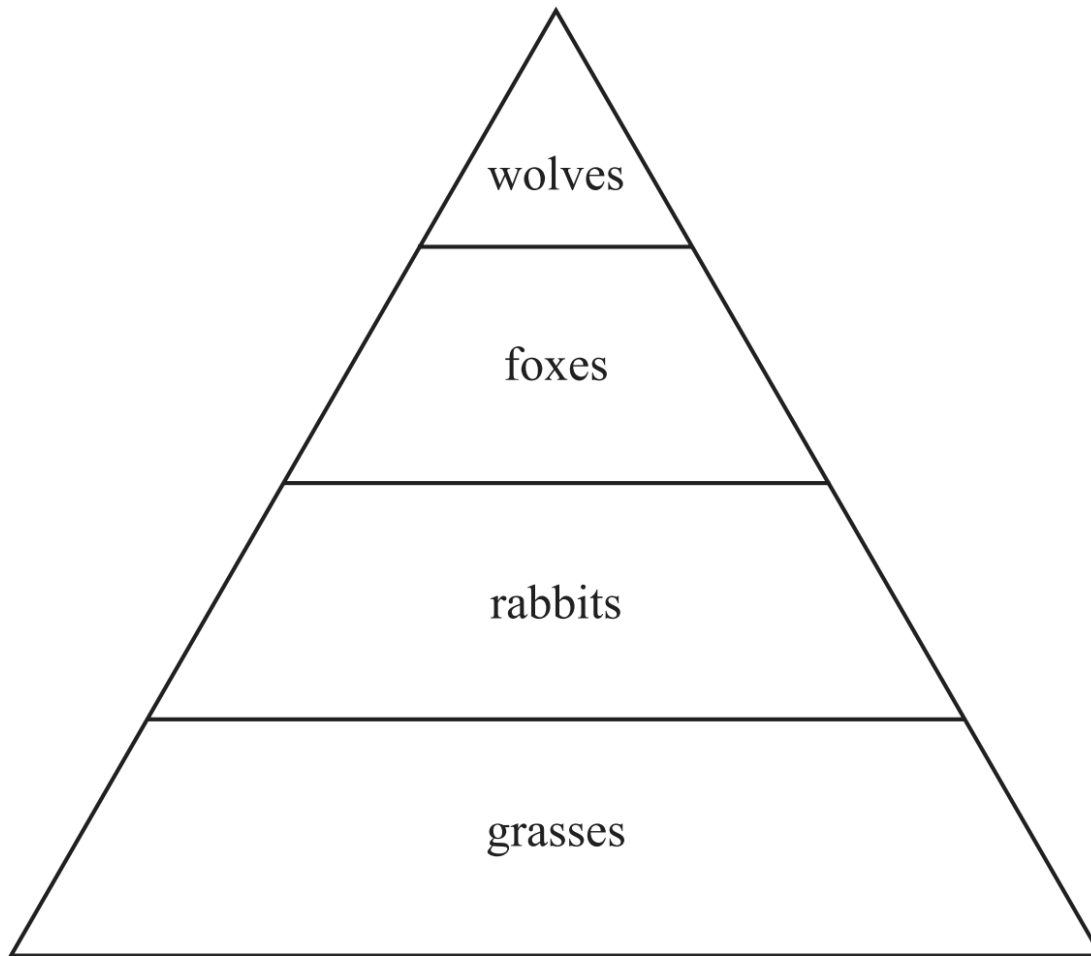


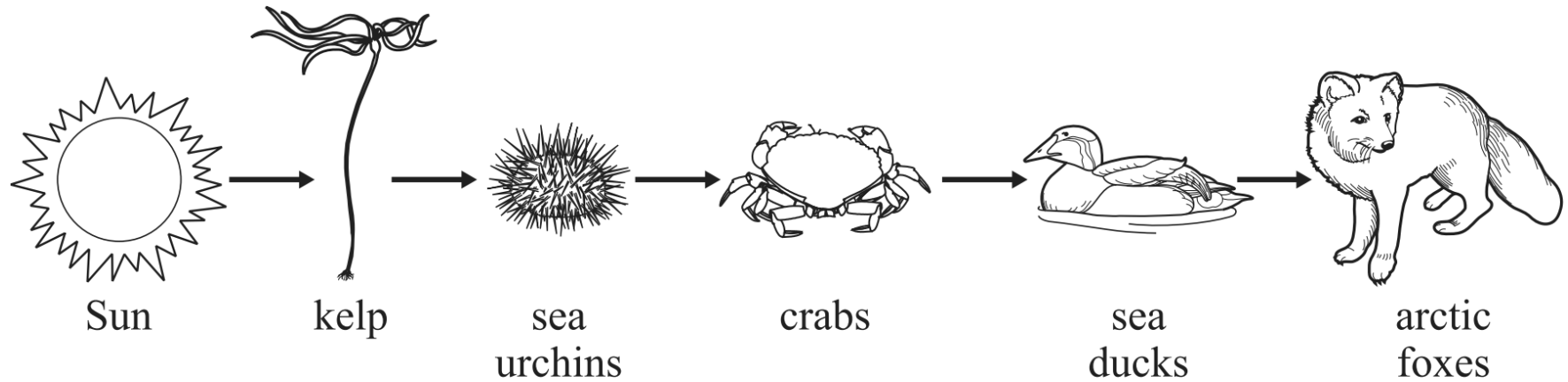
1. The picture below shows an energy pyramid.



What will *most likely* happen to the foxes and the wolves if the rabbits are removed?

- A. The foxes will eat more wolves. B. The foxes will eat fewer wolves.
C. There will be more foxes and wolves. D. There will be fewer foxes and wolves.

2. The picture below shows an ocean bay food chain.



