LESSON 21 | What are some other characteristics of an ecosystem?

If someone asked you where you live, how would you answer? The place where an organism lives is its **habitat** [HAB-i-tat]. A habitat is a special place. It provides all of an organism's needs, like food and air. It provides an organism with shelter. It also provides a place to reproduce. Sometimes, different species share the same habitat. For example, insects and mushrooms may share the same rotting log. Birds, squirrels, and insects might live in the same tree.

Now suppose someone asked what your role or job in life is. You would probably say that you are a student. Being a student is the job or role that you do where you live. Organisms also have jobs and roles in their communities. The job of a living thing is called its **niche** [NICH].

Living things may have the same habitat but they do not have the same niche. For example, tigers and deer both share a habitat in Asia. But while tigers chase and eat deer—deer eat grasses. They do not have the same role.

Although the tigers and deer in Asia have different roles, they are related by how they get their food. Each ecosystem is made up of different kinds of organisms.

Some are **producers**. Producers can make their own food. On land, the main producers are plants. In lakes and oceans, algae are the main producers.

Others are **consumers** [kun-SOO-murs]. Consumers get food by eating other organisms. Some consumers eat only plants. Others eat meat, or other animals. And some, like you, eat both plants and animals.

Some animals feed upon dead animals. They eat animals that have died or that have been killed by other animals. For example, vultures eat dead animals.

Bacteria break down the wastes or remains of organisms. They are **decomposers** [dee-kum-POHZ-ers]. Decomposers return materials from dead organisms to the soil.

FOOD CHAINS

Living things depend upon each other for food. Every living thing is a link in a food chain. A food chain shows the order in which living things feed upon other living things.

Look at Figure A. It shows a food chain. The arrows in the food chain show the direction that food moves along the chain.

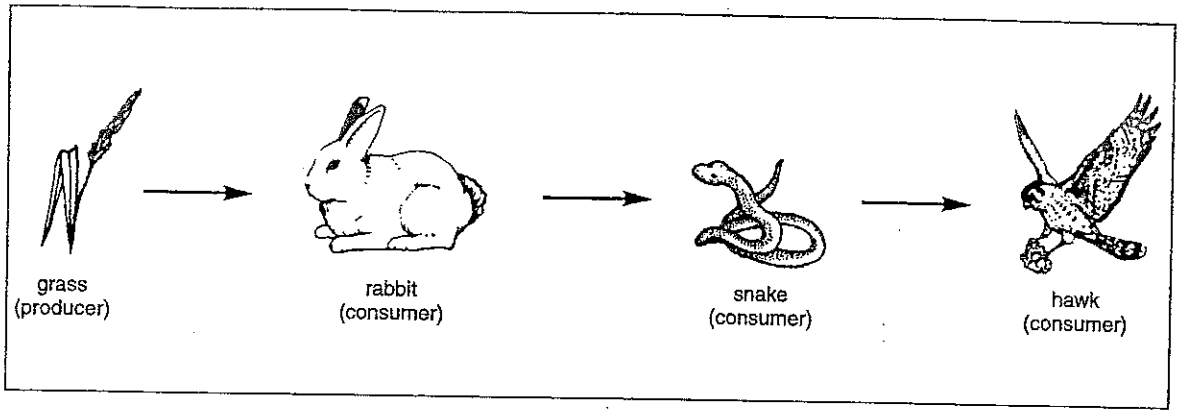


Figure A

Not all organisms eat the same kinds of food. Therefore, there are many different food chains. But, all food chains begin with PRODUCERS.

WHY?

Producers are the only organisms that can make their own food, using energy from the sun.

Why is the sun the source of energy in an ecosystem? _____

_____

_____

_____

FINDING THE MISSING LINKS IN FOOD CHAINS

Six food chains are shown below. One link has been left out of each chain. Identify the organism that is missing. Write your answers in the proper spaces below. Some blank spaces have more than one answer.

