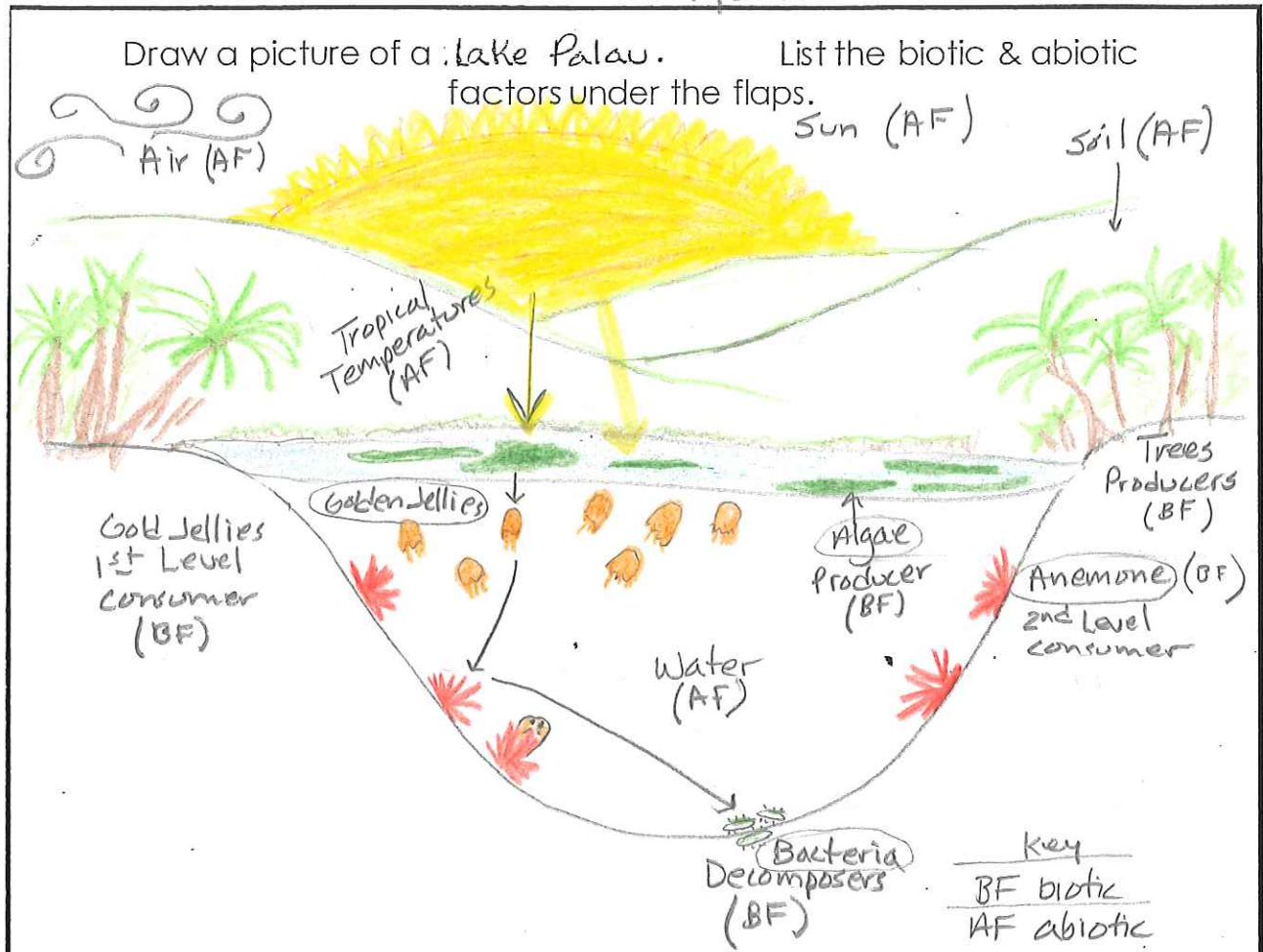
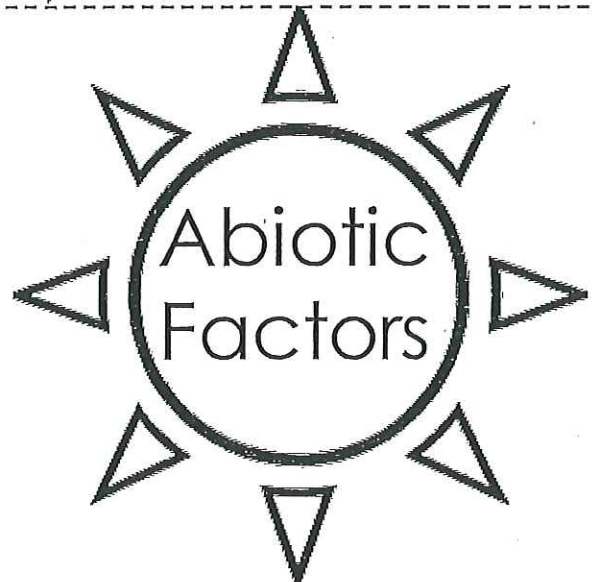
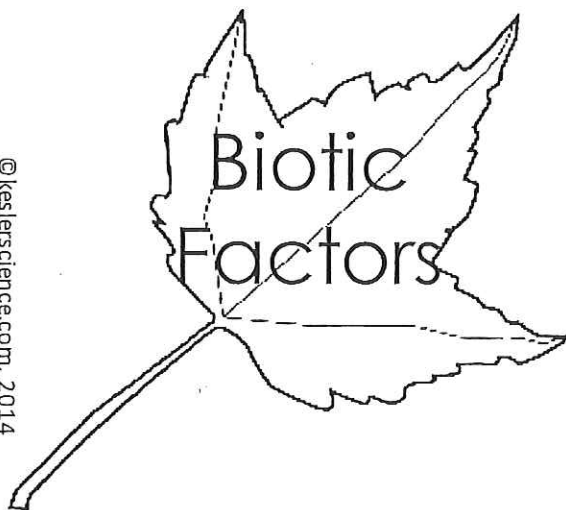


