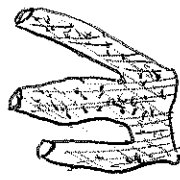




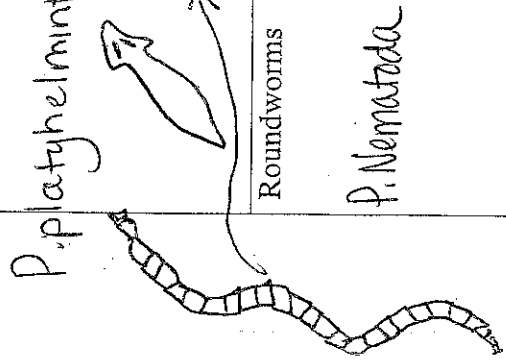





ANIMAL COMPARISON CHART #1

Animal	Body Plan	Nervous System	Reproduction	Digestive System	Muscular System	Unique Characteristics to Group
Sponges P. Porifera 	- cellular level of organization - system of pores & canals - mostly asymmetrical - skeleton of collagen + spicules	N/A	- Sexual + Asexual budding = asexual gemmules are external buds that can survive harsh conditions - Sexual = release of male gametes that	• water flow system in via OSTIA • osculum	N/A	- mostly marine but some freshwater - can contain toxins to protect against predators - Symbiotic Relationships Provide home, food, protection of another
Jellies P. Cnidaria 	- radial symmetry - diploblastic - POLYP → medusa	no cephalization no brain NERVE NET loose network of nerves w/in epidermis	• Asexual Budding (Polyps) • Sexual medusa can produce sexpel gametes	• Simple via gastrovascular cavity • O <sub>2</sub> via diffusion • mucous or diocous	- muscles in bell use water propulsion for movement	- nematocysts which contain stings that sometimes contain poison
Anemones P. Cnidaria 	- bilateral symmetry - tissue level of organization - 2 to 3 tissue layers - POLYP (terrestrial flower)	no cephalization PRIMITIVE simple cell to cell communication . nerve net	Asexual + Sexual	- Gastrovascular Cavity - same opening = mouth/anus - mesoglea contains digestive enzymes	- tentacles but generally sessile	- mostly sessile but can move • Provide protection
Hydra P. Cnidaria 	- radial symmetry - adhesive foot	nerve net	Asexual (budding) + Sexual (Release of male gametes to fertilize eggs of another)	• Eat small AG invertebrates	- tentacles but generally sessile	is able to stretch its digestive wall so it can eat animals larger than it
CORAL P. CNIDARIA 	colonies	nematocysts no brain	Spawning Asexual + Sexual			- MAKE UP REEFS - DARWIN - Coral bleaching

