

Name: \_\_\_\_\_

AP Biology

## **Chapter 41 Active Reading Guide**

### **Species Interactions**

#### **Section 1**

1. What is a community? List six organisms that would be found in your schoolyard community.

2. This section will look at interspecific interactions. Be clear on the meaning of the prefix! To begin, distinguish between intraspecific competition and interspecific competition. Give an example of each.

<b>Type of Competition</b>	<b>Explanation</b>	<b>Example</b>
Intraspecific Competition		
Interspecific Competition		

3. What is G. F. Gause's competitive exclusion principle? Give one example.

4. Define ecological niche.

5. Several species of Anolis lizards live in the same types of trees and have a similar diet. Discuss resource partitioning to explain how interspecific competition is reduced. (Study Figure 41.2)

6. What is the difference between the fundamental niche and the realized niche?
7. Study Figure 41.4, and then explain what is meant by character displacement. (To do this, you will have to learn or review the difference between sympatric populations and allopatric populations. You will find this information in Chapter 22.)
8. Predation is a term that you probably already know. Can you give examples of some predator-prey combinations as listed below?

<b>Predator</b>	<b>Prey</b>	<b>Example</b>
Animal	Animal	
Animal	Plant	
Fungus	Animal	
Bacteria	Animal	
Fungus	Plant	

9. List three special adaptations that predator species possess for obtaining food.
10. List three ways prey species elude predators.

11. Compare the two types of mimicry.

<b>Type of Mimicry</b>	<b>Description</b>	<b>Example</b>
Batesian		
Müllerian		

12. What is herbivory?

13. Did you list any special herbivore adaptations for predation in your response to question 9? Or plant adaptations to avoid herbivory? List two adaptations for each category here.

14. Describe and give an example of each of the following interactions:

Type of Interaction	Description	Example
Symbiosis		
Parasitism		
Mutualism		
Commensalism		

15. Which category above includes the other three? Note that other texts may define this term more narrowly.

16. Your text uses +/-/0 symbols to indicate how interspecific interactions affect survival and reproduction of the two species. Use this notation for each of these interactions.

Type of Interaction	+/, +/-, -/-, +/0
Predation	
Commensalism	
Mutualism	
Parasitism	
Interspecific Competition	
Herbivory	

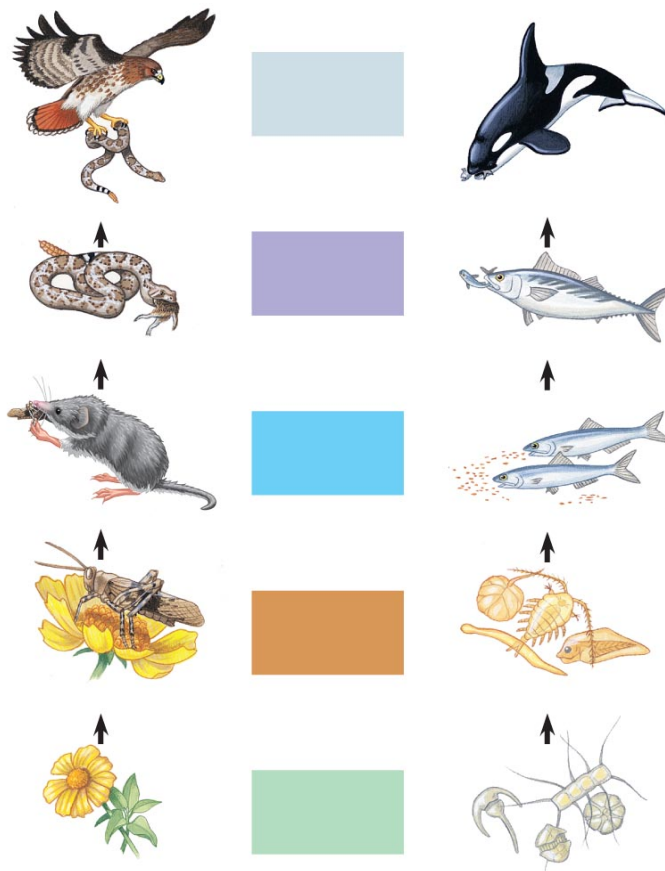
## Section 2

17. What is species diversity? What are its two components? Why is it important?

18. What does an ecologist summarize in a food web?

19. Know the levels of trophic structure in food chains. Give a food chain here, including four links that might be found in a prairie community, and tell the level for each organism.

20. Name every organism in the pictured food chain, and give the trophic level in the box.



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21. According to the energetic hypothesis, why are food chains limited in length? How much energy is typically transferred to each higher level?
  
22. What is a dominant species? For the area where you live, what would be considered a dominant tree species?
  
23. How is a keystone species different from a dominant species?
  
24. Name one keystone species, and explain the effect its removal has on the ecosystem.
  
25. Explain facilitator or foundation species and give an example.

### **Section 3**

26. What is the intermediate disturbance hypothesis? Give an example of a disturbance event, and explain the effect it has on the community.
  
27. Ecological succession is the changes in species that occupy an area after a disturbance. What is the difference between primary succession and secondary succession?



36. Use this model to describe how an island's size and distance from the mainland affect the island's species richness.

### **Section 5**

Let's pull a couple of ideas from this section:

37. What is a pathogen?

38. What is a zoonotic pathogen? List three examples.

39. What is a vector? List three examples.