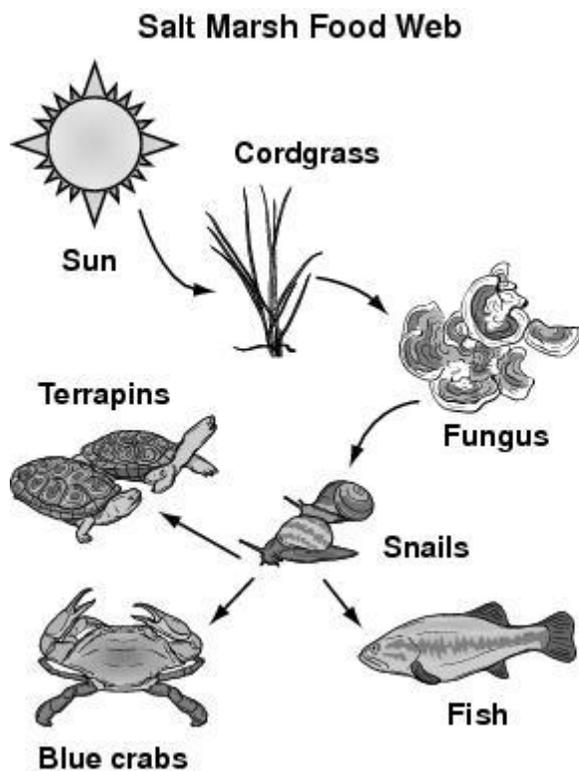


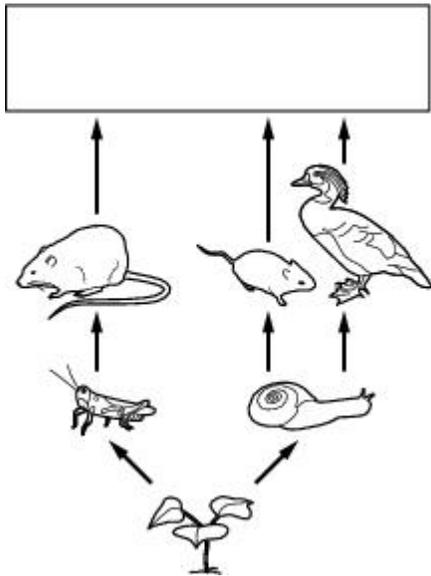
1. The diagram below is of a food web in a southern salt marsh.



When the snails feed on a type of fungus that grows on the cordgrass, they scrape and damage the cordgrass. What would **MOST LIKELY** happen in this food web if the number of blue crabs suddenly decreased?

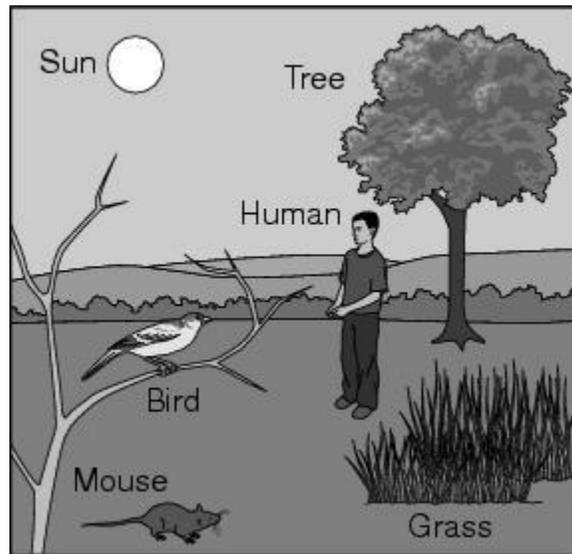
- A. The number of fish would decrease as the snails ate more of them.
  - B. The Sun would need to provide more energy to power the entire web.
  - C. The cordgrass would have more room and the fungus available would increase.
  - D. The number of snails would increase and result in more damage to the cordgrass.
-

2. Which of these is the missing component of the food web shown below?



- A. goose
  - B. sunlight
  - C. fish
  - D. hawk
-

3. What is the original source of energy for the organisms in the picture below?



- A. grass
  - B. mouse
  - C. water
  - D. sunlight
-

4. Based on the picture, which of the following is a producer in the food chain?



- A. Cattails, because they make their own food.
- B. Beaver, because they can change the water level.
- C. Dragonflies, because they occur in high numbers.
- D. Soil, because all other organisms depend on it.

