

**Assess Your Understanding**

# Living Things and the Environment

## What Does an Organism Get From Its Environment?

**got it?** .....

I get it! Now I know that an organism's environment provides \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

I need extra help with \_\_\_\_\_  
\_\_\_\_\_

## What Are the Two Parts of an Organism's Habitat?

**1a. INTERPRET DIAGRAMS** List two biotic and two abiotic factors in Figure 2.

**BIOTIC**

**ABIOTIC**

\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

**b. DRAW CONCLUSIONS** Name two biotic factors in your habitat and explain you your life would be different without them.

**FACTOR**

**AFFECT**

\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

**got it?** .....

I get it! Now I know that the two parts of an organism's habitat are \_\_\_\_\_  
\_\_\_\_\_


I need extra help with \_\_\_\_\_  
\_\_\_\_\_

**Assess Your Understanding**

# Living Things and the Environment

## How Is an Ecosystem Organized?

2a. CLASSIFY All of the different kinds of organisms in a forest are a (community/population).

b. ANSWER  How do living things affect one another?

**got it?** .....

I get it! Now I know that ecosystems are organized into \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

I need extra help with \_\_\_\_\_

\_\_\_\_\_

**Review and Reinforce**

# Living Things and the Environment

## Understanding Main Ideas

Answer the following questions in the spaces provided.

1. What is ecology?

\_\_\_\_\_  
\_\_\_\_\_

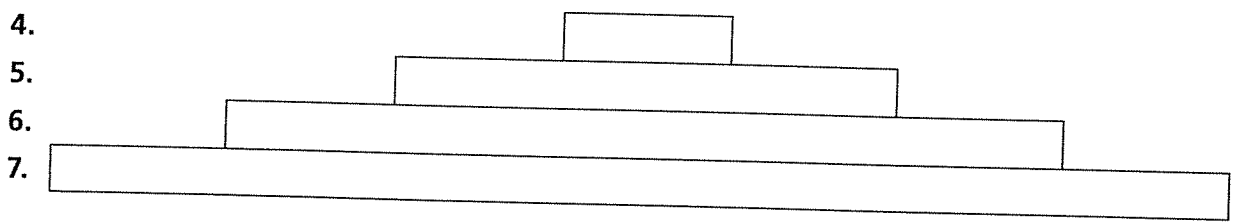
2. Name four abiotic factors found in a prairie ecosystem.

\_\_\_\_\_  
\_\_\_\_\_

3. Name three populations found in a prairie ecosystem.

\_\_\_\_\_

Complete the table to show the levels of organization in an ecosystem. Start with the smallest unit.



## Building Vocabulary

Fill in the blank to complete each statement.

- 8. An environment that provides the things a specific organism needs to live, grow, and reproduce is its \_\_\_\_\_.
- 9. All the living and nonliving things that interact in a particular area make up a(n) \_\_\_\_\_.
- 10. The parts of an organism's environment that are living or once living, and interact with the organism are \_\_\_\_\_.
- 11. All the different populations that live together in an area make up a(n) \_\_\_\_\_.

Place the outside corner, the corner away from the dotted line, in the corner of your copy machine to copy onto letter-size paper.

## Lesson Quiz

# I Living Things and the Environment

Write the letter of the correct answer on the line at the left.

- |  |   |
|--|---|
| <p>1. ___ Which of the following lives in a prairie ecosystem?</p> <p>A grass</p> <p>B mushroom</p> <p>C oak tree</p> <p>D woodpecker</p>  | <p>2. ___ Which of the following is a biotic factor?</p> <p>A temperature</p> <p>B sunlight</p> <p>C bacteria</p> <p>D water</p>  |
| <p>3. ___ Which of the following lists the levels of an ecosystem in order from largest to smallest?</p> <p>A population, organism, community, ecosystem</p> <p>B ecosystem, community, organism, population</p> <p>C organism, community, population, ecosystem</p> <p>D ecosystem, community, population, organism</p> | <p>4. ___ An organism gets food, water, shelter, and other things it needs to live, grow, and reproduce from its</p> <p>A population</p> <p>B habitat</p> <p>C abiotic factors</p> <p>D species</p> |

If the statement is true, write *true*. If the statement is false, change the underlined word or words to make the statement true.

