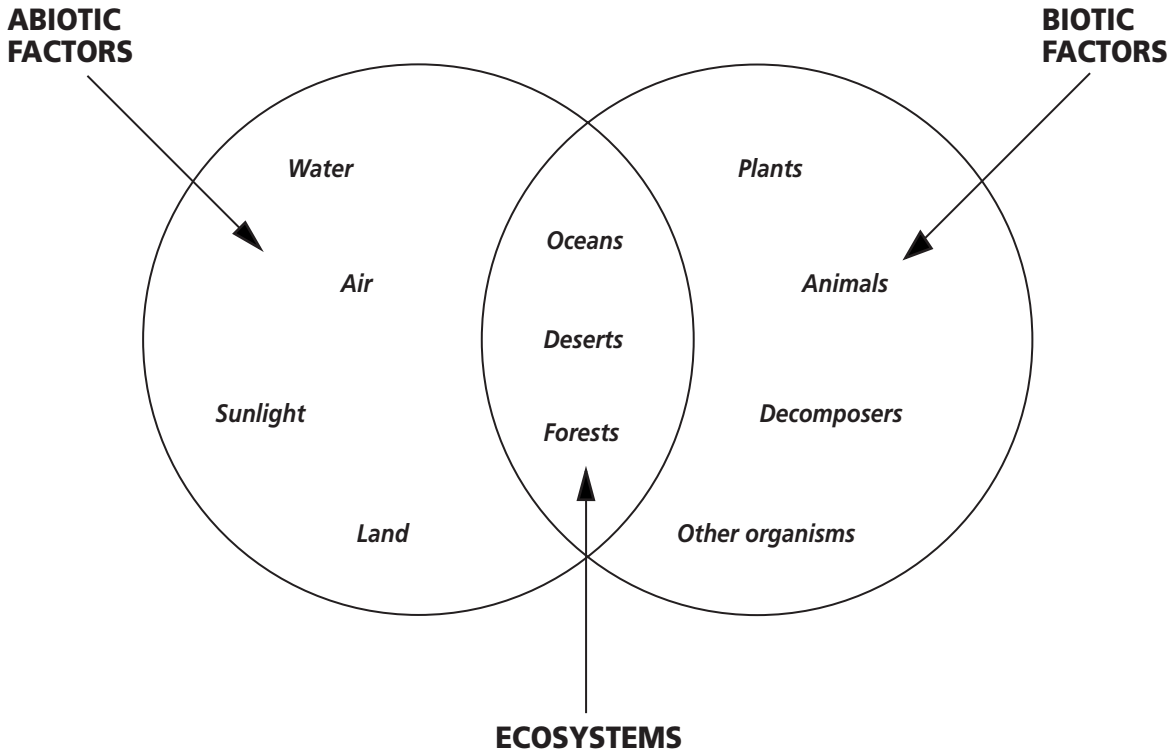
Content Mastery

Chapter 2 Principles of Ecology

Get the Big Picture



Ecology is the study of interactions between the biotic factors and abiotic factors on Earth. Biotic factors are all living things. Abiotic factors are all nonliving things. An ecosystem is all the interactions between the biotic factors and abiotic factors in a certain place.

Use the diagram to answer the following questions.

