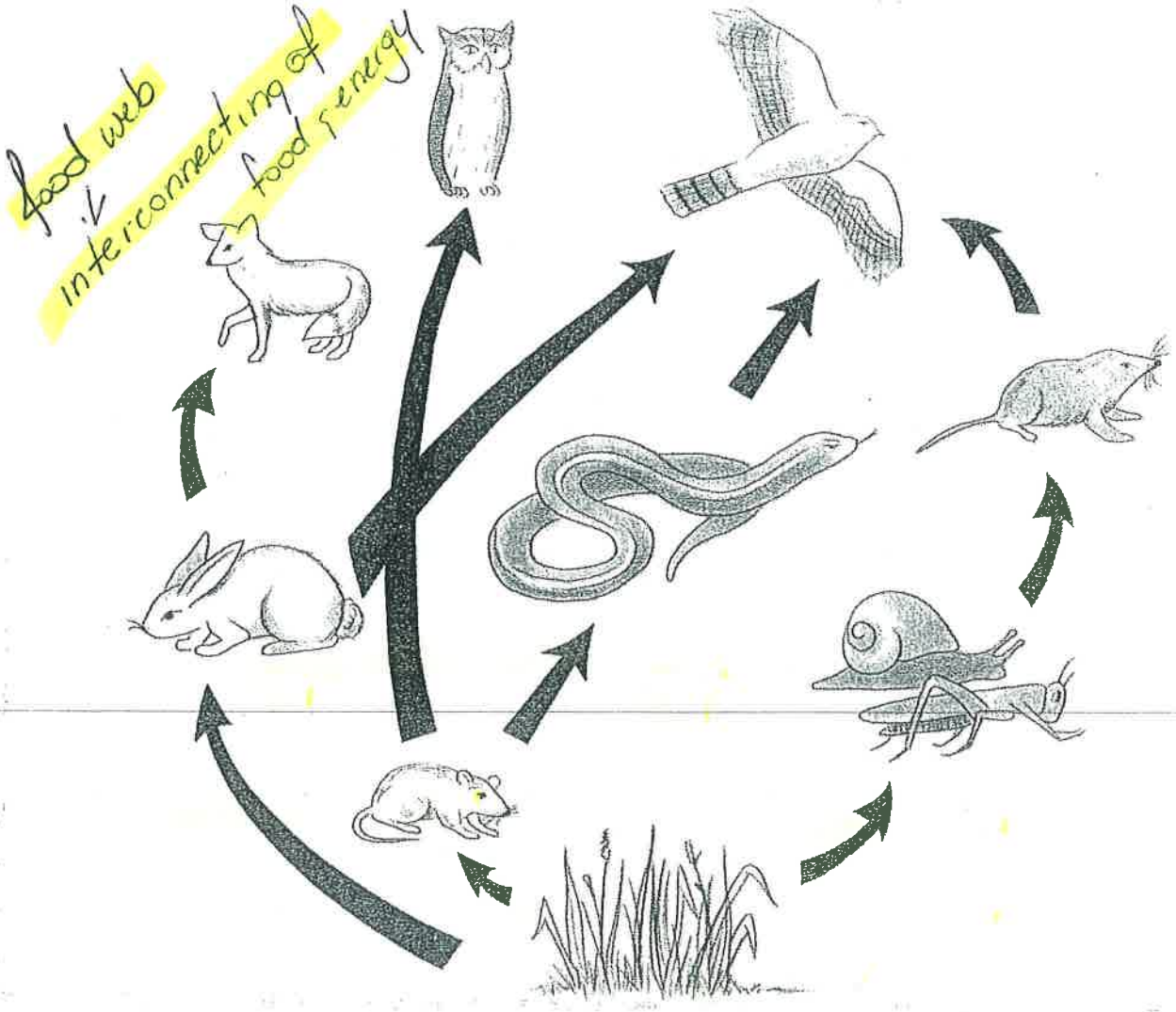
What are some other characteristics of an ecosystem?



food web = interconnecting of food & energy

KEY TERMS

habitat: place where an organism lives within their environment/biome

niche: an organism's role, or job, in its environment

producers: organisms that can make their own food P = producers = plants = photosynth

consumers: organisms that get food by eating other organisms = 3 types

decomposers: organisms that feed on dead organisms

1st part of food chain/web

*1st order consumers
*Primary Consumer
eat plants
PC = plant consumer
*herbivore / omnivore

2nd order
Secondary Consumer
eat the PC & can be
omnivore or carnivore

*3rd order
*Tertiary Consumer
top consumer
omnivore *carnivore*

3 order

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.

herbivore → eat plants

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.

omnivore → eat plants & animals

carnivore → eat just 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. scavengers

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. ex: mold

ecology → the study of the relationship b/t living things and their environment

ecosystem → all living and nonliving parts of an environment

population → all members of one species that live in the same area

community → all the organisms living in a certain area

Biosphere → thin zone of the Earth that supports life.

