

AP Biology

Required Summer Reading/Assignment

An Overview of Invertebrates and Vertebrates

I. Create a chart that compares selected invertebrate phyla.

Phyla to be included:

Porifera	Nematoda
Cnidaria	Annelida
Platyhelminthes	Mollusca

Columns for comparison (to be placed in this order) will include:

Examples, type of symmetry, body plan, habitat, mobility, embryonic development, digestive, excretory/waste disposal, reproductive system, circulatory/transport, respiratory/gas exchange, nervous, skeletal/support, and muscular

II. Create a chart that compares major higher invertebrates phyla and vertebrates classes.

Phyla/Classes to be included:

Echinodermata	Amphibia
Arthropoda	Reptilia
Cephalaspidomorphi	Aves
Chondrichthyes	Mammalia
Actinopterygii	

Columns for comparison (to be placed in this order) will include:

Examples, type of symmetry, body plan, habitat, embryonic development, digestive, excretory/waste disposal, reproductive system, circulatory/transport, respiratory/gas exchange, nervous, skeletal/support, and muscular

III. Questions to be answered for discussion (must be typed)

1. Explain why cephalopods are considered the most advanced invertebrates.
2. Explain how echinoderms are more closely related to vertebrates than any other invertebrate class.
3. Discuss why the only radiate animals live in the sea and bilateral organisms can live anywhere.
4. Discuss the transition from a two to a four chambered heart within a closed circulatory system of vertebrates.
5. Compare the advancements in reproduction from invertebrates to vertebrates. What are the benefits of internal fertilization over external fertilization? Sexual reproduction in invertebrates usually occurs in times of unfavorable living conditions; explain this in terms of an evolutionary adaptation.

Grading:

- This assignment is due to your teacher on the second day of class and all information covered must be typed.
- It will be counted as a test grade.