Sea otters move into the ocean bay. They eat all the sea urchins. This change will cause the

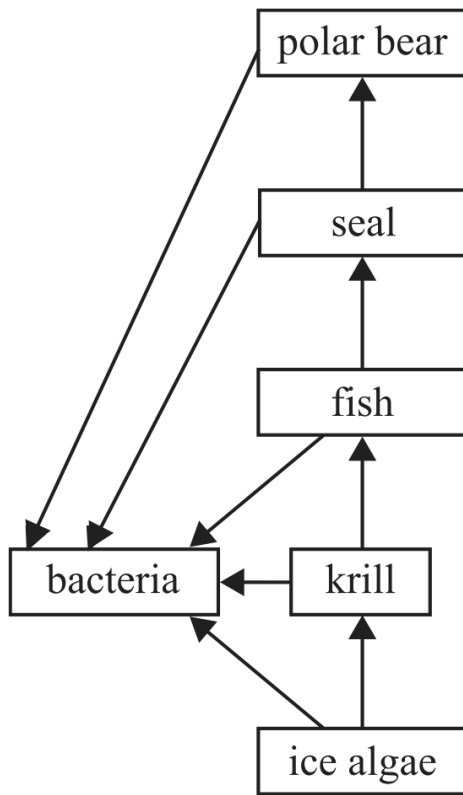
A. kelp to have less food.

B. crabs to have more food.

C. sea ducks to have less food.

D. arctic foxes to have more food.

3. A marine food web is shown below.



Which chart *correctly* shows three of the organisms according to their roles in cycling matter in the marine food web?

A.

Primary Consumer	Secondary Consumer	Decomposer
bacteria	fish	seal

B.