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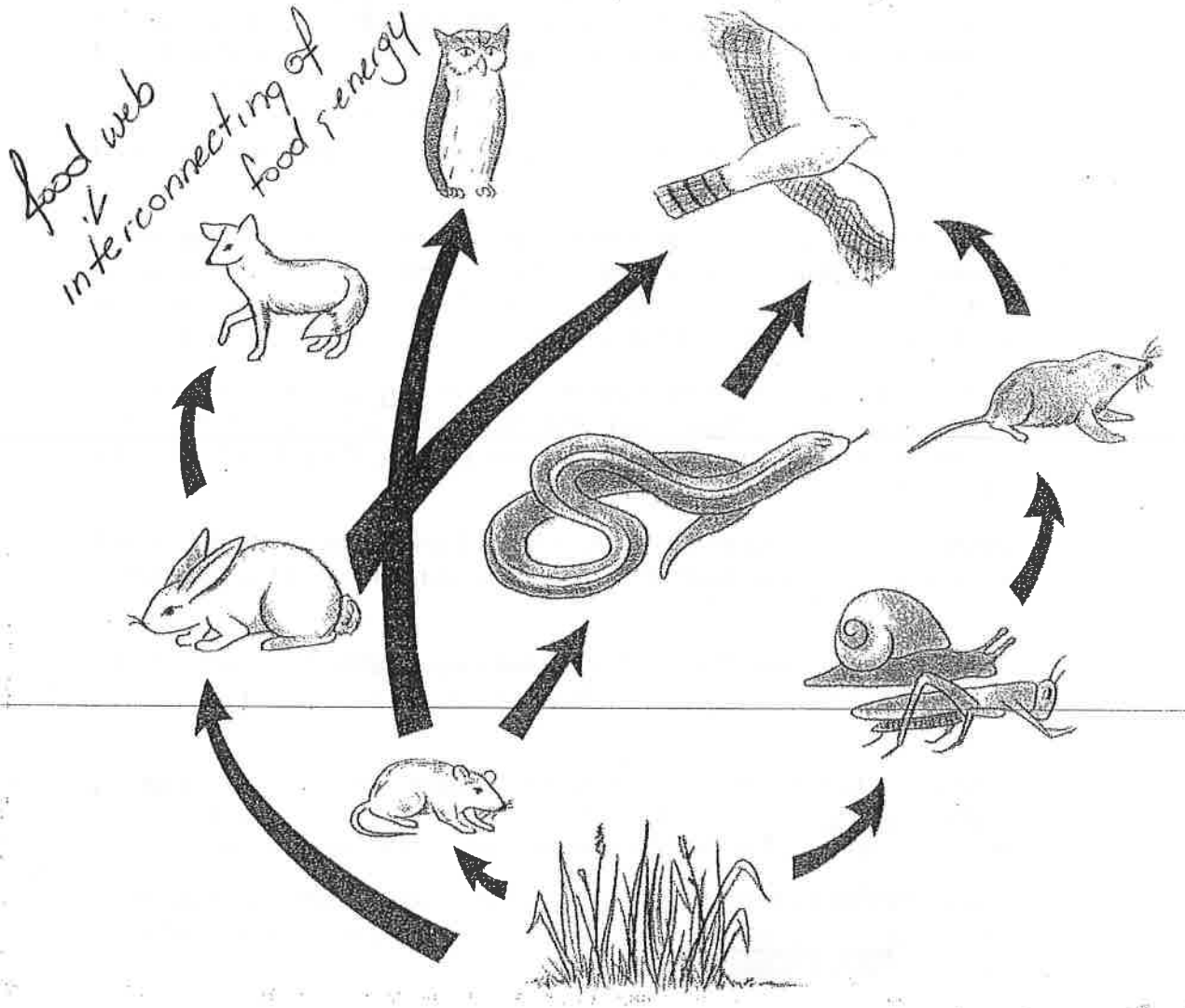
21

What are some other characteristics of an ecosystem?



