AP Biology

Winter -- Very, very FUN PACK!

The Very, Very Fun Pack is due the first day of school in January – No Oops passing!

Part I Directions: You are being asked to survey the diversity of life that exists on earth!! Falalalala! Yes, this IS a survey of about nine chapters and will count towards your reading notes for the Diversity of Life Unit. Give characteristics, facts, notes, graphically organize, draw, or create flash cards about each bullet below (oh what fun it is to ride in the AP Bio sleigh…hey!! Jingle Cells, Jingle Cells, Jingle all the way…)

1. Read Chapter 26: pp. 510-523
- Create a time line of the history of the earth
- What is the hypothesis for the origin of life??
2. pp. 526-530:
- Bacteria and Archaea Domains
- Characteristics of Prokaryotic Cells:
    a. Cell membrane
    b. sex pili
    c. cell wall
3. pp. 532-537
- Metabolic Diversity of Prokaryotic Cells:
    a. Heterotrophs
    b. chemosynthetic autotrophs
    c. photosynthetic autotrophs: sulfur bacteria; cyanobacteria
    d. origin of photosynthesis
4. pp. 328 – 335
- Viruses
    a. Bacteriophages; lytic and lysogenic cycles
    b. Reverse transcription, retroviruses, and HIV
5. pp. 545-554+pictures in figures 28.4-28.5
- Kingdom Protista
    a. Taxonomic problems in Eukarya and Protista
    b. Endosymbiotic hypothesis
    c. Evolution of mitochondria and plastids
6. pp. 575-576, 581-582, 606-612
- Kingdom Plantae
    a. Brophyta, ferns, gymnosperm
    b. Adaptations to land
    c. Evolution of the flower, angiosperms
7. pp. 616-619, 622-623, 623-630
- Kingdom Fungi
    a. Reproduction
    b. Division ascomycota – meiosis (ex. Sordaria)
    c. Lichens, micorrhizae

8. pp. 633-639
- intro to Kingdom Animalia
- Bilateral Symmetry – Tissue Layers: how applied in classification
    a. Acoelomates
    b. Pseudocoelomates
    c. coelomates
- Protostome – Deuterostome: how applied in classification

Part II Directions: For the following phyla, know specific examples and characteristics which distinguish the organisms from each other. (How would you know what one was if you saw it for the very first time? Pictures??)

1. pp. 647-648
    - Phylum Porifera
        a. Feeding
        b. reproduction
2. pp. 648-650
    - Phylum Cnidaria
        a. Radial Symmetry
        b. Gastrovascular Cavity
        c. Nematocysts
        d. Polyp and Medusa
3. pp. 652-654
    - Phylum Platyhelminthes
4. pp. 656
    - Phylum Mollusca + Classes
5. pp. 659
    - Phylum Annelida
6. pp. 661-662
    - Phylum Nematoda
7. pp. 662-663
    - Phylum Arthropoda + Classes
8. pp. 672
    - Phylum Echinodermata
9. pp. 678 -715
    - Phylum Chordata + Classes
        a. Fishes (3 classes)
        b. Amphibia
        c. Reptiles, Amniote Egg, Ectotherms vs. Endotherms
        d. Birds
        e. Mammals
        ** Note specific adaptations for living on land for each animal group

Part III Directions: Organize your knowledge of the diversity of life by completing the following charts with relevant information

Tis The Season To Be Jolly…….See you next year!!

Kingdom	Monerans	Protists
Cellular Features		
Reproductive Life Cycle and Genetic Exchange Mechanisms		
Major Subgroups or phyla with features and adaptations		

Kingdom	Fungi	Plants
Cellular Features		
Reproductive Life Cycle and Genetic Exchange Mechanisms		
Major Subgroups or Phyla with features and adaptations		

Comparison of the Major Animal Phyla

Common Name	Sponges	Hydra, Anemones	Flatworms	Roundworms	Segmented Worms
Phylum					
Level of Body Organization					
Germ Layers					
Symmetry					
Cephalization					
Body Cavity?					
Segmentation?					
Digestive System					
Circulatory System					
Respiratory System					
Excretory System (fluid regulation)					
Nervous System					
Reproduction					
Support, skeletal system					

Comparison of the Major Animal Phyla

Common Name	Insects, Arachnids, Crustaceans	Snails, Clams, Squid	Sea Stars, Sea Urchins	Vertebrates (birds, fish, mammals, amphibians, reptiles, humans)
Phylum				
Level of Body Organization				
Germ Layers				
Symmetry				
Cephalization				
Body Cavity?				
Segmentation?				
Digestive System				
Circulatory System				
Respiratory System				
Excretory System (fluid regulation)				
Nervous System				
Reproduction				
Support, skeletal system				