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5. Autotrophs are organisms that produce their own food. Which do scientists classify as autotrophs?

- A. chordates
  - B. fungi
  - C. plants
  - D. molds
-

6.

What is the first source of energy for all food webs?

- A. plants
  - B. sunlight
  - C. minerals in the soil
  - D. decomposers and recyclers
- 

7.

Plants and other producers use sunlight for photosynthesis. What do plants make during photosynthesis?

- A. water
  - B. sugars
  - C. protein
  - D. carbon dioxide
- 

8.

What is the correct series of steps for the movement of energy in a food chain?

- A. producers → consumers → scavengers and recyclers → sun
  - B. sun → consumers → producers → scavengers and recyclers
  - C. sun → producers → scavengers and recyclers → consumers
  - D. sun → producers → consumers → scavengers and recyclers
- 

9.

James is making a sealed terrarium for his classroom. Inside the terrarium, he intends to place water plants, small fish, and a turtle. Which of the statements below BEST describes a rule that James should follow in order to make a healthy terrarium?

- A. Many fish would be needed to keep the water clean.
  - B. The amounts of fish and turtles should not affect the terrarium. More than one turtle should be included to prevent them from eating the fish.
  - C. Several turtles should be included so that they do not eat the fish.
  - D. The terrarium should be placed near a light source for the water plants.
-

10.

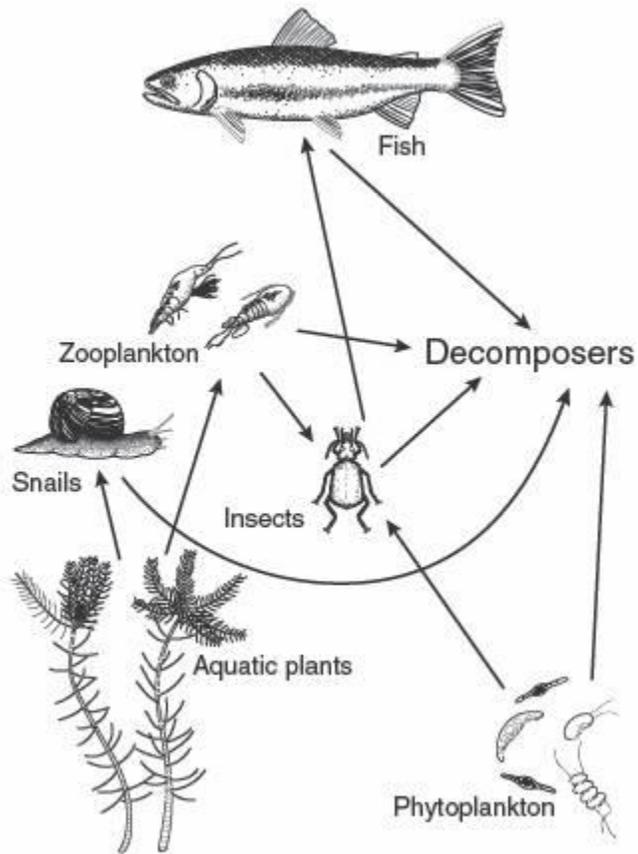
Food webs in the rainforests of Asia contain thousands of species of animals and support many large, predatory animals. Other biomes, such as the taiga of Northern Europe, contain less than 100 animal species and have only a few large predators. What factor is the most important in determining the overall size of a food web?

- A. number of producers
  - B. number of herbivores
  - C. number of carnivores
  - D. number of decomposers
- 

11.

Roberto feeds his pet iguana a mixture of salad greens, carrots, squash, crickets, and worms as part of his regular diet. What type of consumer is the iguana?

- A. herbivore
  - B. carnivore
  - C. omnivore
  - D. detritivore
-



12.