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Links make 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.

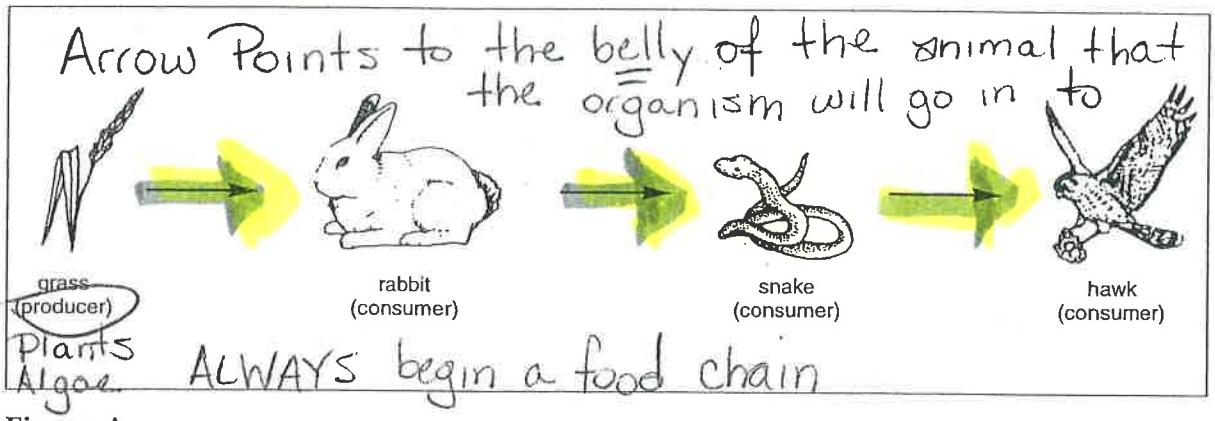

Figure A

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. Photosynthesis is the way plants/ algae make their own food

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

Plants need the sun to PRODUCE their food and every food chain begins with plants (algae)!

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.

