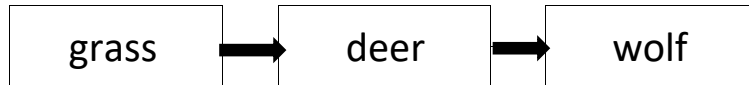


**Goal • Recognize the flow of energy in a food web.**

## What to Do

Answer each question in the space provided.

1. Consider the following food chain.



If the deer population increases, explain what could happen to

- (a) the grass population

---



---

- (b) the wolf population \_\_\_\_\_

---

- (c) The deer consumes grass in order to get energy to grow, keep warm, run, and live.

Approximately 90 percent of the energy that the deer consumes is used for its daily functions.

Only 10 percent is used to reproduce more deer. Complete the energy table below. Assume that the grass in this food chain contains 5000 kJ (kilojoules) of energy.

Organism	Energy available	Energy used in metabolism	Energy stored
grass	_____ kJ	_____ kJ	_____ kJ
deer	_____ kJ	_____ kJ	_____ kJ
wolf	_____ kJ	_____ kJ	_____ kJ

1. Place the following organisms into the correct order (in the boxes) for a food chain.
2. Identify each organism is a producer, consumer, or decompose
3. Indicate the trophic level of each
4. Note whether the organism is a herbivore, carnivore, top carnivore, or detrivore

a) Grasshopper, hawk, bacteria, grass, frog

<b>Organism</b>	Grass	Grasshopper	Frog	Hawk	Bacteria
<b>Prod/Cons/Dec</b>	Producer				
<b>Trophic Level</b>	1				
<b>Herb/Carn/Top Carn/Detr</b>	----- (it's a producer)				

b) Snake, hawk, seeds, grasshopper, worms

<b>Organism</b>					
<b>Prod/Cons/Dec</b>					
<b>Trophic Level</b>					
<b>Herb/Carn/Top Carn/Detr</b>					

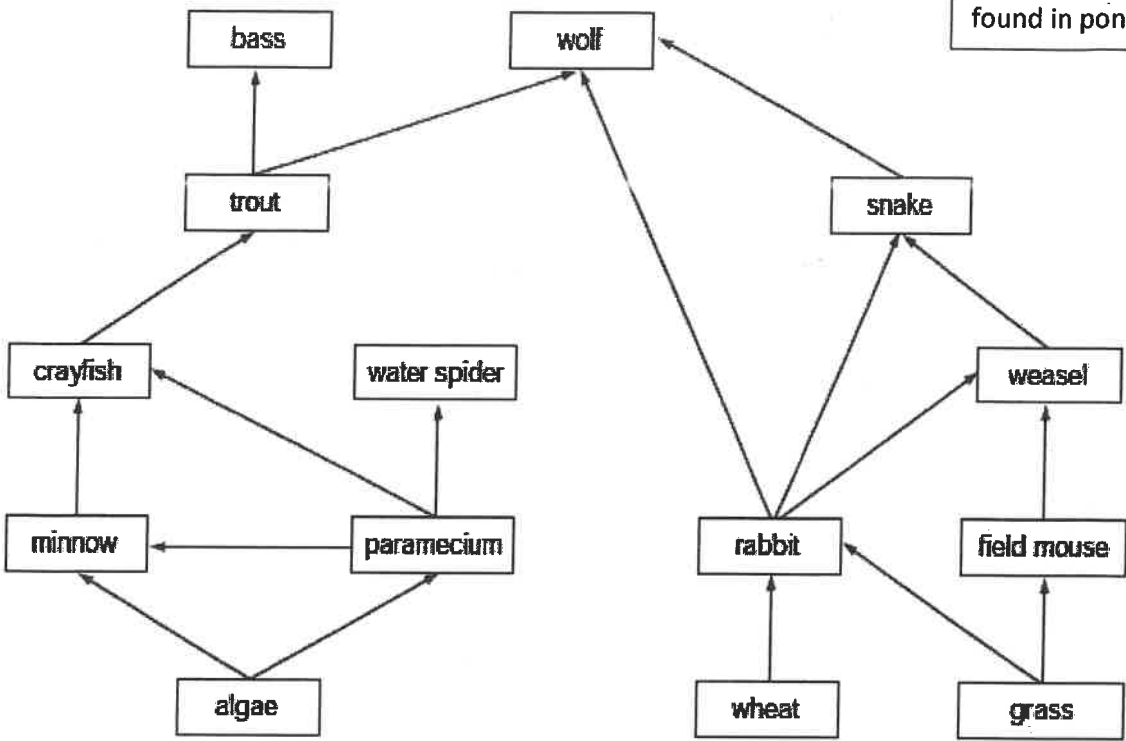
c) Algae, seal, herring, whale, bacteria

<b>Organism</b>					
<b>Prod/Cons/Dec</b>					
<b>Trophic Level</b>					
<b>Herb/Carn/Top Carn/Detr</b>					

## What to Do

Study the diagram of feeding relationships. Then answer the questions that follow.

(FYI: A paramecium is a microscopic organism found in ponds)



1. What does the diagram show? \_\_\_\_\_
2. Which organisms are the producers? \_\_\_\_\_
3. Give an example of an aquatic herbivore. \_\_\_\_\_
4. Give an example of a terrestrial herbivore. \_\_\_\_\_
5. Which organism is the top carnivore in the terrestrial ecosystem? \_\_\_\_\_
6. Give an example of an organism in the second trophic level. \_\_\_\_\_
7. What is another term for "vegetarian organisms"? \_\_\_\_\_
8. In which trophic level is the snake? \_\_\_\_\_
9. Define the term "top carnivore." \_\_\_\_\_  
\_\_\_\_\_
10. Define the term "omnivore." \_\_\_\_\_  
\_\_\_\_\_
11. Which organism is clearly an omnivore? \_\_\_\_\_

12. Give 1 example of each of the following from the food web:

a) Predation: \_\_\_\_\_

b) Interspecies Competition: \_\_\_\_\_

c) Intraspecies Competition: \_\_\_\_\_

d) Co-operation: \_\_\_\_\_

13. How are Mutualism, Parasitism and Commensalism Similar? How are they different?

---

---

---