Primary Consumer	Secondary Consumer	Decomposer
fish	seal	polar bear

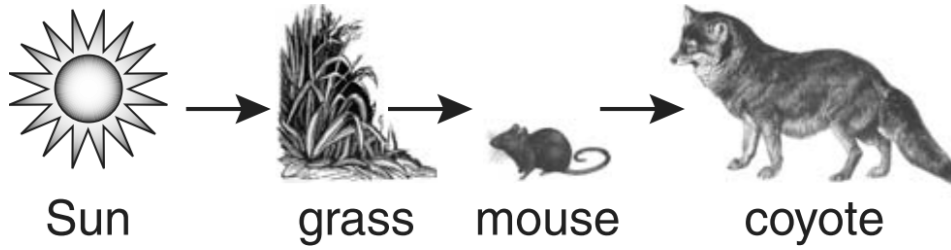
C.

Primary Consumer	Secondary Consumer	Decomposer
krill	fish	bacteria

D.

Primary Consumer	Secondary Consumer	Decomposer
ice algae	krill	fish

4. The diagram below shows a simple food web.

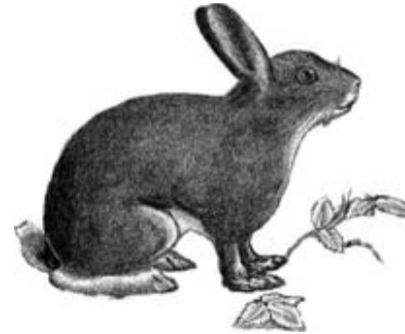


Which of the following animals might compete with the coyote in this food chain?

A.



B.



C.



D.

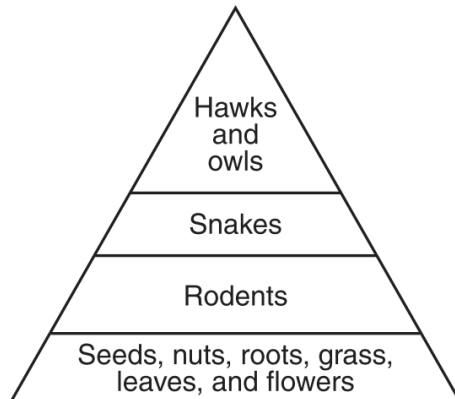


5. The table below contains information about animal diets.

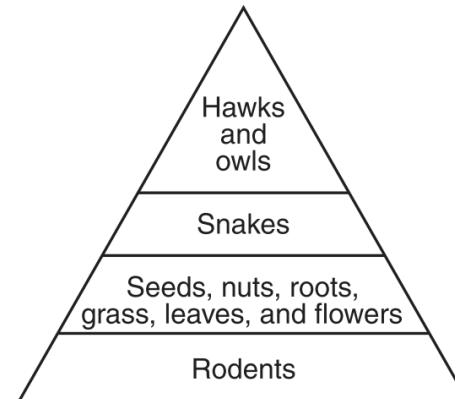
Animals	Diet
Snakes	Squirrels, chipmunks, gophers, and mice
Hawks and owls	Rodents and reptiles
Rodents	Seeds, nuts, roots, grass, leaves, and flowers

Which energy pyramid best represents the data in the table?

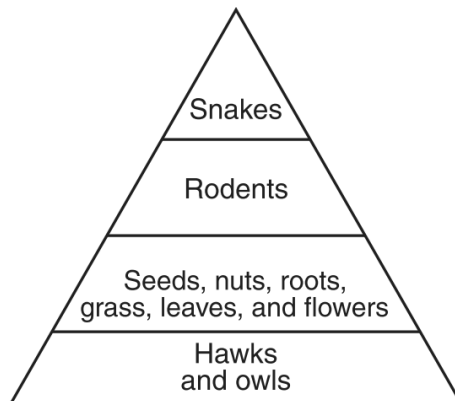
A.



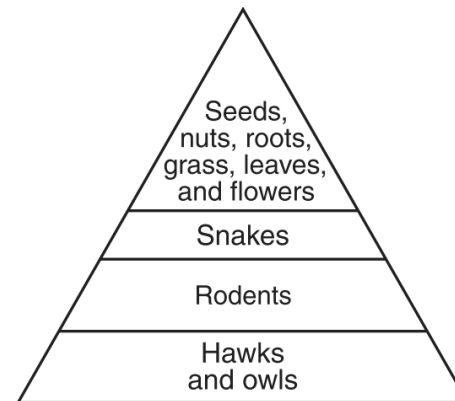
B.