5. \_\_\_\_\_ The nonliving things that interact with an organism are called biotic factors.
6. \_\_\_\_\_ The study of how living things interact with each other and their environment is called ecology.
7. \_\_\_\_\_ A group of organisms that can mate with each other and produce offspring that can also mate and reproduce is called a species.
8. \_\_\_\_\_ Oxygen is an abiotic factor in the environment that is important for plants to make their own food.
9. \_\_\_\_\_ All the organisms that live in a particular area and their nonliving surroundings make up an ecosystem.
10. \_\_\_\_\_ All the members of one community living in a particular area make up a population.

**Assess Your Understanding**

# Populations

## How Do Populations Change in Size?

- 1a. **REVIEW** Two ways to join a population are \_\_\_\_\_ and \_\_\_\_\_. Two ways to leave a population are \_\_\_\_\_ and \_\_\_\_\_.
- 1b. **CALCULATE** Suppose a population of 8 wolves has produced 20 young in a year. If 7 wolves have died, how many wolves are in the population now? (Assume no wolves have moved into or out of the population for other reasons.)  
\_\_\_\_\_

**got it?** .....

- I get it! Now I know that population size changes due to \_\_\_\_\_  
\_\_\_\_\_
- I need extra help with \_\_\_\_\_  
\_\_\_\_\_

## What Factors Limit Population Growth?

- 2a. **SUMMARIZE** When the climate changes or there is not enough \_\_\_\_\_ or \_\_\_\_\_ or \_\_\_\_\_, a population can (begin/stop) growing in size.
- 2b. **RELATE CAUSE AND EFFECT** Choose a limiting factor and describe the factor's effect on population growth.

**got it?** .....

- I get it! Now I know that populations can be limited when \_\_\_\_\_  
\_\_\_\_\_
- I need extra help with \_\_\_\_\_  
\_\_\_\_\_

Place the outside corner, the corner away from the dotted line, in the corner of your copy machine to copy onto letter-size paper.

**Review and Reinforce**

# Populations

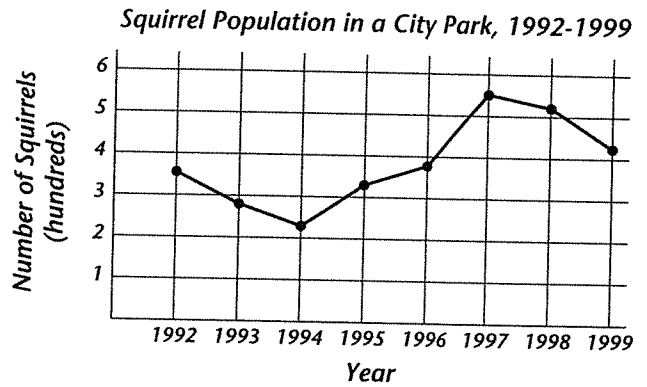
**Understanding Main Ideas**

Answer the following questions on a separate sheet of paper.

1. A vegetable garden is 12 meters long by 7 meters wide. It is home to 168 mice. What is the population density of the mice?
2. What are two ways that the size of a population can increase? What are two ways that the size of a population can decrease?
3. Identify three limiting factors that can prevent a population from increasing. Explain how each factor limits a population's size.

The line graph below shows how the size of the squirrel population in a city park changed over time. Use the line graph to answer questions 4–6.

4. Over which time period(s) did the squirrel population increase?
5. Over which time period(s) did the squirrel population decrease?
6. In which year did the population reach its lowest point? What was the size of the population that year?



**Building Vocabulary**

Fill in the blank to complete each statement.