1. What things make up the biotic factors on Earth? Give examples.

_____

2. What things make up the abiotic factors on Earth? Give examples.

_____

3. What is an ecosystem? Give examples.

_____

_____

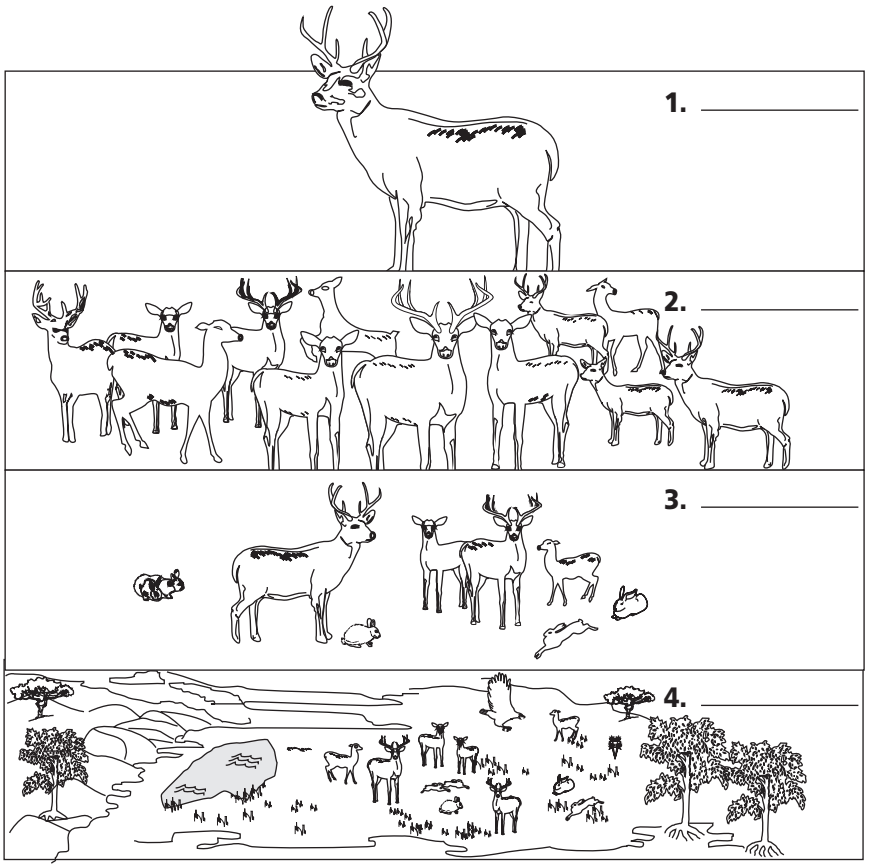
4. During the carbon cycle, plants take in carbon dioxide gas from the air and use it to make food. So the carbon cycle involves the air and plants. Where on the diagram does the carbon cycle belong?

_____

_____

Study the Pictures

Label each drawing with one of these words: community, ecosystem, organism, population.



1. Define a **population**. Give an example of a population of animals from the drawings above.

2. Define a **community**. Give an example of a community from the drawings above.

3. Define an **ecosystem**. Give an example of an ecosystem from the drawings above.

Review the Vocabulary

abiotic factors (ahy bi YAH tihk)	autotroph
biosphere (BI o sfeer)	biotic factors (bi YAH tihk)
commensalism (kuh MEN suh liz um)	community
decomposer	ecology (ih KAH luh jee)
ecosystem (EE khy sihs tum)	food chain
food web	habitat
heterotroph (HET uh ruh trohfs)	mutualism (MYEW chuh lih zum)
niche (NIHCH)	parasitism (PAYR uh sih tih zum)
population	scavengers
symbiosis (sihm bee OH sus)	trophic level (TROH fihk)

Fill in the blank in each sentence below with the correct word from the list above. You will not use all the words.

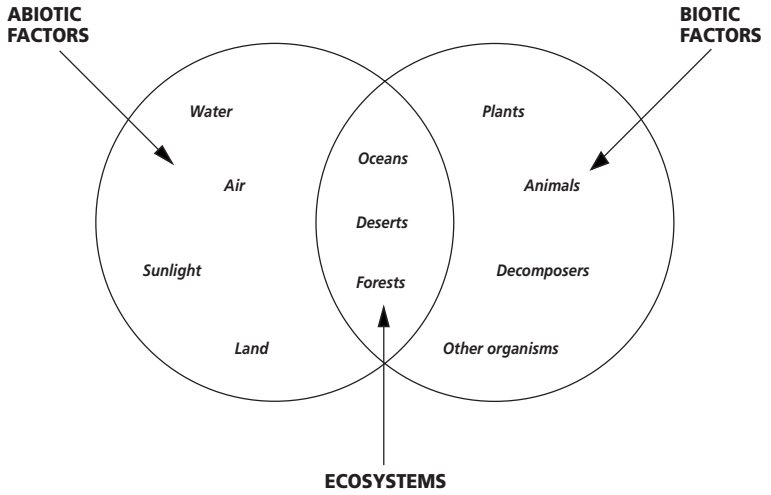
1. An organism's _____ is the place where it lives out its life.
2. Vultures are _____ because they eat animals that are already dead.
3. The role a species has in its environment is called its _____ .
4. The study of interactions among organisms and their environments is called _____ .
5. A _____ is a group of organisms of one species that mate with one another and live in the same place at the same time.
6. An _____ uses the energy from the sun or energy stored in chemical compounds to make its own food.
7. The portion of Earth that supports life is called the _____ .
8. A _____ is a group of populations that interact with one another.
9. An organism that feeds on other organisms is called a _____ .
10. A relationship between two organisms in which one organism benefits while the other organism is harmed is called _____ .
11. A _____ breaks down and absorbs nutrients from dead organisms.
12. The nonliving parts of an organism's environment are _____ .