C.

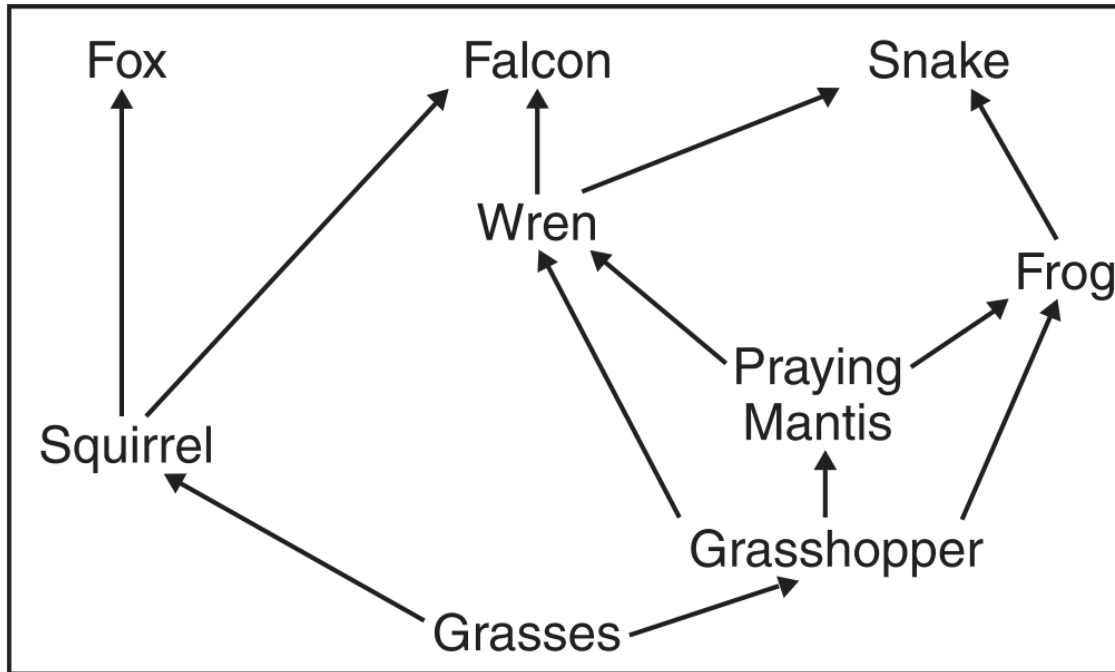


D.