7. Moving into a population is called \_\_\_\_\_.
8. Moving out of a population is called \_\_\_\_\_.
9. The largest \_\_\_\_\_ an area can support is called the carrying capacity.
10. The number of individuals that die in a population in a certain time period is the \_\_\_\_\_.

Place the outside corner, the corner away from the dotted line, in the corner of your copy machine to copy onto letter-size paper.

## Lesson Quiz

# Populations

If the statement is true, write *true*. If the statement is false, change the underlined word or words to make the statement true.

- \_\_\_\_\_ The size of a population increases if the number of individuals added to the population is equal to the number of individuals leaving the population.
- \_\_\_\_\_ Immigration means moving out of a population.
- \_\_\_\_\_ Three coyotes per square kilometer is an example of population density.
- \_\_\_\_\_ If foxes arrive in an area and catch and eat a large number of rabbits, the foxes are causing an increase in the birth rate of the rabbit population.
- \_\_\_\_\_ Sunlight can be a limiting factor for populations of plants.

Fill in the blank to complete each statement.

- Water and food are examples of \_\_\_\_\_ for populations.
- If an area has all the wolves that it can support, the wolf population has reached its \_\_\_\_\_.
- A population can decrease due to deaths or \_\_\_\_\_.
- If animals cannot find enough places to build nests, it is because \_\_\_\_\_ is a limiting factor for the population.
- A flood that covers a meadow and drowns animals and a late frost that kills young plants are examples of how \_\_\_\_\_ can affect the size of a population.

**Assess Your Understanding**

# Interactions Among Living Things

## How Do Adaptations Help an Organism Survive?

- 1a. **DEFINE** Adaptations are the \_\_\_\_\_ and \_\_\_\_\_ characteristics that allow organisms to live successfully in their environments.
- b. **EXPLAIN** How are a snake's sharp fangs an adaptation that help it survive in the saguaro community?

**got it?**.....

- I get it! Now I know that adaptations are \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
- I need extra help with \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

## What Are Competition and Predation?

- 2a. **REVIEW** Two main ways in which organisms interact are \_\_\_\_\_ and \_\_\_\_\_.
- b. **DESCRIBE** Give an example of competition. Explain your answer.  
\_\_\_\_\_  
\_\_\_\_\_
- c. **APPLY CONCEPTS** Owls often prey on mice. What adaptations do you think the mice have that help them avoid becoming prey?  
\_\_\_\_\_  
\_\_\_\_\_

**got it?**.....

- I get it! Now I know that competition and predation \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
- I need extra help with \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



**Assess Your Understanding**

# Interactions Among Living Things

**What Are the Three Types of Symbiosis?**

3a. **IDENTIFY** The three types of symbiosis are \_\_\_\_\_,  
\_\_\_\_\_, and \_\_\_\_\_.

b. **CLASSIFY** Microscopic mites lie at the base of human eyelashes, where they feed on tiny bits of dead skin. What type of symbiosis could this be? Explain your answer.

\_\_\_\_\_  
\_\_\_\_\_

c. **COMPARE AND CONTRAST** Name each type of symbiosis and explain how the two species are affected.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**got it?** .....

I get it! Now I know that the three types of symbiosis differ in \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