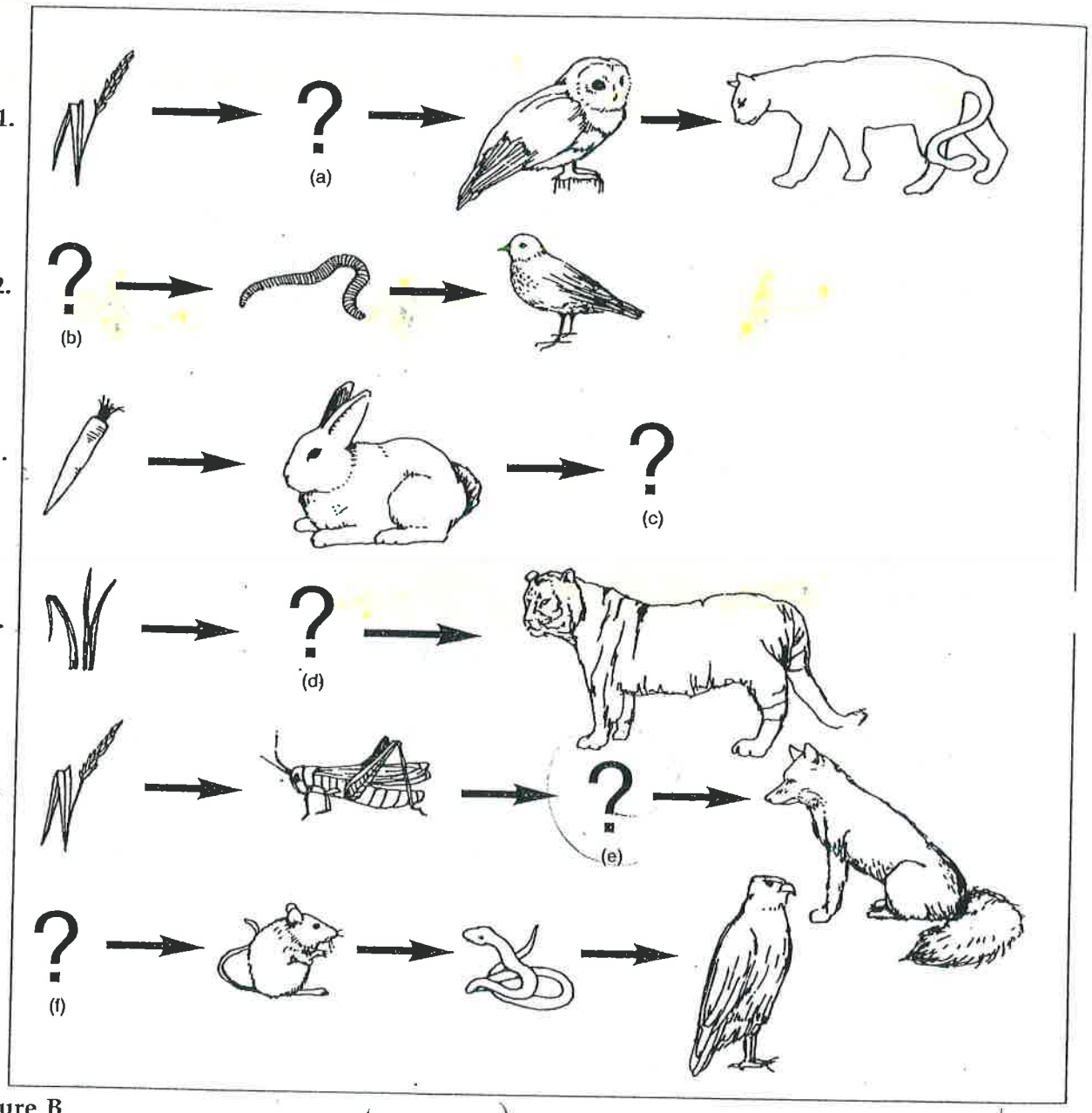

Figure B

1. a. mouse (herbivore/omnivore Consumer)
2. b. grass (Plant/algae producer)
3. c. Snake (Carnivore/omnivore consumer)
4. d. gazelle (herbivore/omnivore consumer)
5. e. bird (carnivore/omnivore consumer)
6. f. grass (producer)

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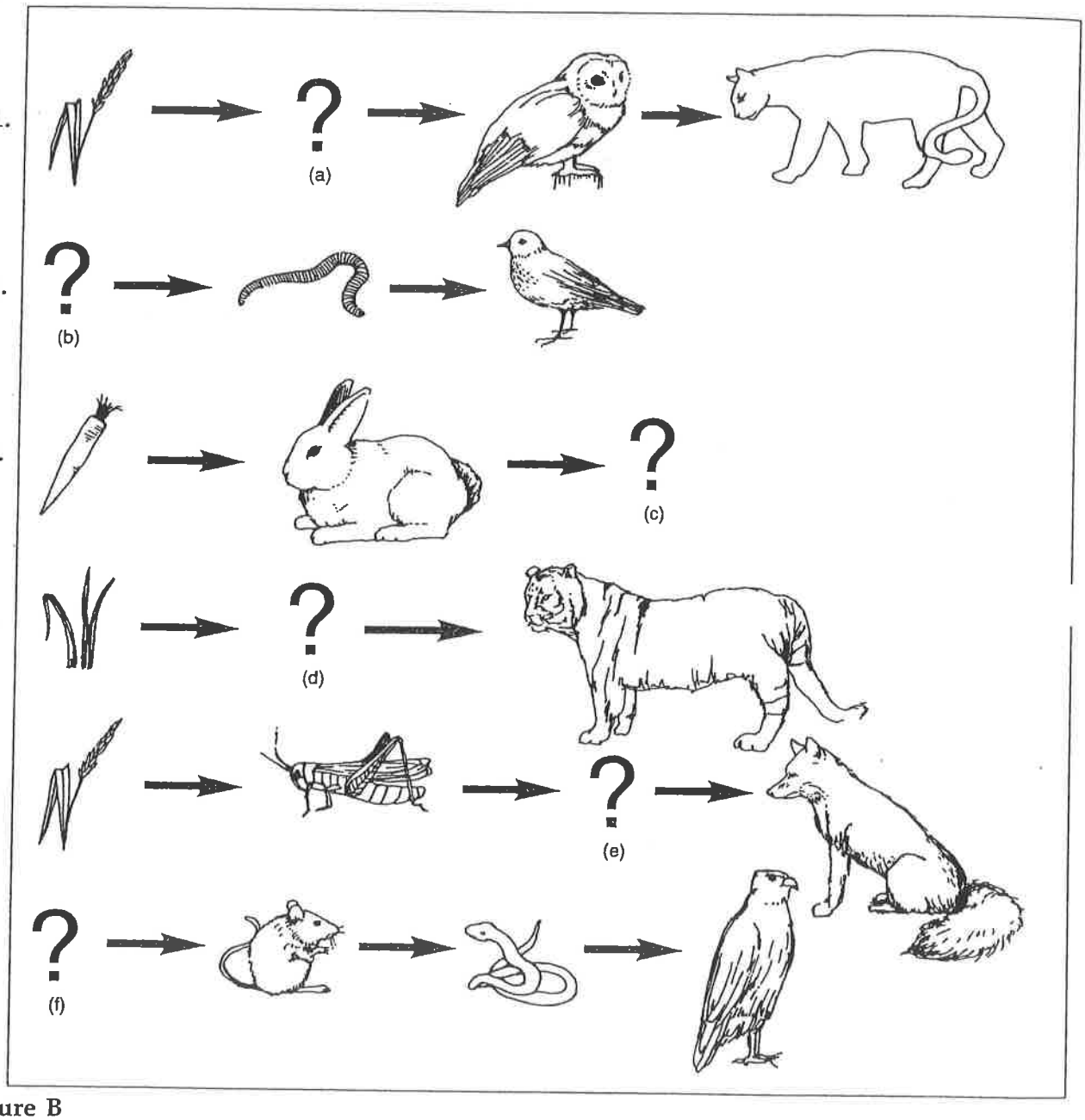

