**Chapter 20** **Study Guide Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

1. What is the difference between biotic and abiotic factors in ecosystems? Give examples.
2. What are the 3 categories of ecosystems? What % of the earth’s surface is covered by each?
3. A position in a food chain or food web is called a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
4. List and describe the trophic levels in a food chain or web in order.
5. What are some problems with the use of food chains to describe trophic levels?
6. Why is the use of a food web somewhat better that the use of a food chain to describe interactions between species?
7. What is the difference between a grazing and a detrital food web?
8. What is an autotroph? Give an example.
9. What is a heterotroph? Give an example.
10. What is the difference between gross primary productivity and net primary productivity?
11. What is DDT? How did it harm birds, such as eagles?
12. What are the 6 most common elements that are associated with organic molecules?
13. What is a biogeochemical cycle?
14. On earth, \_\_\_\_\_\_\_\_\_\_% of water is salt water, \_\_\_\_\_\_\_\_\_% is underground or ice and \_\_\_\_\_\_\_\_% is fresh water.
15. What are fossil fuels? Why are they considered a non-renewable resource?
16. The 4th most abundant element in living organisms is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. It makes up macromolecules and is of primary importance to living organisms.
17. Even though nitrogen makes up 78% of the atmosphere, most organisms can’t utilize it (even though they need it to make macromolecules). What types of organisms allow nitrogen to enter the living world?
18. What is eutrophication? What is its relationship to the formation of dead zones?
19. Phosphorous is involved in the formation of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in living things. Sulfur is involved in the formation of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in living things.
20. What is acid rain? How does it form?
21. The 8 major terrestrial biomes are distinguished by \_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
22. Why is the extraordinary biodiversity of the tropical forest currently under threat?
23. Match the terrestrial biomes with the characteristic.
24. Tropical forest also known as prairies; have hot summers and cold winters
25. Savanna very cold; little annual precipitation, diversity and productivity
26. Chaparral very dry; often located on downwind side of a mountain
27. Desert have defined growing seasons; dominated by deciduous trees
28. Temperate grassland also known as taiga; dominated by evergreen conifers
29. Temperate forest grasslands in Africa, South America and Australia
30. Boreal forest found in equatorial regions; highest diversity of all
31. Tundra scrub forest; dominated by shrubs
32. What are several abiotic factors that are important in aquatic habitats?
33. Match the zones of the marine biome to the characteristic.
34. Intertidal zone open ocean area; contains abundant plankton, fish and whales
35. Neritic zone region closest to land; often a sandy beach
36. Oceanic zone the ocean bottom; contains abundant fungi, bacteria and invertebrates
37. Benthic zone highest productivity and biodiversity of the coean
38. Abyssal zone deepest part of the ocean; very cold with low nutrients
39. What is the difference between the photic and aphotic zones of the ocean?
40. Coral reefs are one of the most diverse biomes. How are they threatened by human activity?
41. What is an estuary?
42. Why are freshwater biomes important to humans?
43. List examples of freshwater biomes that are standing water and examples that are flowing water.
44. What is an algal bloom? How are blooms related to nitrogen and phosphorous?
45. What is a wetland?
46. Be familiar with the vocabulary in the chapter. You can use the last slides in the PPT as a guide.