







### INVERTEBRATE ANIMALS

INVERTEBRATE PHYLUM	EXAMPLES	MAIN CHARACTERISTICS	SYMMETRY	REPRODUCTION (Sexual or Asexual)
PORIFERA	Sponge	<ul style="list-style-type: none"> <li>◆ Marine</li> <li>◆ Absorb nutrients and oxygen directly from water</li> <li>◆ Pores</li> </ul>	-	Both
CNIDARIA OR COELENTERATA	Jellyfish, coral, hydra, sea anemone	<ul style="list-style-type: none"> <li>◆ Marine</li> <li>◆ Hollow body</li> <li>◆ Stinging cells on tentacles</li> </ul>	Radial	Both
PLATYHELMINTHES	<u>Flatworms</u> - Tapeworm, liver fluke, planarian	<ul style="list-style-type: none"> <li>◆ Most are parasitic</li> <li>◆ Planarians are free-living</li> </ul>	Bilateral	Both
NEMATODA	<u>Roundworms</u> - Hookworm, threadworm	<ul style="list-style-type: none"> <li>◆ Unsegmented elongated soft body</li> </ul>	Bilateral	Sexual
NEMERTEA	<u>Ribbon worms</u> or Proboscis worms	<ul style="list-style-type: none"> <li>◆ Marine</li> <li>◆ Extendable proboscis to catch prey</li> </ul>	Bilateral	Sexual
BRYOZOA	<u>Moss animals</u>	<ul style="list-style-type: none"> <li>◆ Marine</li> <li>◆ Sessile (fixed to rocks)</li> <li>◆ Resembles seaweed</li> </ul>	Bilateral	Some asexual, some sexual
MOLLUSCA	Slug, snail, clam, oyster, octopus, squid	<ul style="list-style-type: none"> <li>◆ Soft body</li> <li>◆ Muscular 'foot'</li> <li>◆ Tongue-like radula</li> </ul>	Bilateral	Sexual

ANNELEIDA	<u>Segmented worms</u> - Earthworm, leech	<ul style="list-style-type: none"> <li>◆ Segmented elongated soft body</li> <li>◆ More complex than other worms because of extra internal protective cavity called a coelem</li> </ul>	Bilateral	Sexual
ARTHROPODA	<u>Crustaceans</u> – Crab, prawn, barnacle, slater, water flea <u>Myriapods</u> – Centipede, millipede <u>Arachnids</u> – Spider, scorpion, tick, mite <u>Insects</u> – Bee, fly, dragonfly, moth, grasshopper, cockroach	<u>All Arthropods</u> <ul style="list-style-type: none"> <li>◆ Exoskeleton</li> <li>◆ Segmented body</li> <li>◆ Jointed legs, some modified for swimming or feeding</li> </ul> <u>Crustaceans</u> <ul style="list-style-type: none"> <li>◆ Aquatic</li> <li>◆ Gills</li> </ul> <u>Myriapods</u> <ul style="list-style-type: none"> <li>◆ 1 or 2 pairs of legs per body segment</li> </ul> <u>Arachnids</u> <ul style="list-style-type: none"> <li>◆ 4 pairs of legs</li> <li>◆ No antennae</li> </ul> <u>Insects</u> <ul style="list-style-type: none"> <li>◆ 3 pairs of legs</li> <li>◆ Antennae</li> </ul>	Bilateral	Sexual
ECHINODERMATA	Starfish, sea cucumber, sea urchin, sand dollar	<ul style="list-style-type: none"> <li>◆ Marine</li> <li>◆ ‘Spiny’ skin</li> <li>◆ Internal structure of calcium carbonate</li> </ul>	Radial	Both

VERTEBRATE ANIMALS IN PHYLUM CHORDATA

VERTEBRATE PHYLUM	FISH	CLASS AMPHIBIA	CLASS REPTILIA	CLASS AVES (BIRDS)	CLASS MAMMALIA
EXAMPLES	<u>Jawless Fish</u> – Lamprey <u>Cartilaginous Fish</u> – Shark, ray, lungfish <u>Bony Fish</u> – Trout, barramundi	Frog, toad, salamander, newt	Snake, lizard, crocodile, turtle	Eagle, emu, penguin	<u>Monotremes</u> – platypus, echidna <u>Marsupials</u> – koala, kangaroo, wombat, bandicoot <u>Placentals</u> – human, dog, whale, dolphin
BODY TEMPERATURE	Changing	Changing	Changing	Constant	Constant
BODY COVERING	Scales	Moist skin	Scales	Feathers	Hair or fur
BREATHING ORGANS	Gills	Early stage as tadpole – gills Adult stage – lungs and moist skin	Lungs	Lungs	Lungs
SYMMETRY	Bilateral	Bilateral	Bilateral	Bilateral	Bilateral
REPRODUCTION	♦ Sexual ♦ Most lay eggs	♦ Sexual ♦ Lay eggs	♦ Sexual ♦ Most lay eggs	♦ Sexual ♦ Lay eggs	♦ Sexual ♦ Mammary glands