# Biotic and Abiotic Factors

## Lake Palau Ecosystem



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Name \_\_\_\_\_

# Food Chains and Webs

How does energy move through an ecosystem?

All organisms need energy to live. Energy is stored in food. A food chain shows how food energy moves from one organism to another in a community. In one food chain, a grass plant uses energy from sunlight to produce seeds. A mouse gets energy by eating the seeds. A hawk gets energy by eating the mouse. Each organism acts as the energy source for

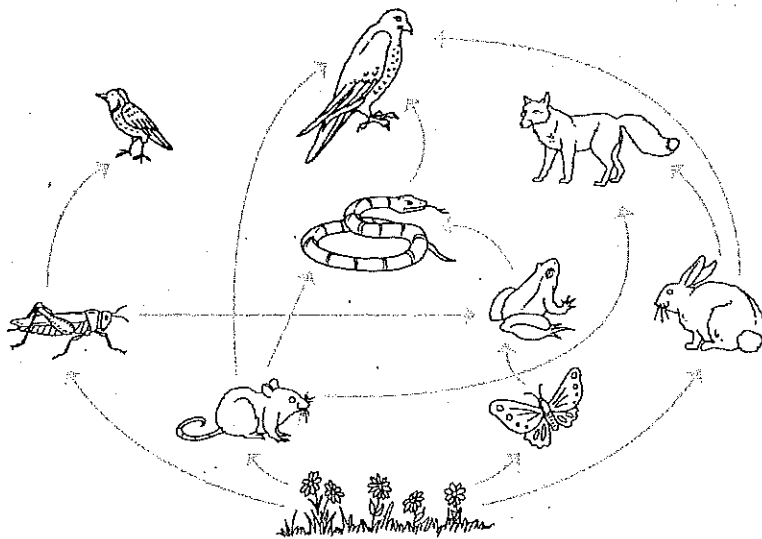
the next organism in the food chain. The first link in a food chain is always a producer.

A simple food chain shows only some of the ways organisms in a community depend on each other for food. Most animals depend on more than one source of food. A **food web** is a network of food chains that gives a more complete picture of how food energy moves through a community.

Removing one organism from a food web affects other organisms. If a species disappears, the populations that depend on it have more difficulty finding food and their population decreases.

At the same time, any population that the missing species feeds on increases, because fewer individuals are eaten.

Grassland Food Web



## Show What You Know

Use the diagram above to answer these questions.

- Which organisms depend on rabbits for food?

Hawk, Fox

- What would happen to the butterfly population if frogs disappeared?

