



Name \_\_\_\_\_

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Date \_\_\_\_\_

SECTION  
**13.1**

ECOLOGISTS STUDY RELATIONSHIPS

## Study Guide

### KEY CONCEPT

**Ecology is the study of the relationships among organisms and their environment.**

### VOCABULARY

ecology	ecosystem
community	biome

**MAIN IDEA:** Ecologists study environments at different levels of organization.

Write a description of each level of organization in the table. Also, provide an example for each level.

Level	Description	Example
1. organism		
2. population		
3. community		
4. ecosystem		
5. biome		

**MAIN IDEA:** Ecological research methods include observation, experimentation, and modeling.

6. What is observation?

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7. What is the difference between direct and indirect surveys?

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SECTION  
**13.2**

BIOTIC AND ABIOTIC FACTORS

**Study Guide**

**KEY CONCEPT**

Every ecosystem includes both living and nonliving factors.

**VOCABULARY**

biotic	biodiversity
abiotic	keystone species

**MAIN IDEA:** An ecosystem includes both biotic and abiotic factors.

Use a word from the box below to complete the following sentences.

abiotic	animals	biotic
living	moisture	nonliving
plants	temperature	wind

1. All ecosystems are made up of \_\_\_\_\_ and \_\_\_\_\_ components.
2. \_\_\_\_\_ factors are living things, such as \_\_\_\_\_ or \_\_\_\_\_.
3. \_\_\_\_\_ factors are nonliving things, such as \_\_\_\_\_, \_\_\_\_\_, or \_\_\_\_\_.

**MAIN IDEA:** Changing one factor in an ecosystem can affect many other factors.

4. Describe what biodiversity means in your own words.

\_\_\_\_\_

5. What is the term for an organism that has an unusually large effect on its ecosystem?

\_\_\_\_\_

6. List a few reasons why a beaver is an example of a keystone species.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



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SECTION  
**13.4**

FOOD CHAINS AND FOOD WEBS

**Study Guide**

**KEY CONCEPT**

**Food chains and food webs model the flow of energy in an ecosystem.**

**VOCABULARY**

food chain	decomposer
herbivore	specialist
carnivore	generalist
omnivore	trophic level
detritivore	food web

**MAIN IDEA:** A food chain is a model that shows a sequence of feeding relationships.

Complete the following sentence with the correct terms.

1. A food chain follows the connection between one \_\_\_\_\_ and a single chain of \_\_\_\_\_ within an \_\_\_\_\_.

Choose the correct term from the box below to fit each description.

carnivore	herbivore	secondary consumer
decomposer	omnivore	tertiary consumer
detritivore	primary consumer	trophic levels

2. I eat only plants. I am a(n) \_\_\_\_\_.
3. I eat only other animals. I am a(n) \_\_\_\_\_.
4. I eat both plants and animals. I am a(n) \_\_\_\_\_.
5. I eat dead organic matter. I am a(n) \_\_\_\_\_.
6. I break down organic matter into simpler compounds. I am a(n) \_\_\_\_\_.
7. I am the first consumer above the producer level. I am a(n) \_\_\_\_\_.
8. I am a carnivore that eats herbivores. I am a(n) \_\_\_\_\_.
9. I am a carnivore that eats other carnivores. I am a(n) \_\_\_\_\_.
10. The levels of nourishment in a food chain are called \_\_\_\_\_.

## STUDY GUIDE, CONTINUED

**MAIN IDEA:** A food web shows a complex network of feeding relationships.

**11.** How is a food web different from a food chain?

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**12.** What happens to energy at each link in a food web?

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**13.** What type of organism provides the base of a food web?

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### Vocabulary Check

**14.** Use your knowledge of the words *special* and *general* to explain the diets of a specialist and a generalist.

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**15.**

Word Part	Meaning
herba	vegetation
carnus	flesh
omnis	all

Use the word origins to explain the diets of each of the following consumers: herbivores, carnivores, and omnivores.

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Name

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SECTION  
**15.3**

BIOMES  
**Study Guide**

**KEY CONCEPT**

**Biomes are land-based, global communities of organisms.**

**VOCABULARY**

canopy	coniferous
grassland	taiga
desert	tundra
deciduous	chaparral

**MAIN IDEA:** Earth has six major biomes.

Fill in the chart with details about the six major biomes found on Earth.

Biome	Description
1. tropical rain forest	
2. grassland	
3. desert	
4. temperate	
5. taiga	
6. tundra	

**7.** What is the difference between tropical and temperate grasslands?

**8.** What are the four different types of deserts?

## STUDY GUIDE, CONTINUED

9. How does precipitation differ in a temperate deciduous forest and a temperate rain forest?

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10. Why do few plants grow in the tundra?

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11. Describe the main characteristics of chaparral.

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**MAIN IDEA: Polar ice caps and mountains are not considered biomes.**

12. Why aren't polar ice caps and mountains considered biomes?

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13. Where are the polar ice caps located?

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14. What is a mountain life zone?

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**Vocabulary Check**

15. I lose my leaves in the autumn. I am a \_\_\_\_\_.

16. I retain my needles all year long. I am a \_\_\_\_\_.

17. I am the uppermost branches of a tree. I am called the \_\_\_\_\_.