Figure B

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

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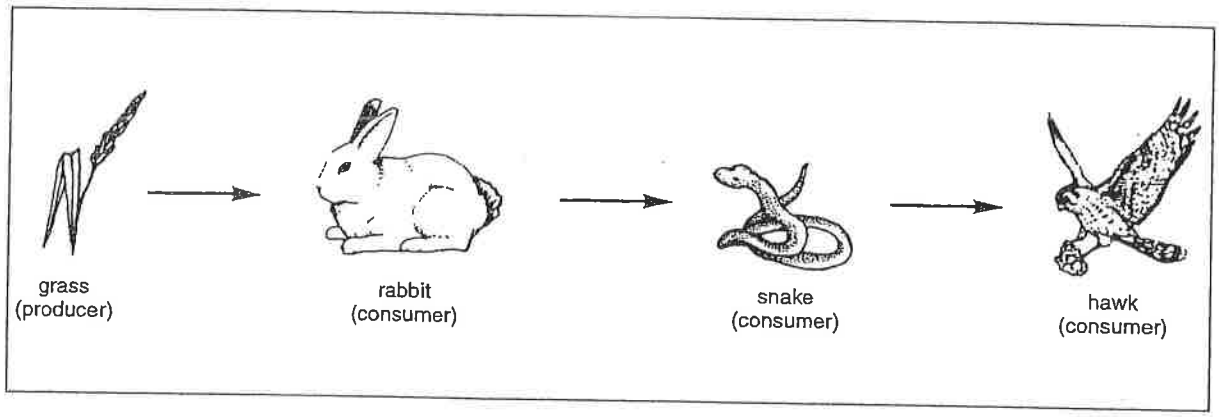

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Why is the sun the source of energy in an ecosystem? _____

_____

_____

_____

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. A food WEB is the transfer of food energy from one organism to the next that interconnects with other organisms.

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

1. What is the diagram shown called?
   food web
2. What does the diagram show?
   how a number of food chains are related
3. What does a rabbit eat? plant.
4. What organisms do wolves eat?
   rabbits & birds
5. Which organism is the producer?
   plant