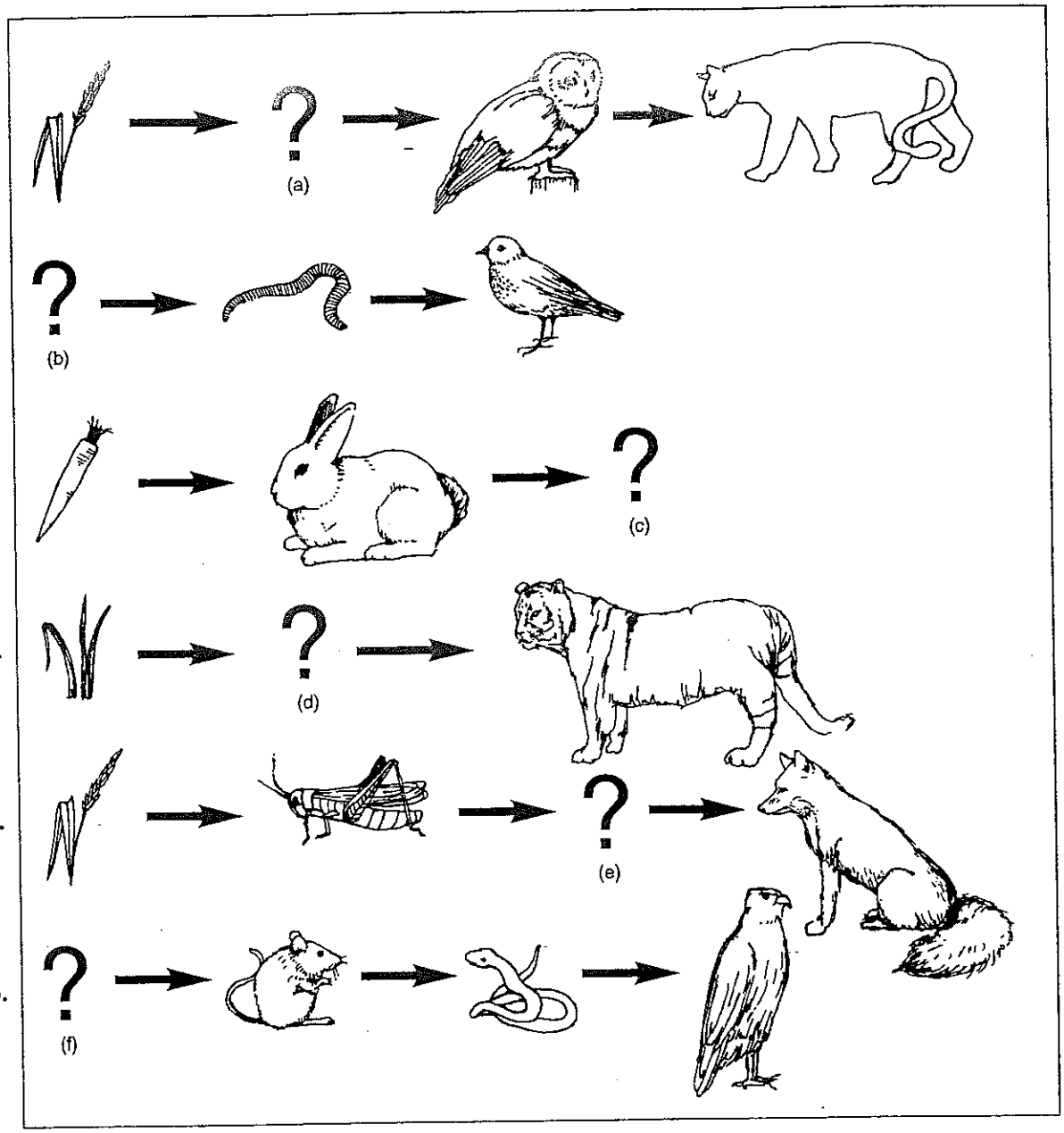


Figure B

1. a. _____
2. b. _____
3. c. _____
4. d. _____
5. e. _____
6. f. _____

FOOD WEBS

You have just learned that food chains show food relationships. However, in nature, many food chains combine and overlap. They form a food web. A food web is a more complete way of showing food relationships. A food web shows how a number of food chains are related.

Look at the food web in Figure C. Then answer the questions.

1. What is the diagram shown called?

   _____

2. What does the diagram show?

   _____

3. What does a rabbit eat? _____

4. What organisms do wolves eat?

   _____

5. Which organism is the producer?

   _____

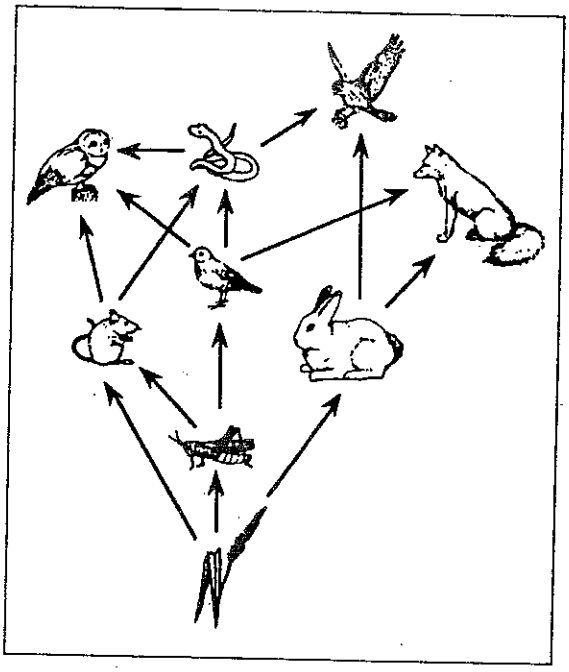


Figure C

MAKE YOUR OWN FOOD CHAIN

In the space provided, draw one of the food chains shown in the diagram above.