6. A forest-ecosystem food web is shown below.

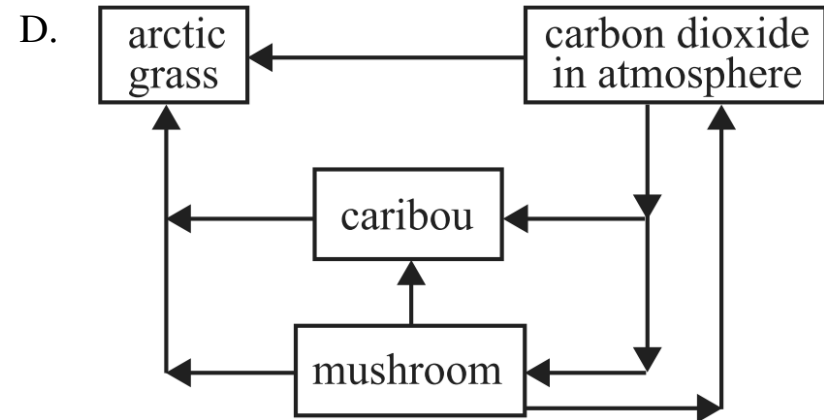
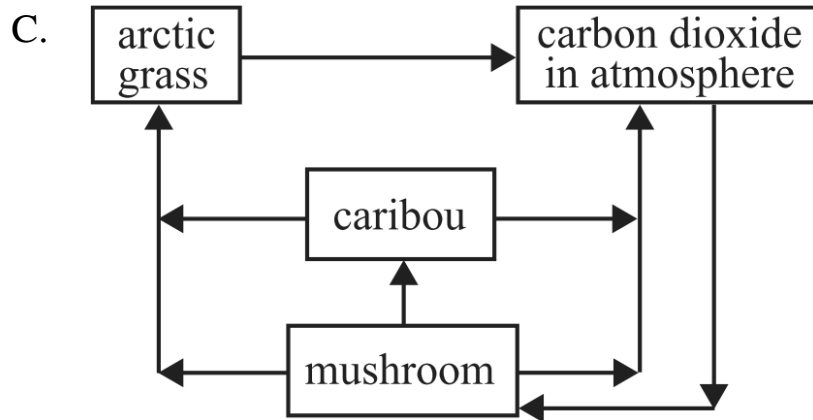
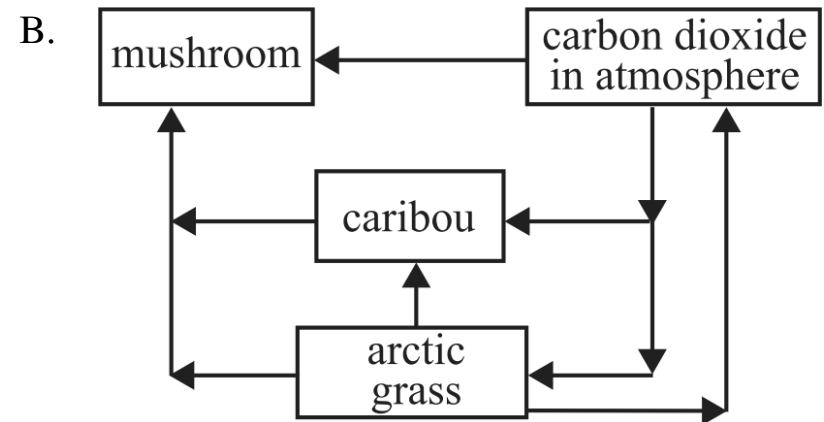
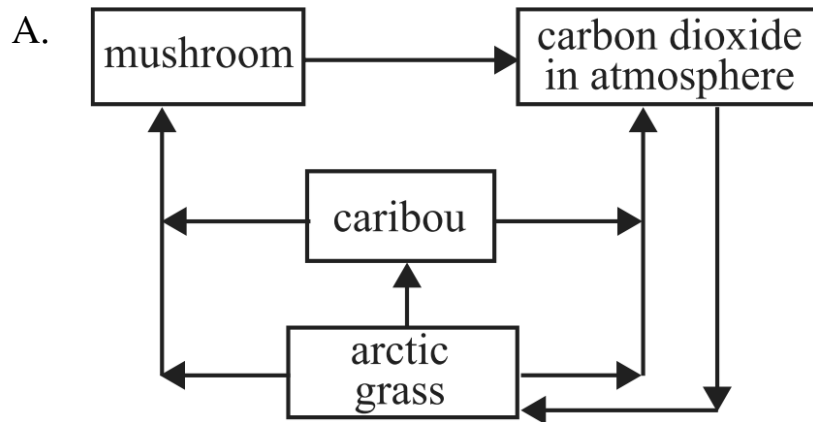
Forest Food Web



If additional wrens are introduced into this ecosystem, there will most likely be an immediate decrease in the