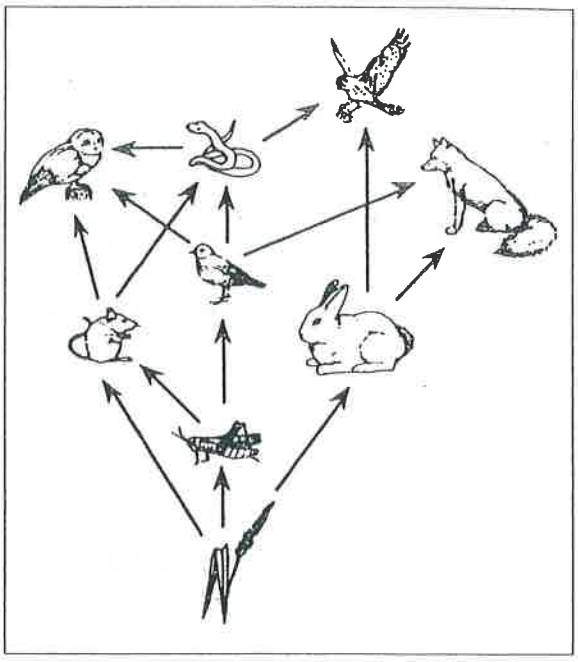
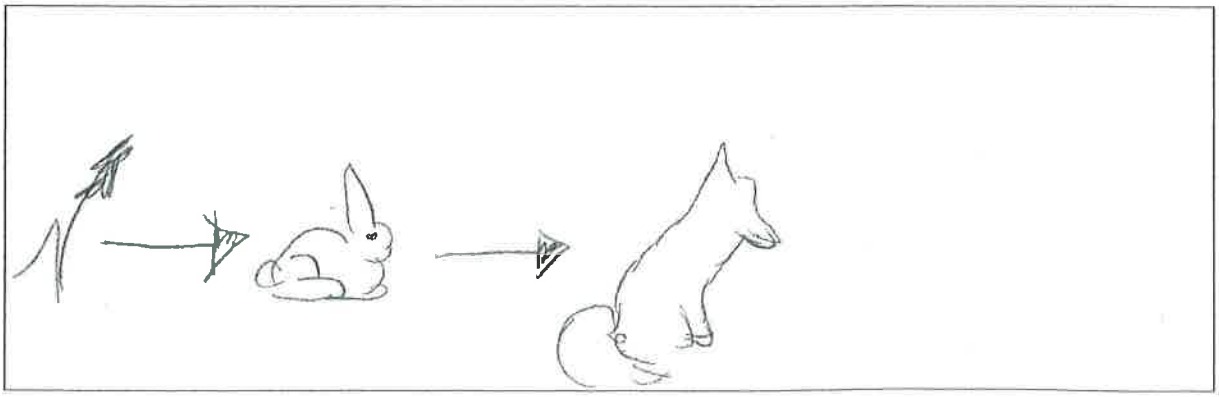


Figure C

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



*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		✓

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

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

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MATCHING

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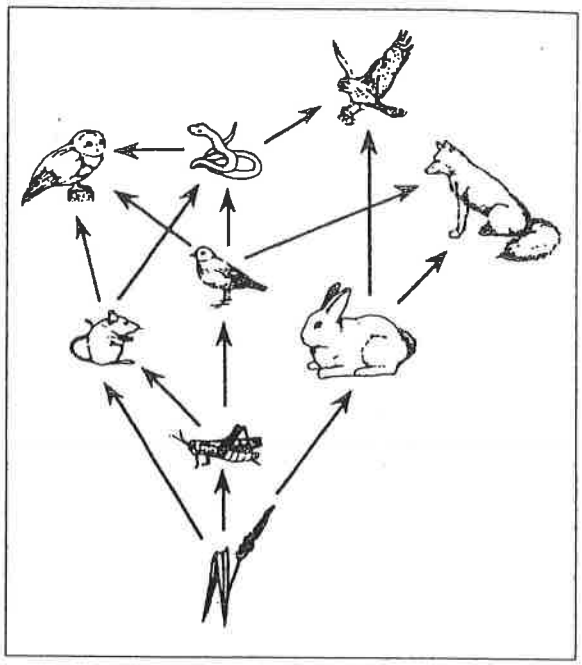


