Honors Biology Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  
NDHS Per: \_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_  
  
**ANIMALS**

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| **Name** | **Characteristics** | **Examples** |
| Porifera | * No true tissues * Collection of Cells that work together * Filter feeders * Made of glass or sponging |  |
| Cnidarians | * Two layers of tissue * Radial symmetry * Gastrovascular Cavity * Stinging cells: Cnidoblasts |  |
| Acoelomate | * Unsegmented flatworms * Bilateral symmetry * Gastrovascular cavity * Cephalization * Eye spots |  |
| Psuedocoelomate | * Unsegmented round worms * Bilateral symmetry * Cephalization * Complete digestive system |  |
| Coelomates | * Complete digestive system * Fluid filled cavity around internal organs |  |

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| Annelids | * Segmented Round Worms * Bilateral * Segmented, repeated body plan |  |
| Mollusks | * Bilateral, radial or no symmetry * Complete digestive track * Some show cephalization * 3 parts: visceral mass = internal organs   Mantle – secretes shell  Foot – muscle for movement |  |
| Bivalves | * Shells * Filter feeders * No cephalization * No symmetry |  |
| Gastopods | * “stomach” footed animals * Bilateral * Cephalization * Move on foot * Radula tongue – scraping |  |
| Cephalopods | * Head * Large eyes * Foot split into 8 arms * Very intelligent |  |

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| Arthropods | * Segmented external skeleton made of chitin * Bilateral/cephalization * Open circulatory systems |  |
| Insect | * Head, thorax, abdomen * 6 appendages on thorax * Various mouth parts for feeding * Complete or incomplete metamorphosis * Breath through tracheal tubes that start at openings in the abdomen called spiracles |  |
| Arachnids | * One or Two body segments: Abdomen and cephalothorax * Spiders breath using book lungs |  |
| Myriapods | * Many segments, many legs |  |
| Crustaceans | * 19 pairs of appendages * Gills for breathing * Copper based blood |  |

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| Echinoderm | * Spiny Skin * Radial symmetry as adult * Bilateral as young * Large capacity for regeneration * Tube Feet * Water Vascular System * Eat by ejecting their stomach out of their body |  |
| Agnatha | * Jawless fish * Cartilaginous skeleton |  |
| Vertebrates | * Protective bones around spinal chord called vertebrae (spinal column) |  |
| Chondrichthes | Cartilagenous Fish  Lower Jaw Lateral Line 2 chambered heart Gills |  |
| Osteoichthes | Bony Fish Swim Bladder for Buoyancy  Lateral Line 2 chambered heart Gills |  |

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| Amphibians | “Both Lives” - land and water stage  - water needed for reproduction  - unprotected egg  - three chambered heart  - lungs |  |
| Reptiles | * Scaled made of keratin * Leathery shell on eggs * Three chambered heart (except Crocs and Allis) * Lungs |  |
| Aves | * Feathers * Honeycomb “hollow” bones * Hard shells of calcium carbonate * Four chambered heart * Lungs |  |
| Mammals | * Hair * Four chambered heart * Lungs |  |

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| Monotremes | * Egg Laying Mammals * Leather Eggs * Young hatch very immature |  |
| Marsupials | * Young born very immature * Crawl to the mother’s pouch |  |
| Placental | * Young grow in the uterus and are fed by the umbilical cord which grows from the placenta – lining of the uterus |  |

**Important Terms and Roots:   
Gastrovascular Cavity**: digestive system with one opening – both mouth and anus  
**Cephalization** – the head – cluster of sensory organs  
**Bilateral** – split into two even sides  
**Radial** – distributed evenly around a central point  
**Coelom** – fluid filled space between intestinal walls and musculature of the abdomen  
**Chondro** - cartilage  
**Osteo** – bone   
**Ichthes** –fish  
**Gnath** – jaw