I need extra help with \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

## Review and Reinforce

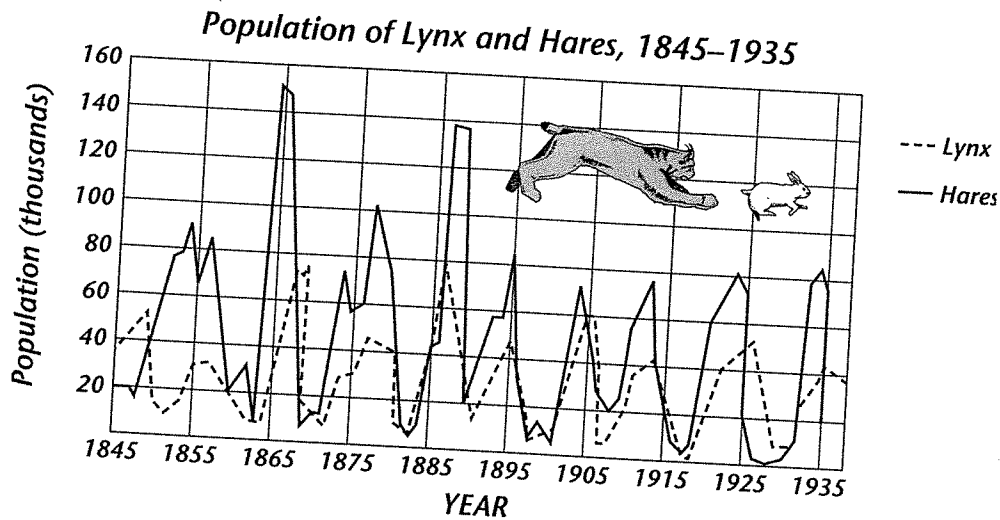
# Interactions Among Living Things

### Understanding Main Ideas

Answer the following questions on a separate sheet of paper.

1. How does natural selection result in adaptations in a species?
2. What is an organism's niche?
3. How do adaptations help an organism to reduce competition for food and other resources?

The line graph below shows how the populations of lynx and snowshoe hares has changed over time. Use the line graph to answer questions 4–6.



4. When the hare population increased, what happened to the lynx population. Why?
5. How do you think an increase in the lynx population affected the hare population? Why?
6. What other factors could have caused a decrease in the hare population?

### Building Vocabulary

On a separate sheet of paper, write a definition for each of these terms.

7. predator
8. competition
9. symbiosis

## Lesson Quiz

# Interactions Among Living Things

If the statement is true, write *true*. If the statement is false, change the underlined word or words to make the statement true.

1. \_\_\_\_\_ In natural selection, individuals whose unique characteristics are well-suited for an environment tend to survive and produce more offspring.
2. \_\_\_\_\_ Adaptations are behaviors and social characteristics that allow organisms to live successfully in their environments.
3. \_\_\_\_\_ A grackle and a sparrow try to eat from the same ear of corn in a field. This is an example of mutualism.
4. \_\_\_\_\_ The two main kinds of interactions among organisms are competition and adaptation.
5. \_\_\_\_\_ An increase in a predator population will likely result in a decrease in the prey population.
6. \_\_\_\_\_ Dwarf mistletoe is a plant that grows into the bark of a tree to obtain water and nutrients. The mistletoe is a parasite.

Write the letter of the correct answer on the line at the left.

- |  |  |
|--|--|
| <p>7. ___ When a snake kills a shrew, the shrew is the</p> <p>A host</p> <p>B prey</p> <p>C predator</p> <p>D parasite</p>   | <p>8. ___ The role of an organism in its habitat is its</p> <p>A host</p> <p>B prey</p> <p>C niche</p> <p>D adaptation</p>   |
| <p>9. ___ An example of an adaptation that helps a prey species avoid being caught is</p> <p>A claws</p> <p>B mimicry</p> <p>C sharp teeth</p> <p>D poisonous stingers</p> | <p>10. ___ A relationship in which two species live closely together and both benefit is</p> <p>A mutualism</p> <p>B predation</p> <p>C parasitism</p> <p>D commensalism</p> |

**Assess Your Understanding**

# Changes in Communities

## How Do Primary and Secondary Succession Differ?

1a. **DEFINE** During succession, pioneer species are the \_\_\_\_\_ species to populate an area. They are carried to an area by \_\_\_\_\_ and \_\_\_\_\_.

b. **OBSERVE** Grass poking through a crack in a sidewalk is an example of succession. Is it primary or secondary succession?

\_\_\_\_\_  
\_\_\_\_\_

c. **CHALLENGE** Why are the changes during succession predictable?