Figure C

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

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			

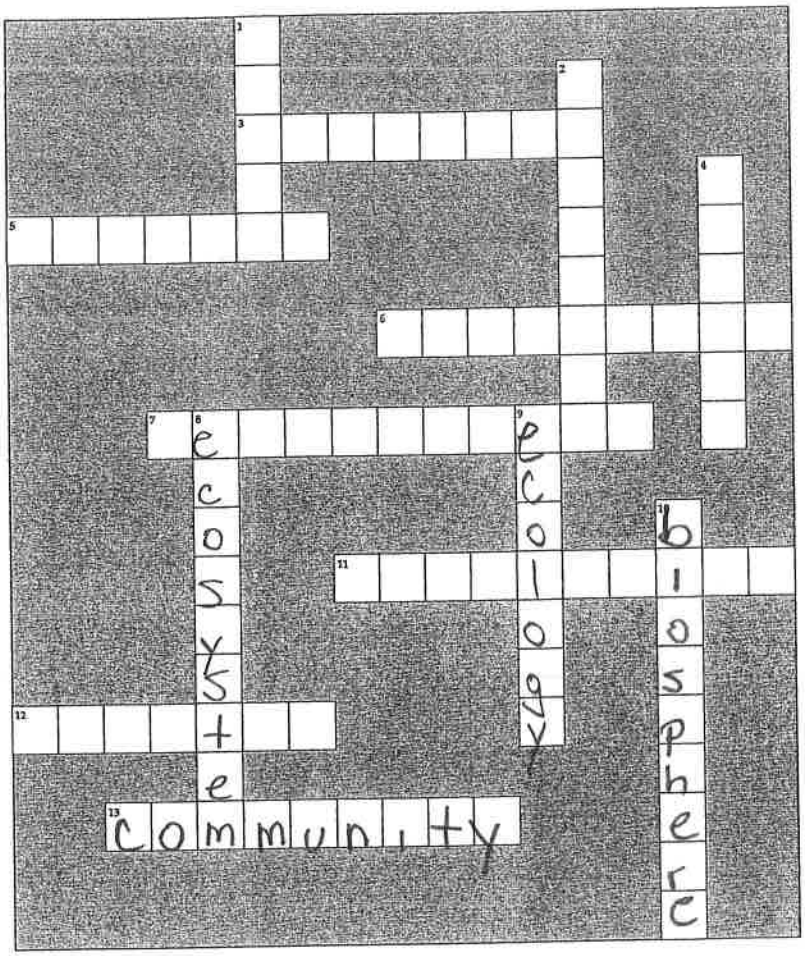
FILL IN THE BLANK

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

niche webs food
sun soil

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 _____.

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

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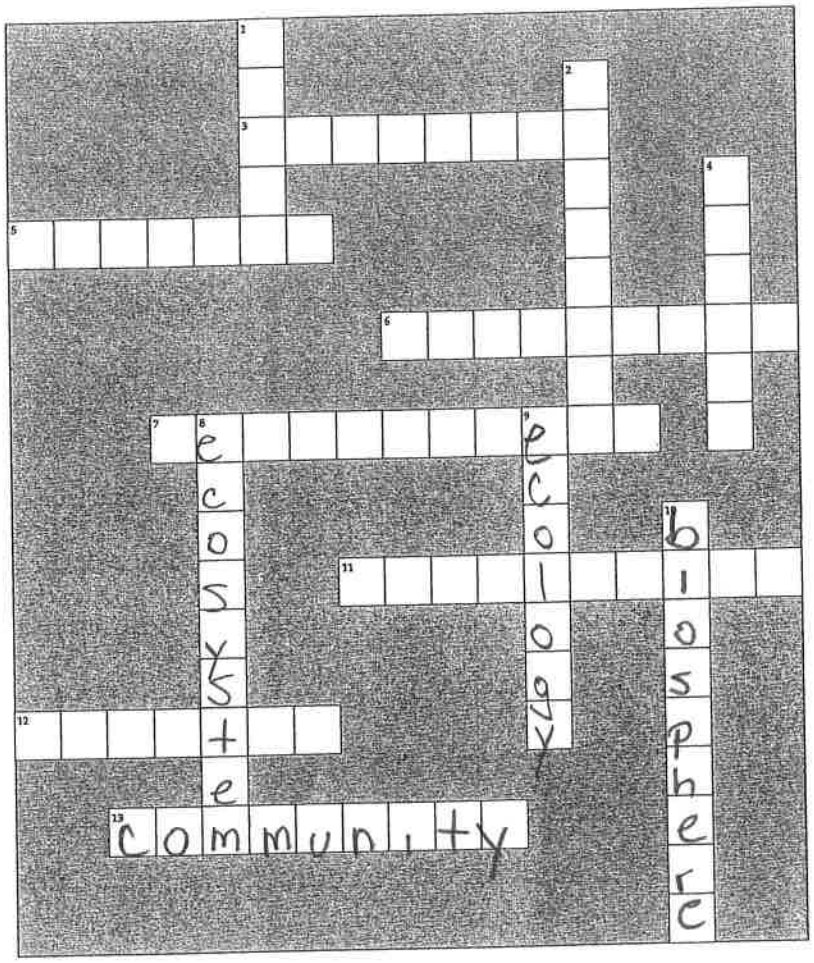

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