

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



**TEKS FOCUS:** 3D Connection between biology and careers; 11D Role of microorganisms in maintaining equilibrium in an ecosystem; 12B Predation, parasitism, commensalism, and mutualism

*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)

- Complete the table about factors that influence ecosystems.

**FACTORS THAT INFLUENCE ECOSYSTEMS**

Type of Factor	Definition	Examples
Biotic factors		
Abiotic factors		

- What do the biotic and abiotic factors together determine? \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

### The Niche (pages 91–92)

- What is a niche? \_\_\_\_\_  
 \_\_\_\_\_
- In what ways is food part of an organism’s niche? \_\_\_\_\_  
 \_\_\_\_\_
- Circle the letter of each sentence that is true about niches.
  - Different species can share the same niche in the same habitat.
  - No two species can share the same niche in the same habitat.
  - Two species in the same habitat have to share a niche to survive.
  - Different species can occupy niches that are very similar.

### Community Interactions (pages 92–93)

- When does competition occur? \_\_\_\_\_  
 \_\_\_\_\_
- What is a resource? \_\_\_\_\_
- 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? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_