

## CHAPTER 3—ECOSYSTEMS: WHAT ARE THEY AND HOW DO THEY WORK?

### COMPLETION

1. Destruction of tropical rain forests will help accelerate \_\_\_\_\_.
2. Tropical rain forests may be prevented from returning to cleared areas if an irreversible \_\_\_\_\_ is reached.
3. The study of connections in nature is \_\_\_\_\_.
4. A group of individuals of the same species living in the same place at the same time is a(n) \_\_\_\_\_.
5. Ecologists assign every type of organism in an ecosystem to a feeding level or \_\_\_\_\_.
6. Organisms that convert simple inorganic compounds into nutrients, without sunlight, are called \_\_\_\_\_ organisms.
7. Organisms that cannot produce their own food and, therefore, must eat other organisms, are called \_\_\_\_\_.
8. Decomposers are mainly bacteria and \_\_\_\_\_.
9. A sequence of organisms, each of which serves as a source of food or energy for the next, is called a(n) \_\_\_\_\_.
10. \_\_\_\_\_ from the sun is captured, converted into chemical energy, and stored as biomass in the tissues of the producer.
11. The rate at which an ecosystem's producers convert solar energy into chemical energy as biomass is called \_\_\_\_\_.
12. \_\_\_\_\_ are by far the most productive aquatic ecosystem when measured as average net primary productivity per square meter per year.
13. Some precipitation sinks through soil and permeable rock formations and into \_\_\_\_\_ where it is stored as \_\_\_\_\_.

14. The major reservoir for nitrogen is the \_\_\_\_\_.
15. Carbon cycles through the biosphere and depends on the process of \_\_\_\_\_ and \_\_\_\_\_.
16. Nitrogen fixation is accomplished by specialized \_\_\_\_\_ in the soil and \_\_\_\_\_ in aquatic environments.
17. The rotten-egg smell coming from volcanoes and anaerobic decomposition in bogs and swamps comes from the gas \_\_\_\_\_.
18. \_\_\_\_\_ can help scientists understand large and very complex systems by allowing them to change variables and project possible changes.
19. Human activities are altering both the \_\_\_\_\_ of energy flow and the \_\_\_\_\_ of nutrients within the carbon cycle.