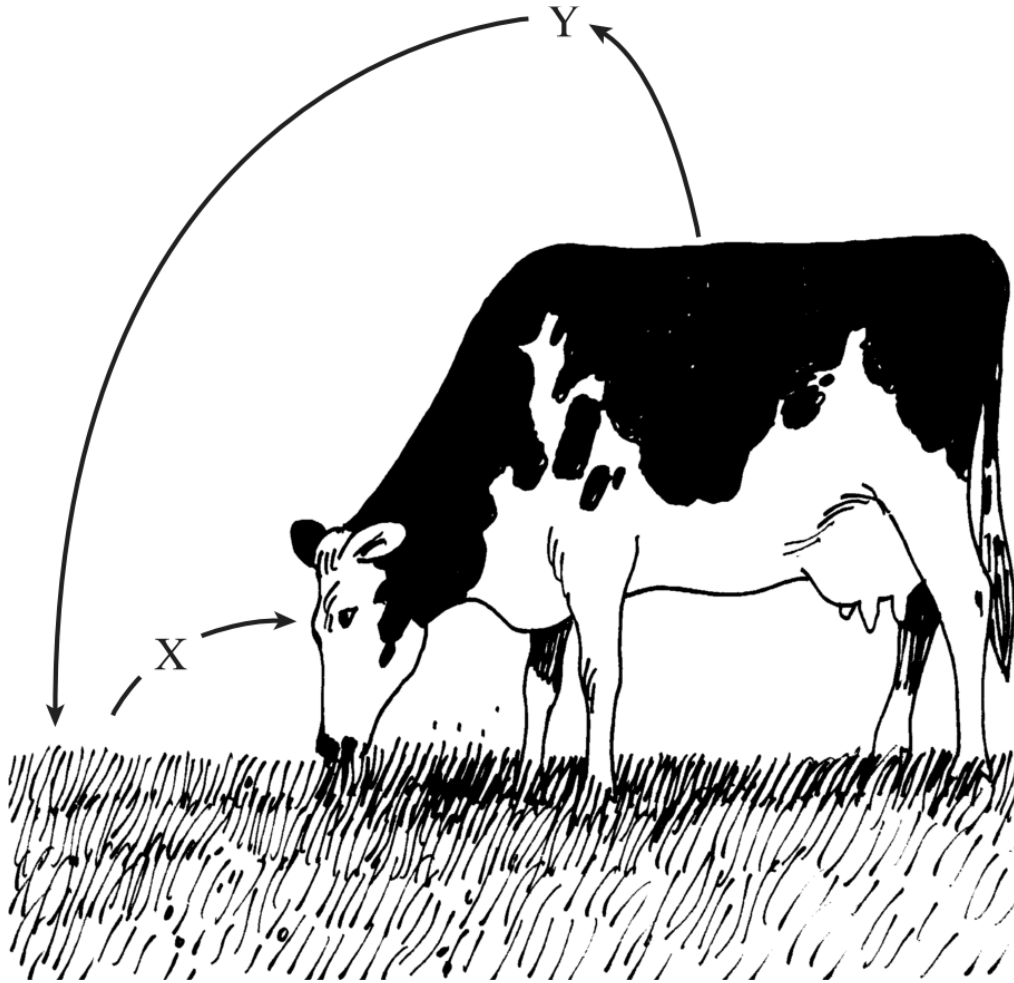
- A. frog population.
- B. snake population.
- C. falcon population.
- D. grasshopper population.

7. Which diagram correctly models the movement of carbon in a food web?



8. How do nitrogen-fixing bacteria help cycle nitrogen through ecosystems?
- A. They release nitrogen into the atmosphere when they replicate their DNA.
 - B. They convert sunlight into chemical energy which is then stored in the nitrogen.
 - C. They convert ammonia from animal feces and urine into forms that plants can use.
 - D. They capture nitrogen from the atmosphere and convert it into forms that plants can use.

9. The illustration below shows part of the carbon cycle.



At position *Y*, carbon is *most likely* to be in which of the following forms?

