

# AP Biology Spring Break Assignment

## Animal Diversity

Animals are multicellular, heterotrophic eukaryotes that traditionally have been grouped into two main branches, invertebrates or vertebrates. Both groups have specific body plans that allow them to perform vital functions. By studying their comparative physiology, morphology and development, we can predict possible phylogenetic relationships.

- Read Chapters 32-34.
- Using the information from the text complete the assigned worksheets. Chapters 40-49 also contain many useful examples of comparative physiology.

### Invertebrates

1. General Characteristics- List the major characteristics for each animal phyla.
2. Representative Organisms – **Identify, describe and sketch** representative organisms for All the Phyla on the chart. In addition, include the major classes for each of the Invertebrate phyla listed below under representative organisms, including common names.

- P. Porifera
- P. Cnidaria - Classes Hydrozoa, Scyphozoa, Anthozoa
- P. Platyhelminthes - Classes Turbellaria, Trematoda, Cestoidea
- P. Nematoda - Classes Adenophorea, Secernentea
- P. Annelida - Classes Oligochaeta, Polychaeta, Hirudinea
- P. Mollusca - Classes Polyplacophora, Gastropoda, Bivalvia, Cephalopoda
- P. Arthropoda - Classes Arachnida, Diplopoda, Chilopoda, Insecta, Crustacea
- P. Echinodermata – Classes Asterozoa, Ophiurozoa, Echinozoa, Crinozoa, Holothurozoa

3. Embryonic Development:  
Tissues / Germ Layers      Symmetry / Body shape      Blastopore Fate      Body cavity
4. Nutrition/Digestion- Mode of nutrition, Feeding structures and Digestion
5. Motility- Locomotion or movement at any stage of development
6. Reproduction- Reproductive strategies
7. Circulation- Structures and Function
8. Respiration- Structures and Function
9. Nervous System- Structures and Function, specialized structures
10. Excretion- Structures and Function
11. Special Adaptations
12. Ecology – Niche and habitat
13. Relevance to Humans- beneficial roles, disease, etc.

### Phylum Chordata

1. General Characteristics- List the major characteristics for Phylum Chordata and for each of the classes under Sub Phyla Vertebrata.
2. Representative Organisms – **Identify and Describe** the representative organisms for each taxonomic group on the chart. In addition include the other Chordate Sub phyla.
3. Embryonic Development:  
Tissues / Germ Layers      Symmetry / Body shape      Blastopore Fate      Body cavity
- 4.-10. Structural and Functional Adaptations
11. Ecology – Niche and habitat
12. Relevance to Humans- beneficial roles, disease, etc.