening	One mouth/anus; more energy, specialization in eating
Circulatory system? Type?	None, primarily diffusion	No, diffusion and some facilitated circulation	None	Diffusion and some facilitation of circulation via fluid movement in hydrostatic skeleton	Closed	Open Circulatory System	Open Circulatory System	closed
Nervous System? Type?	None,	Yes, nerve net	Ladder like nervous system ganglion in head end	Lateral nerve cords	Yes brain	Nerve Cords	Well developed sensory organs	Increased complexity
Other	Cell to cell Communication		- no sacs, tissue canals	Cuticle (outer coating) Sexual		Calcium carbonate shells, visceral mass, mantle	Undergo Ecdysis and have a segmented	

				reproduction			exoskeleton	