Characteristics	Key invertebrate phyla							
	Porifera	Cnidaria	Platyhelminthes	Nematoda	Annelida	Molllusca	Arthropoda	Echinodermata
Examples of Organisms	*Sponges*	Jellyfish, corals, hydra	Flatworm, tapeworm, planarian	Nematodes Roundworms Pin worms Hook worms	Earthworm	Clams, snails, slugs	Insects, crustaceans, arachnids	Sea Star
Number of Tissue layers in Embryo	*Doesn't Apply*	*2; ectoderm and endoderm*	**3; ectoderm endoderm mesoderm**	3; ectoderm endoderm mesoderm	3; ectoderm endoderm mesoderm	**3**	**3**	**3**
Tissue versus organ level development	*Quasi tissue level*	*Tissue level*	Tissue level	Organ level	Organ level	Organ level	Well developed sensory organs	**Organ level**
True muscle cells?	*No*	*No; have epithelio-muscular cells*	No	Longitudinal	Longitudinal circular	Yes	Yes attached to exoskeleton	Yes
Symmetry? Cephalization?	Asymetric; No	Radial symm, yes	Bilateral Yes – **not in tapeworms**	Bilateral; yes	Bilateral; yes	Radial/asymmetrical, yes	Bilateral; yes	Bilateral No
Coelom? Type?	No	**No, Acoelmates**	No	Pseudocoelem	Coelem true	**Pseudocoelem**, schizocoelus	Yes, becomes more reduced with development	No
Digestive tract? Type?	No; Suspension Feeder	**Yes; gastrovascular cavity**	Some do. Gastrovascular cavity, **except in tapeworms**	**alimentary canal**	**Yes**	Yes, coiled in visceral mass	Yes	Yes; stomach and anus
Circulatory system? Type?	No	No	No	No	Tiny blood vessels, closed	Yes, open	Yes- open circulatory system	Yes
Nervous System? Type?	No	Yes; nerve net and simple nerves for sensation	Yes, different nerve nets	Yes	Yes, cerebral ganglia nerve chords	Yes, nerve cords	Yes; well developed sensory organs	Yes
Other	2 layer Mesophyll Water comes in through spongocoel	Nematocysts, polyp or medusa, cnidocytes, single cavity openings	Most are parasites	Cuticle (tough outer coat) sexual reproduction	Hermaphrodite, asexual too by fragmentation by regeneration	3 main parts: foot, visceral mass, mantle Most have calcium carbonate shell	Exoskeleton--> molting segmentation and jointed appendages, internal systems for gas exchange	