

Organization and Pattern Study Guide

Concepts & GPS:

- Levels of Organization (*SB4a; Ch. 4,5*)
- Structure & Function of Six Kingdoms (*SB3b; Sec. 18-3, Ch. 20-33*)
- Viruses (*SB3d; Sec. 20-2, 20-3*)
- Evolutionary Basis of Classification (*SB3c; Sec. 18-1, 18-2*)

Vocabulary

Levels	Classification	Viruses/Bacteria
Atom	Taxonomy	Bacteriophage
Macromolecule	Binomial	Lytic cycle
Organelle	nomenclature	Lysogenic cycle
Cell	Phylogeny	Binary fission
Biosphere	Phylogenetic tree	Virus
Ecosystem	Cladistics	Bacteria
Community	Cladogram	
Population	Derived character	Characteristics of Life
Organism	Prokaryotic	Homeostasis
Biotic	Eukaryotic	
Abiotic	Heterotroph	
	Autotroph	
	Dichotomous key	

Study Questions:

1. What is the difference between an independent and dependent variable? (2pts)
2. What are the 7 characteristics of life? (3pts)
3. What are the levels of organization **for life**? (4pts)
4. Define biosphere, ecosystem, community, population, and organism. (5pts)
5. What is the difference between biotic and abiotic factors? (2pts)
6. What is taxonomy? (1pt)
7. List the levels of organization **for classification** starting with domains. (4pts)
8. Who developed the modern classification system and what is the 2-word naming system called? (2pts)
9. What are the 2 names in an organism's scientific name? (1pt)
10. What is the main difference between a phylogenic tree and a cladogram? (2pts)
11. What information can you learn from a cladogram? (Be able to answer questions using a sample cladogram) (1pt)
12. What evidence do scientists use to classify organisms?
13. Why are physical characteristics alone not enough to group organisms? (2pts)

14. What is a dichotomous key and how is it used? (Be able to use a dichotomous key) (1pt)
15. What are the 3 domains? (1pt)
16. What are the main characteristics of the 6 kingdoms (KINGDOM CHART)? (Cell type, cell number, nutrition, cell wall, and examples) (6pts)
17. Why are viruses nonliving? (1pt)
18. What is the difference between where archaeobacteria and eubacteria live? (2pts)
19. What are the steps of lytic and lysogenic cycles for viruses? (2pts)
20. How do bacteria reproduce? (1pt)
21. What are the 3 groups of protists? (1pt)