

Chapter 4, Ecosystems and Communities *(continued)*

Section 4–2 What Shapes an Ecosystem? (pages 90–97)

This section explains how biotic and abiotic factors influence an ecosystem. It also describes what interactions occur within communities and explains how ecosystems recover from a disturbance.

Biotic and Abiotic Factors (page 90)

1. Complete the table about factors that influence ecosystems.

FACTORS THAT INFLUENCE ECOSYSTEMS

| Type of Factor | Definition | Examples |
|-----------------|------------|----------|
| Biotic factors | | |
| Abiotic factors | | |

2. What do the biotic and abiotic factors together determine? _____

The Niche (pages 91–92)

3. What is a niche? _____

4. In what ways is food part of an organism’s niche? _____

5. Circle the letter of each sentence that is true about niches.

- a. Different species can share the same niche in the same habitat.
- b. No two species can share the same niche in the same habitat.
- c. Two species in the same habitat have to share a niche to survive.
- d. Different species can occupy niches that are very similar.

Community Interactions (pages 92–93)

6. When does competition occur? _____

7. What is a resource? _____

8. What is often the result of direct competition in nature? _____

9. What is the competitive exclusion principle? _____

10. What is predation? _____

11. When predation occurs, what is the organism called that does the killing and eating, and what is the food organism called? _____

12. What is symbiosis? _____

13. Complete the table about main classes of symbiotic relationships.

MAIN CLASSES OF SYMBIOTIC RELATIONSHIPS

| Class | Description of Relationship |
|--------------|-----------------------------|
| Mutualism | |
| Commensalism | |
| Parasitism | |

14. The organism from which a parasite obtains nutritional needs is called a(an) _____.
15. Circle the letter of each sentence that is true of parasites.
- a. They generally weaken but do not kill their host.
 - b. They obtain all or part of their nutritional needs from the host.
 - c. They neither help nor harm the host.
 - d. They are usually smaller than the host.

Ecological Succession (pages 94–97)

16. What is ecological succession? _____

17. What is primary succession? _____

18. The first species to populate an area when primary succession begins are called _____.
19. When a disturbance changes a community without removing the soil, what follows?

20. An area that was once referred to as a climax community may appear to be permanent, but what might cause it to undergo change? _____

