

TEST DATE:

ECOLOGY UNIT
Exam Study Guide
Chapters 3, 4, 5 and Section 6.2
(PLUS vocabulary terms)

1. What is the branch of biology dealing with interactions between and among organisms and their environment called?
2. What is the combined portions of Earth in which all living things exist called?
3. How do each of the following obtain food?
 - a. *Escherichia coli*
 - b. *Ulmus americana*
 - c. *Canis lupus*
 - d. *Methanococcus jannaschii*
4. Define each of the following and provide one example for each:
 - a. Carnivore
 - b. Omnivore
 - c. Detritivore
 - d. Herbivore
5. What is the % of energy transferred from level to level in an energy pyramid?
6. Calculate the amount of kcals of energy available for tertiary consumers if the producers start with 37500 kcals of energy? PSYW
7. Most of that energy is used by the tertiary consumers but a small fraction is not used at all. What happens to it?
8. What do the following help us to understand about energy and the environment?
 - a. Water cycle
 - b. Carbon cycle
 - c. Nitrogen cycle
 - d. Phosphorus cycle
9. What is a niche?
10. Define the C.E.P., aka Gause's Law, and **provide and explain ONE example** that illustrates this in the wild.
11. Name the three feeding relationships and **provide and explain TWO** examples for each.
12. How can a predator increase the numbers of certain species in its habitat?
13. How does ecological SUCCESSION occur? Explain BOTH types!
14. What is a biome identified by?
15. For any biome of your choosing, provide 3 biotic factors and 3 abiotic factors.
16. What factors affect *population growth*?
17. What is the significance of an ecosystem's carrying capacity?
18. Name and explain the factors that can affect population size.
19. Compare and contrast density dependent and density independent limiting factors.
20. What is DDT and how has DDT affected the biodiversity of some organisms in the wild?
21. What is a keystone species? Provide 2 examples of keystone species and explain their story.
22. Why are invasive species harmful to ecosystems?
23. KNOW ALL 20 VOCABULARY plus Review Chapters 3, 4, 5 & 6.2 in Book
24. Review all practice pages in the unit packet!