Name Date Class

Chapter 2 **Principles of Ecology**

Content Mastery

Get the Big Picture



Ecology is the study of interactions between the biotic factors and abiotic factors on Earth. Biotic factors are all living things. Abiotic factors are all nonliving things. An ecosystem is all the interactions between the biotic factors and abiotic factors in a certain place.

Use the diagram to answer the following questions.

1. What things make up the biotic factors on Earth? Give examples.
   Biotic factors are all living things, such as plants, animals, and decomposers.
2. What things make up the abiotic factors on Earth? Give examples.
   Abiotic factors are all nonliving things, such as air, water, sunlight, and land.
3. What is an ecosystem? Give examples.
   An ecosystem is the interactions between the biotic factors and abiotic factors in a certain place. Deserts, oceans, and forests are examples of ecosystems.
4. During the carbon cycle, plants take in carbon dioxide gas from the air and use it to make food. So the carbon cycle involves the air and plants. Where on the diagram does the carbon cycle belong?
   in the section labeled Ecosystems

Name Date Class

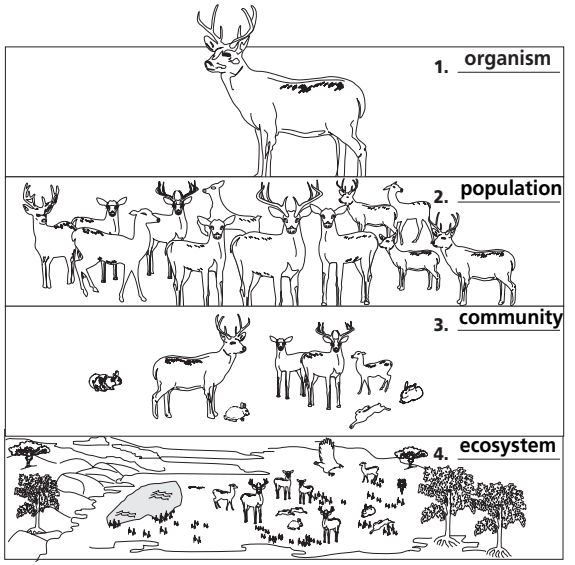
Chapter 2 **Principles of Ecology,** *continued*

Content Mastery

Section 2.1 Organisms and Their Environment

Study the Pictures

Label each drawing with one of these words: community, ecosystem, organism, population.



1. Define a **population**. Give an example of a population of animals from the drawings above.
   A population is a group of organisms that mate with one another and live in the same place at the same time. Sample answer: The deer are a population.
2. Define a **community**. Give an example of a community from the drawings above.
   A community is made up of populations that interact with each other. Sample answer: The rabbits and hawk are part of a community.
3. Define an **ecosystem**. Give an example of an ecosystem from the drawings above.
   An ecosystem is made up of the populations in a community and their nonliving surroundings. Sample answer: The deer, rabbit, and plant populations that live in the meadow and the lake, air, and rocks are part of an ecosystem.

Name Date Class

Review the Vocabulary

abiotic factors (ahy bi YAH tihk)	autotroph
biosphere (BI o sfeer)	biotic factors (bi YAH tihk)
commensalism (kuh MEN suh liz um)	community
decomposer	ecology (ih KAH luh jee)
ecosystem (EE khy sihs tum)	food chain
food web	habitat
heterotroph (HET uh ruh trohfs)	mutualism (MYEW chuh lih zum)
niche (NIHCH)	parasitism (PAYR uh sih tih zum)
population	scavengers
symbiosis (sihm bee OH sus)	trophic level (TROH fihk)

Fill in the blank in each sentence below with the correct word from the list above. You will not use all the words.

1. An organism's _____habitat_____ is the place where it lives out its life.
2. Vultures are _____scavengers_____ because they eat animals that are already dead.
3. The role a species has in its environment is called its _____niche_____ .
4. The study of interactions among organisms and their environments is called _____ecology_____ .
5. A _____population_____ is a group of organisms of one species that mate with one another and live in the same place at the same time.
6. An _____autotroph_____ uses the energy from the sun or energy stored in chemical compounds to make its own food.
7. The portion of Earth that supports life is called the _____biosphere_____ .
8. A _____community_____ is a group of populations that interact with one another.
9. An organism that feeds on other organisms is called a _____heterotroph_____ .
10. A relationship between two organisms in which one organism benefits while the other organism is harmed is called _____parasitism_____ .
11. A _____decomposer_____ breaks down and absorbs nutrients from dead organisms.
12. The nonliving parts of an organism's environment are _____abiotic factors_____ .