Energy is transferred from insects to fish in this system by —

- A. water.
- B. radiation.
- C. food consumption.
- D. decaying processes.

13. Which is a hypothesis?

- A. Five earthworms died when the soil became too dry.
  - B. Earthworms have a mucous-covered outer surface.
  - C. Heavy rain causes earthworms to move above ground.
  - D. What will happen if an earthworm is cut in two?
- 

14. Which activity is **most** harmful to the environment?

- A. watering the garden
  - B. cutting the grass
  - C. installing a wooden fence
  - D. fertilizing the lawn
- 

15. Which item is considered hazardous waste?

- A. soda bottle
  - B. aluminum foil
  - C. cardboard box
  - D. motor oil
- 

16. Which of the following is the **best** way to investigate the effect of fertilizers on potato plants?

- A. Put several potato plants outdoors and several potato plants indoors and give both groups different amounts of fertilizer.
  - B. Add fertilizer to several potato plants.
  - C. Grow several potato plants under the same conditions but vary the amount of fertilizer added to each.
  - D. Grow several potato plants under various temperature conditions.
- 

17. A scientist is studying the effect of acid rain on oak trees. Of the numbers below, which would be the number of oak trees the scientist should use to obtain the most reliable data?

- A. 1
  - B. 2
  - C. 20
  - D. 200
-

18. Which trash is the **least** biodegradable?

- A. orange peel
  - B. chewing gum
  - C. plastic wrapper
  - D. apple core
- 

19. A lab report for a plant experiment contained the four statements below. Which statement is an **inference** rather than an **observation**?

- A. Lack of light caused the plants to grow at a slower rate.
  - B. All of the plants bent toward the small light source.
  - C. Each of the plants grew less than 2 centimeters.
  - D. Several of the plants have yellow leaves.
- 

20. Which animal is probably well adapted to a hot, dry environment?

- A. a rabbit with small ears and fur that is brown in summer and white in winter
  - B. a rodent that sleeps underground during the day
  - C. a white fox with long fur, small ears, and a bulky body
  - D. a long-legged bird that has dark feathers and eats snails and small fish
- 

21. Algal blooms that pollute streams, rivers, and lakes are caused by the presence of

- A. lead.
  - B. oxygen.
  - C. mercury.
  - D. phosphates.
- 

22. Plants with spines and waxy leaves are well-suited for life in which environment?

- A. temperate forest
  - B. grassland
  - C. tropical forest
  - D. desert
-

23. Which is a reason some birds fly south in the fall or early winter?

- A. to breed
  - B. to develop spring colors
  - C. to find food
  - D. to hibernate
- 

24. Species adapt to changes in their environment through which process?

- A. extinction
  - B. mating
  - C. migration
  - D. evolution
- 

25. Which is **least** important for most kinds of bacteria to grow?

- A. warmth
  - B. light
  - C. food
  - D. water
- 

26. Juan conducted an experiment on the growth of two identical potted geraniums. He placed one plant on the windowsill and one in the closet and watered both of them. Which variable was Juan most likely testing?

- A. light
- B. pot size
- C. soil
- D. water

### Answer Key

1. D) The number of snails would increase and result in more damage to the cordgrass.
2. D) hawk
3. D) sunlight
4. A) Cattails, because they make their own food.
5. C) plants
6. B) sunlight
7. B) sugars
8. D) sun  $\rightarrow$  producers  $\rightarrow$  consumers  $\rightarrow$  scavengers and recyclers
9. D) The terrarium should be placed near a light source for the water plants.
10. A) number of producers
11. C) omnivore
12. C) food consumption.
13. C) Heavy rain causes earthworms to move above ground.
14. D) fertilizing the lawn
15. D) motor oil
16. C) Grow several potato plants under the same conditions but vary the amount of fertilizer added to each.
17. D) 200
18. C) plastic wrapper
19. A) Lack of light caused the plants to grow at a slower rate.
20. B) a rodent that sleeps underground during the day
21. D) phosphates.

22. D) desert

23. C) to find food

24. D) evolution

25. B) light

26. A) light

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