The number of butterflies would increase (making their food source decrease)

Name: Kely

Date: \_\_\_\_\_

Class: \_\_\_\_\_

1. How are the living creatures in an ecosystem linked?

- a. By what they eat
- b. By how they breathe
- c. By their size
- d. By their species

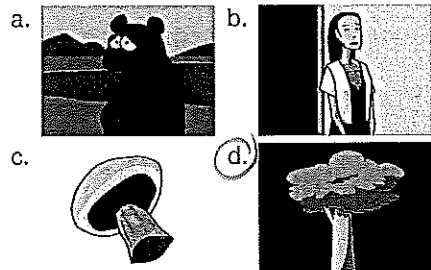
2. What can you infer from the fact that the disappearance of just one species can disrupt an entire food chain?

- a. Every food chain depends entirely on a single species
- b. Food chains are extremely fragile
- c. Food chains can regenerate on their own
- d. Food chains would not exist without humans

3. How is a food web different from a food chain?

- a. Food webs contain only producers, not consumers
- b. Food webs do not include decomposers
- c. Food webs contain many different, linked food chains
- d. Food webs exist in aquatic environments; food chains exist in terrestrial environments

4. Which of the following is a producer?



5. Through what process do producers make their own food?

- a. Parthenogenesis
- b. Photosynthesis
- c. Meiosis
- d. Mitosis

6. What role do you play in the food web?

- a. Producer
- b. Consumer
- c. Decomposer
- d. Human

7. How might a lack of sunlight disrupt the food web?

- a. It would cause consumers to consume less
- b. It would prevent decomposers from decomposing matter
- c. It would prevent producers from producing nutrients
- d. It would not disrupt the food web at all

8. How are primary consumers different from secondary consumers?

- a. Primary consumers eat only plants; secondary consumers eat other consumers
- b. Primary consumers eat other consumers; secondary consumers eat only plants
- c. Primary consumers eat plants and other consumers; secondary consumers eat plants and decompose matter
- d. Primary consumers eat plants and decompose matter; secondary consumers eat plants and other consumers

9.



This organism is most likely:

- a. A primary consumer
- b. A secondary consumer
- c. A decomposer
- d. A producer

10. Sheep are herbivorous. What can you infer from this?

- a. They are primary consumers.
- b. They are producers.
- c. They are secondary consumers.
- d. They are decomposers.

# Ecosystem Levels of Organization Key

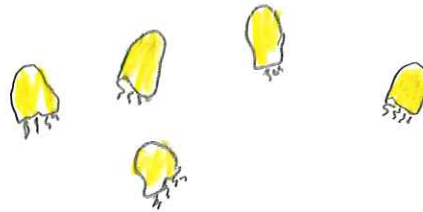
## Organism

An individual animal, plant, or single-celled living thing



## Population

More than 1 organism in an ecosystem that are the same.



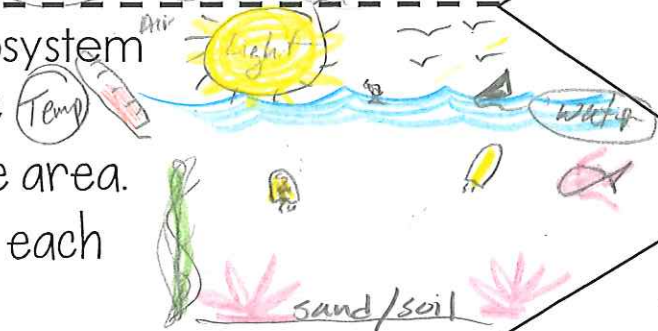
## Community

All biotic factors in the same ecosystem.




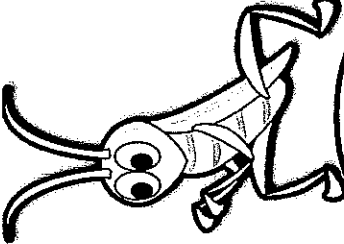
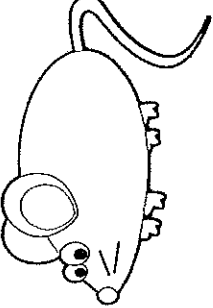
## Ecosystem

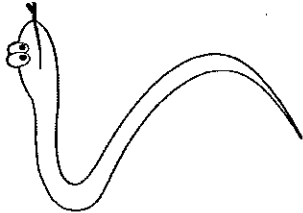

All abiotic and biotic factors in the same area. They all depend on each other.