- A. protein B. carbon solid C. carbohydrate D. carbon dioxide

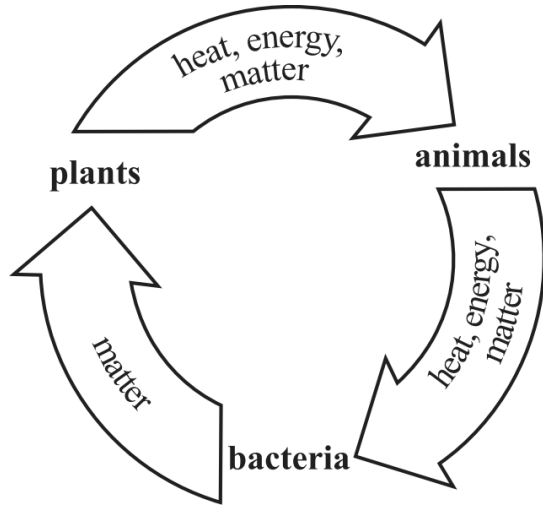
10. Fertilizers can enable farmers to grow the same crop in a field for several years in a row. Farmers who use less fertilizer often rotate their crops by planting the crop one year and legumes, such as beans and clover, the following year.

Fertilizer use and crop rotation with legumes both increase the availability of which of the following nutrients in soil?

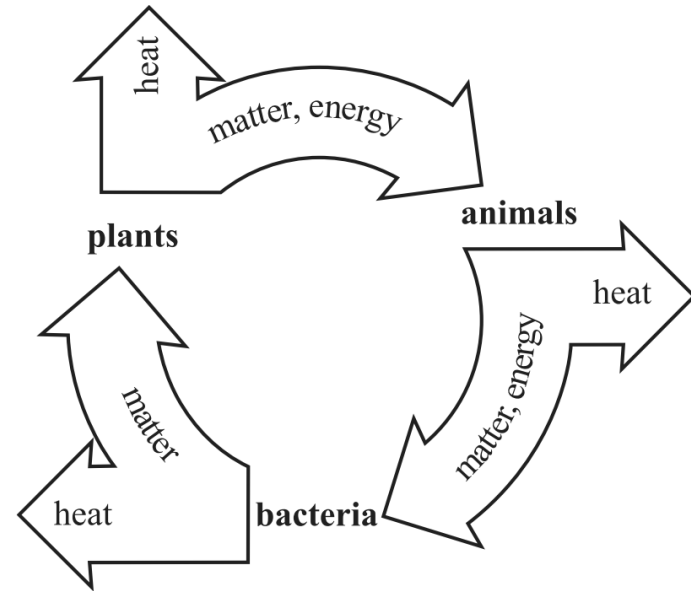
- A. calcium B. nitrogen C. oxygen D. protein

11. Which diagram correctly models the movement of heat, energy, and matter in an ecosystem?

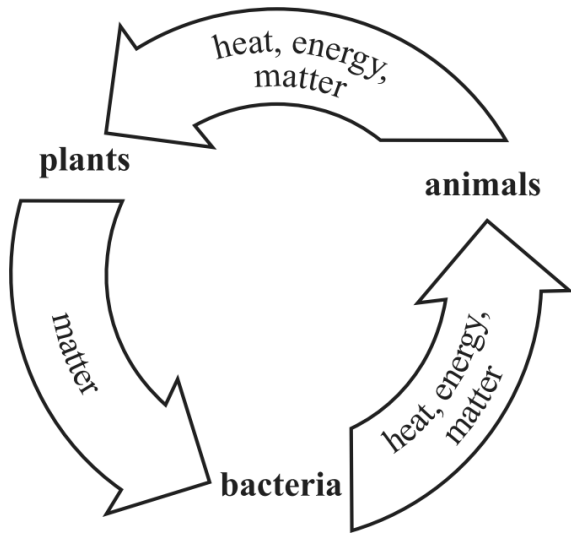
A.