\_\_\_\_\_  
\_\_\_\_\_

**got it?** .....

I get it! Now I know that primary and secondary succession differ in \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

I need extra help with \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

Printed on recycled paper. Copy machine to copy onto letter-size paper.

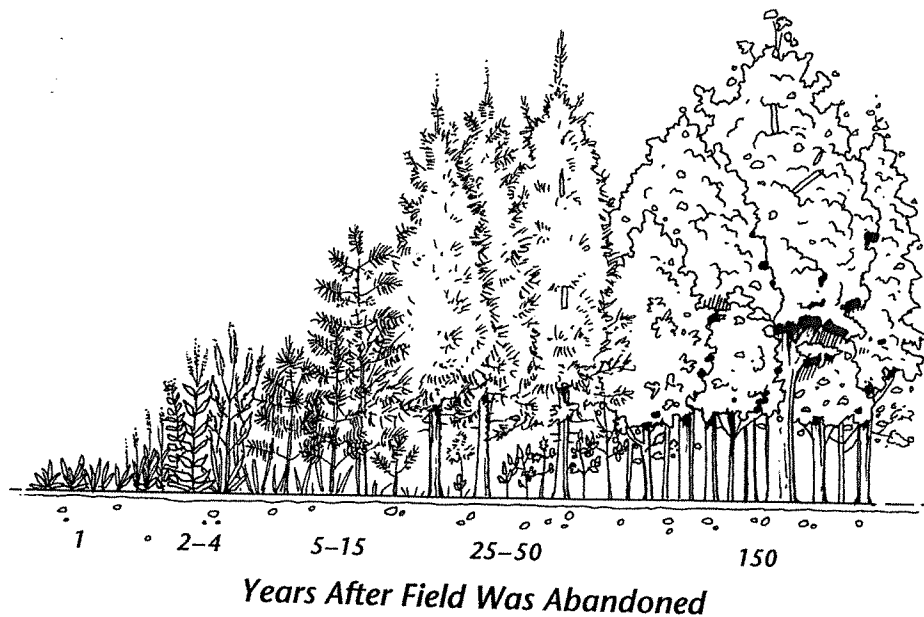
## Review and Reinforce

# Changes in Communities

### Understanding Main Ideas

Answer the following questions on a separate sheet of paper.

1. What organisms are usually the pioneer species in a new area? How do these organisms prepare the area for other species?
2. The illustration below shows succession in an abandoned field. How did the plant populations in the community change over time?



### Building Vocabulary

Identify each of the following as an example of primary succession or secondary succession. Write your answers in the spaces provided.

3. An old house was torn down. Small weeds and grasses grew in the vacant lot. Over the next few years, bushes and tree seedlings began to grow.  
\_\_\_\_\_
4. An undersea volcano erupted and formed a small island. Mosses and lichens began to grow on the bare volcanic rock.  
\_\_\_\_\_

## Lesson Quiz

# Changes in Communities

Fill in the blank to complete each statement.

1. Pioneer species break down rocks, forming the beginning of \_\_\_\_\_.
2. Two examples of pioneer species are \_\_\_\_\_ and lichens.
3. A lichen is a symbiotic combination of \_\_\_\_\_ and algae.
4. A forest fire is followed by \_\_\_\_\_ succession.
5. The series of changes that occur in an area where no soil or organisms exist is called \_\_\_\_\_ succession.

If the statement is true, write *true*. If the statement is false, change the underlined word or words to make the statement true.

6. \_\_\_\_\_ After a long time, a mature community is established and this community does not change unless it is disturbed.
7. \_\_\_\_\_ The first species to populate an area are called primary species.
8. \_\_\_\_\_ Unlike primary succession, secondary succession occurs in a place where an ecosystem currently exists.
9. \_\_\_\_\_ Secondary succession is usually slower than primary succession.
10. \_\_\_\_\_ Natural disturbances that lead to succession include fires, hurricanes, and tornadoes.