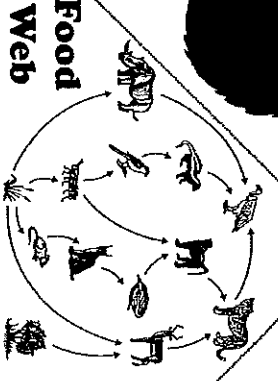
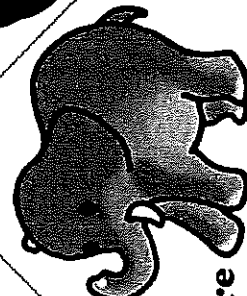
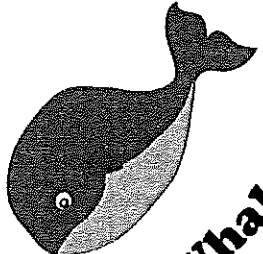




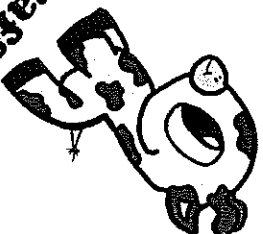

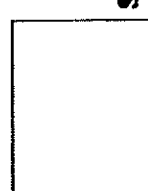
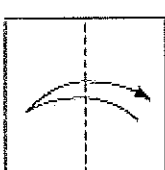
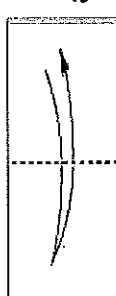
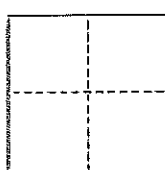
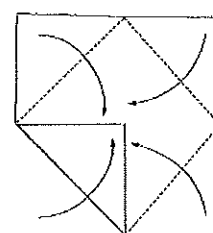
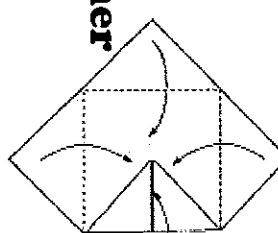
# Levels of Organization in an Ecosystem

# Food Chain Key

 <p>Producer or Consumer?</p> <p>Where does its energy come from? Sun</p>	 <p>Producer or Consumer?</p> <p>Where does its energy come from? Grass</p>	 <p>Producer or Consumer?</p> <p>Where does its energy come from? Grasshopper</p>
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 <p>Producer or Consumer?</p> <p>Where does its energy come from? Mouse</p>	 <p>Producer or Consumer?</p> <p>Where does its energy come from? Snake</p>
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1. Cut out the two strips and tape at the mouse/snake arrow.
2. Fold on the dotted lines
3. Tape or glue the "producer" tab into Sci. journal

<p><b>1</b></p> <p>An organism that makes its own food from inorganic sources</p> <p><b>Producer</b></p> 	<p><b>2</b></p> <p>An animal that eats other animals</p> <p><b>Carnivore</b></p> 	<p><b>3</b></p> <p>An animal that eats both plants and animals</p> <p><b>Omnivore</b></p> 	<p><b>4</b></p> <p>A network of chains showing which organisms eat each other</p> <p><b>Food Web</b></p> 	<p><b>5</b></p> <p>An animal that only eats plants</p> <p><b>Herbivore</b></p> 	<p><b>Whale</b></p> 
<p><b>6</b></p> <p>An animal that feeds on dead organisms</p> <p><b>Scavenger</b></p> 	<p><b>7</b></p> <p>An organism that breaks down dead plant and animal matter</p> <p><b>Decomposer</b></p> 	<p><b>8</b></p> <p>Animals that can't make their own food, so they eat plants or other animals</p> <p><b>Consumers</b></p> 	<p><b>9</b></p> <p>An animal that eats plants</p> <p><b>Butterfly</b></p> 	<p><b>Giraffe</b></p> 	<p><b>Instructions:</b></p>  <p>Cut along the edges of the Cootie Catcher.</p>  <p>Fold along the horizontal line</p>  <p>Fold along the vertical line</p>  <p>Open it all up and flip it text down on the desk</p>  <p>Fold each corner to the center</p>  <p>Flip over and fold each corner to the center</p>  <p>Fold in half and put your fingers under the flaps</p> 