Amoebocytes are - totipotent cells can transform into other cells

Can regenerate

Flatworms	Body Plan	Nervous	REPRODUCTION	DIGESTION	MUSCULAR	UNIQUE
<p>Platyhelminthes</p>  <ul style="list-style-type: none"> <li>• Bilateral</li> <li>• unsegmented</li> <li>• soft body</li> <li>• no true body cavity</li> </ul>	<ul style="list-style-type: none"> <li>• Tapeworms (cestoda) have proglottids</li> <li>• 3 layers</li> </ul>	<ul style="list-style-type: none"> <li>• eye spots</li> </ul>	<ul style="list-style-type: none"> <li>• Usually sexual via penis fencing</li> </ul> <p><u>HERMAPHRODITIC</u></p>	<ul style="list-style-type: none"> <li>• Single opening at the mouth</li> <li>• waste can exit via mouth or respiratory or circulatory system</li> </ul>	<ul style="list-style-type: none"> <li>• 3 types of muscles</li> </ul>	<ul style="list-style-type: none"> <li>• can cause diseases in humans and livestock</li> <li>• can also be used for genetic research</li> </ul>
<p>Roundworms</p> <p>P. Nematoda</p> 	<ul style="list-style-type: none"> <li>• Pseudocoelomate (semi body cavity)</li> <li>• distinct head</li> <li>• adhesive gland</li> <li>• Bilateral</li> </ul>	<ul style="list-style-type: none"> <li>• dorsal/ventral nerve</li> <li>• nerve ring near pharynx</li> <li>• sewer as brain</li> </ul>	<ul style="list-style-type: none"> <li>• Dioecious (separate ♂ &amp; ♀)</li> <li>• usually sexual</li> </ul> <p><u>INTERNAL FERTILIZATION</u></p> <p><u>HERMAPHRODITIC</u></p>	<ul style="list-style-type: none"> <li>• Mouth Pharynx Gut</li> <li>• No stomach</li> <li>• anus</li> </ul>		<ul style="list-style-type: none"> <li>• Free living or Parasitic</li> </ul>
<p>Earthworms</p> <p>P. Annelida</p> 	<ul style="list-style-type: none"> <li>• Bilateral</li> <li>• Segmented</li> <li>• clitellum</li> </ul>	<ul style="list-style-type: none"> <li>• Brain + nerves</li> </ul>	<p><u>INTERNAL FERTILIZATION</u></p> <p><u>HERMAPHRODITIC</u></p>	<ul style="list-style-type: none"> <li>• tube w/ n tube</li> <li>• complete digestion</li> <li>• mouth → anus</li> <li>• crop = gizzard</li> </ul>	<ul style="list-style-type: none"> <li>• circular + longitudinal</li> </ul>	<ul style="list-style-type: none"> <li>• * closed circulatory system</li> <li>• release CO<sub>2</sub> (g)</li> <li>• believed to have helped to end the Ice age via greenhouse effect</li> </ul>
<p>Oligochaeta</p>						
<p>Leeches</p> 	<ul style="list-style-type: none"> <li>• Bilateral + Segmented</li> <li>• Anterior + Posterior</li> <li>• Sucker</li> </ul>	<ul style="list-style-type: none"> <li>• ganglia + nerves</li> </ul>	<ul style="list-style-type: none"> <li>• hermaphroditic</li> </ul>	<ul style="list-style-type: none"> <li>• jaw</li> <li>• esophagus</li> <li>• crop → digestive tract</li> <li>• anus</li> </ul>	<ul style="list-style-type: none"> <li>• circular + longitudinal</li> </ul>	<ul style="list-style-type: none"> <li>• Jawless +</li> <li>• anticommande jawed (Hirudin)</li> <li>• anticoagulant</li> <li>• Proboscis</li> </ul>
<p>P. Annelida</p>						
<p>Hirudinea</p>						

\* Medicines  
Leeches

ANIMAL COMPARISON CHART #1

Animal	Body Plan	Nervous System	Reproduction	Digestive System	Muscular System	Unique Characteristics to Group
Squid P. Mollusca	Coelomate Dilatacal	ganglia + nerve cords more specialized than other mollusks several lobes well developed sensory organs	Separate Sexes  Asexual	Mouth → Stomach → anus  Prey captured by tentacles	Strong Swimmers that utilize jet propulsion	Gills + lungs <del>closed</del> circulatory  internal shell = PEN
Bivalve P. Mollusca	coelomate bilateral	ganglia + nerve cords	Sexual	Mouth → Esophagus → Stomach → Anus mechanical + chemical digestion cilia in intestines		Gills & lungs Mussels, clams, scallops, oyster Open circulatory system
Gastropod P. Mollusca snails, slugs Pezizomorphs Sea star	coelomate	ganglia + nerve cords	dioecious + monoecious  Asexual	Similar Intracellular & extracellular digestion note that torsion		Gills / ctenidium very diverse <u>Torsion</u>
P. Echinodermata	Coelomate Pentaradial	ganglia + nerve cords	Asexual	Mouth on underside (oral) CARDIAC STOMACH ↳ Can be everted PYLORIC STOMACH anus have Caeca + digestive glands Anus is at center of Body	Have a peritreme can in all muscle contraction muscle contraction	Unique water vascular system * Siphon * Siphon plate OR Madreporite

Animal	Body Plan	Nervous System	Reproduction	Digestive System	Muscular System	Unique Characteristics to Group
Octopus	Bilateral tentacles Suckers	Brain specialized w/ several lobes Well developed sensory organs	Sexual	Complete		able to squeeze body thru small gaps intelligent
P. Mollusca						
Cephalopoda						
Sea Cucumber  P. Echinoderm	Pentaradial leathery skin elongated body endoskeleton below skin Spines	no true brain nerve ring	Sexual	Complete		Benthic water vascular system
Crayfish  P. Arthropoda	Bilateral segmented exoskeleton head-thorax-abdomen modified appendages	Brain/Nerves	Sexual	Complete		marine + freshwater - open circulatory system - Gills
Crustacean						
Grasshopper P. Arthropoda	Bilateral segmented exoskeleton head-thorax-abdomen modified appendages	Brain/Nerves	Sexual	Complete		- open circulatory system - wings