COMPLETE THE CHART

*Classify each description as a **habitat** or **niche** by checking the correct column.*

Habitat and Niche			
	Description	**Habitat**	**Niche**
1.	Eaten by fish		
2.	Under rocks		
3.	Hole in a tree		
4.	Eat mice		
5.	Nest on a tree branch		
6.	Eat seeds and fruit		
7.	Log		
8.	Jungle		
9.	Shared by organisms		
10.	Not shared by organisms		

MATCHING

Match each term in Column A with its description in Column B. Write the correct letter in the space provided.

	Column A	**Column B**
_____	1. plants	a) organism that makes its own food
_____	2. producer	b) animal that feeds on other animals
_____	3. decomposer	c) bird that eats dead animals
_____	4. consumer	d) organism that breaks down the wastes or remains of other organisms
_____	5. vulture	e) main producers on land
_____	6. algae	f) main producers in lakes and oceans

COMPLETE THE CHART

Classify each organism listed in the table as a producer, consumer, or decomposer. Place a check mark in the correct column.

	Organism	Producer	Consumer	Decomposer
1.	Seaweed			
2.	Duck			
3.	Hawk			
4.	Ants			
5.	Bacteria			
6.	People			
7.	Rabbits			
8.	Grass			
9.	Apple Tree			
10.	Bees			
11.	Earthworm			
12.	Beetle			

FILL IN THE BLANK

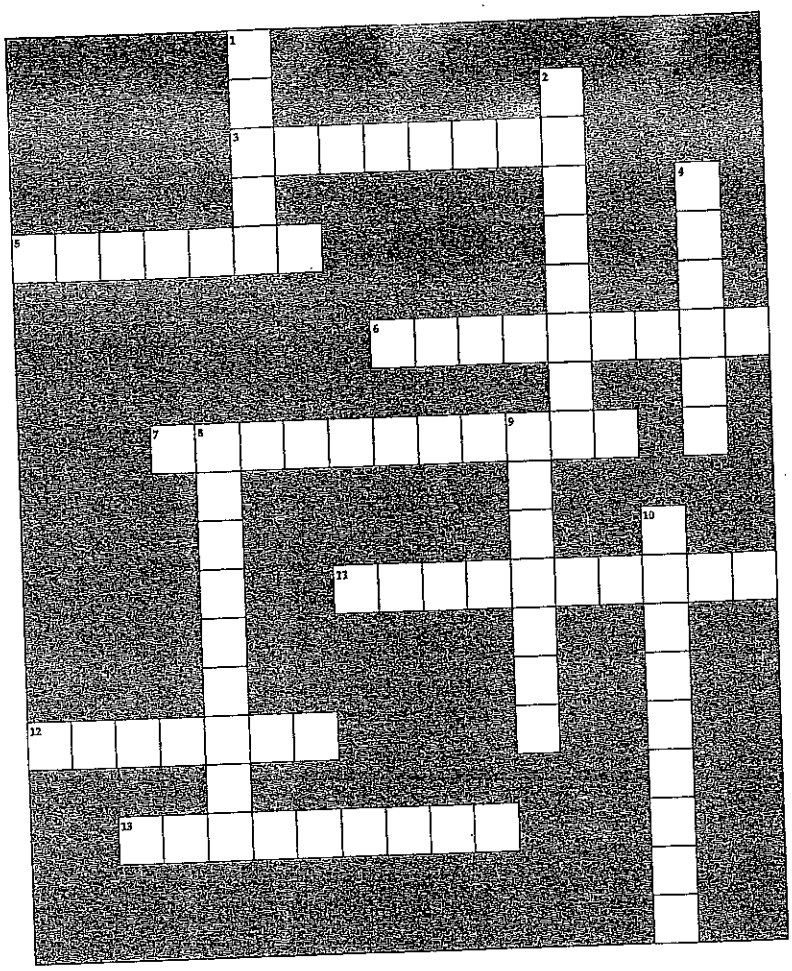
Complete each statement using a term or terms from the list below. Write your answers in the spaces provided.

niche
sun
webs
soil
food

1. A producer can make its own _____.
2. The _____ is the source of energy for an ecosystem.
3. Food chains combine to form food _____.
4. The role of an organism is called its _____.
5. A decomposer returns materials from dead organisms to the _____.

CROSSWORD PUZZLE

Use the clues to complete the crossword puzzle.



CLUES

ACROSS

3. organism that gets food by eating other organisms
5. combining and overlapping of many food chains
6. model of the flow of energy through an ecosystem
7. organism that feeds on dead organisms
11. all the members of one species that live in the same area
12. place where an organism lives
13. all the organisms living in a certain area

DOWN

1. an organism's role in its environment
2. organism that makes its own food
4. not dead
8. all the living and nonliving parts of an environment
9. study of the relationship between living things and their environment
10. thin zone of the earth that supports all life