phylogenic key

	2 charateristics	3 advancements	method of repro	method of digestion	nervous system	symmetry
porifera	sessile, porus		hermphorditic, hold eggs, sperm released	digest in cavity	none	none
cnidaria	radial symmetry, gastro cavity, 2 stages of life cycle	radial symmetry, gastrovascular cavity, tissue	budding, sexual reproduction by polyp	gastrovascular cavity with one opening, digestion in cavity, absorption direct	nerve net for general response	radial
platyhelminthes		3 tissue layers, bilaterally symmetry, digestive tract	sexually, asexual bydividing in half	primitive tract with one opening	2 ventral nerve chords	bilateral
rotifera	jaws, crown of cilia	separation between tissue layers, complete digestive tract, jaws	sexual repro with short lived males, parthenogenisis	complete digestive tract - mouth and anus		bilateral
nematoda			internal reproduction	complete digestive tract - mouth and anus		bilateral
mollusca	diverse tissues, motile, multi organs, mantle (shell), no true segmentation	coelomates, foot, gills, radula,	distinct male and female external fert	radula to "chew" separate organs for digestion	2 nerve chords with ring at head to connect - cepalization	bilateral
annelida	diverse tissues, motile, multi organs, true segmentation	coelomates, segmentation, distinct organs	hermphorditic, external fertilization	distinct organs	ventral nerve with segmented ganglia, cerebral ganglia	bilateral
arthropoda	diverse tissues, motile, multi organs, true segmentation, jointed legs, exoskeleton	coelomates, segmentation, distinct organs, legs	gender specific, external fertilization	mouth to chew		bilateral
echinodermata	invertibrate, water vascular system	deuterostome	separate genders external release into sea	complete digestive tract - mouth and anus, makes digestive juice	nerve ring and nerve chords in each leg	embryo = bilateral Adult = radial
chordata	vertibrae (mostly), notochord-longitudinal flex rod between nerve chord and digestive sys fluid filled	dorsal hollow nerve chord, pharygeal slits, postanal tail, amneotic egg	gender specific internal fert. + external fert.	complete	central = brain + spinal chord peripheral = nerves	bilateral

phylogenic key

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	tissue	embryology	major classes
porifera	none		
cnidaria	2 cell layers of tissue		hydrozoa - hydra, scyphozoa - jellies, anthozoa - anemones
platyhelminthes	acoelomate		
rotifera	pseudocoelomate		
nematoda	pseudocoelomate		
mollusca	coelomates	protostome	polyplacophora - chitons, gastropoda - snails, bivalva - clams, cephalopoda - squid
annelida	coelomates	protostome	oligochaeta - earthworm, polychaeta - marine worms, hirudinea - leeches
arthropoda	coelomates	protostome	Arachnida - spiders, diplopoda - millipedes, chilopoda - centipedes, insecta - insects, crustacea - crabs
echinodermata	coelomates	deuterostome	asteroidea - sea stars, ophiuroidea - brittle stars, echinoidea - sand dollars, crinoidea - sea lilies, holothuroidea - sea cuc's
chordata	coelomate	deuterostome	