

Biology Chapter 3 Study Guide – The Biosphere

1. List and define 6 levels of organization.
2. What does the biosphere consist of?
3. Define “ecology”.
4. List three nonliving things in their environment that organisms interact with.
5. Describe three methods used to study ecology.
6. What are autotrophs?
7. Describe how we can study ecology from space.
8. What are producers and describe two different types of producers.
9. Describe both photosynthesis and chemosynthesis and tell the differences between the two.
10. What are heterotrophs and name and describe four main types.
11. Describe the flow of energy through an ecosystem.
12. Define “food chain”.
13. Describe a typical prairie food chain and a typical marine food chain.
14. What is a food web and describe a typical salt marsh food web.
15. Define “trophic level”.
16. Describe the energy pyramid, the biomass pyramid, and pyramid of numbers and what they represent.
17. Describe the processes in the water cycle and define the steps in it.
18. Describe the biogeochemical cycle.
19. Describe the processes in the carbon cycle.
20. List the four biggest reservoirs of carbon in the biosphere.
21. Why are nutrients essential to life?
22. What is nitrogen fixation?
23. Name four places where nitrogen is found.
24. Describe the processes of the nitrogen cycle.
25. Describe phosphorus cycle.
26. Name four places where phosphorus is found.