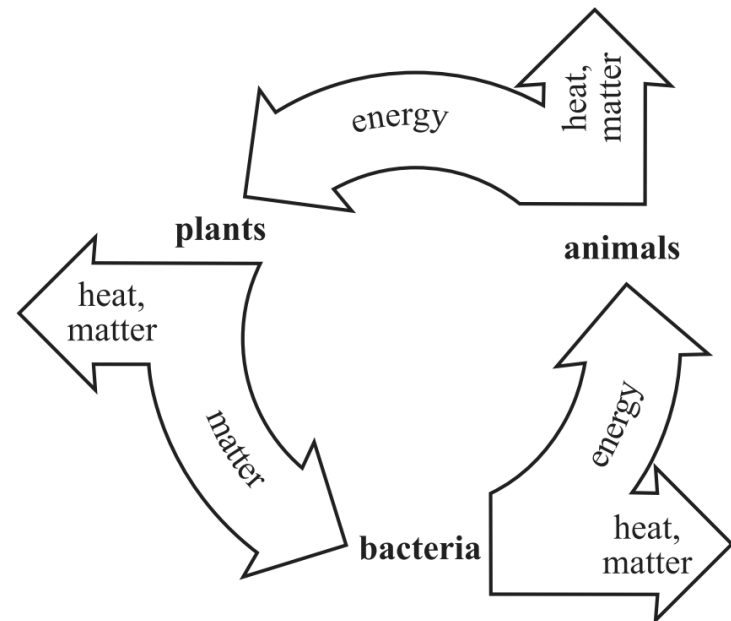
B.



C.



D.



12. A group of students is building a model of an ecosystem. Which of the following organisms should the students select to act as a decomposer?

A.



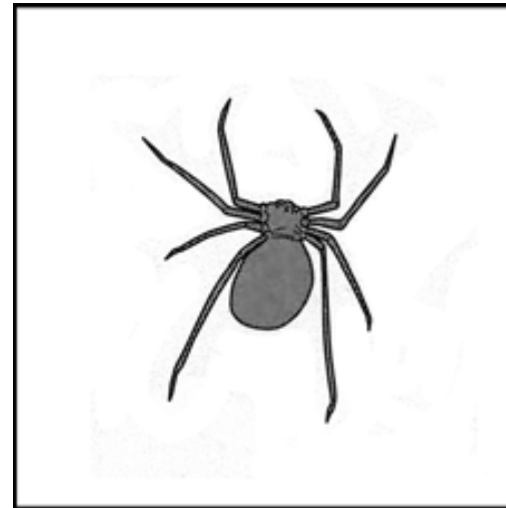
B.



C.



D.



13. **The yucca moth of the Arizona desert lays its eggs inside the flower of the yucca plant. When the eggs hatch, the moth larvae eat some of the plant seeds. When the moth flies away from the plant, it takes pollen from the yucca flower with it.**

How does the yucca moth help the yucca plant?

A. lays eggs

B. eats seeds

C. hatches larvae

D. spreads pollen

14. A tick feeds on the blood of a deer and can transmit diseases. Which of these terms describes the relationship between the tick and the deer?

- A. parasitism B. mutualism C. predation D. competition

15. The roots of many clover plants produce structures that are filled with bacteria. The clover plants provide food and shelter for the bacteria, while the bacteria produce a nutrient that is used by the plants. As a result, clover plants that have these structures on their roots grow at a faster rate and are healthier than clover plants that do not have the structures.

What type of relationship exists between the clover plants that have these structures on their roots and the bacteria in the structures?

A. mutualism

B. parasite-host

C. predator-prey

D. commensalism

1.
Answer: D
2.
Answer: C
3.
Answer: C
4.
Answer: C
5.
Answer: A
6.
Answer: D
7.
Answer: A
8.
Answer: D
9.
Answer: D
10.
Answer: B
11.
Answer: B
12.
Answer: B
13.
Answer: D
14.
Answer:
15.
Answer: