
Student Name: _____

Teacher: _____ Date: _____

District: London City

Assessment: 07 Science Science Test 4

Description: Life Science Final 1

Form: 301

1. A food chain is shown.

Sunlight → Grass → Rabbit → Snake

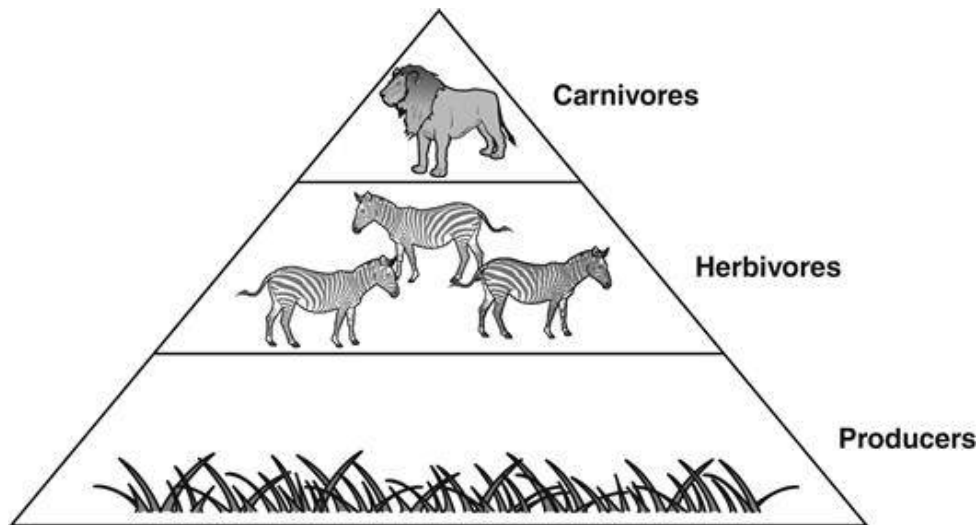
What is the abiotic factor in this food chain?

- A. Sunlight
- B. Grass
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2. Carbon dioxide is removed from Earth's atmosphere due to

- A. respiration of animals.
- B. decay of animal matter.
- C. plant photosynthesis.
- D. burning of fossil fuels.

3. An energy pyramid is shown below.

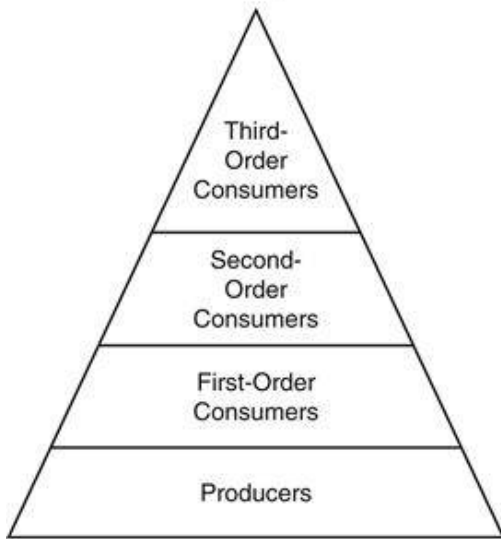


Energy pyramids are best used to represent

- A. how useful energy decreases as it flows through a food chain.
- B. the carnivores need more energy than other organisms for survival.
- C. the producers have less competition than other organisms.
- D. which organisms consume other organisms in a food web.

4. Consumers obtain energy from producers.

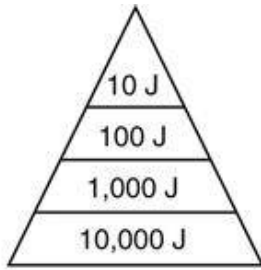
A Food Pyramid



What can most likely be said about the amount of energy available for third-order consumers?

- A. Most of the energy passed to the third-order consumers comes directly from the producers.
- B. More energy is lost as heat by third-order consumers than by first-order consumers.
- C. The amount of available energy is the greatest for the third-order consumers.
- D. The amount of available energy decreases for third-order consumers.

5. Organisms produce energy during the course of their lifespans. The pyramid shown represents the flow of energy in a particular ecosystem.



Which population of organisms will most likely produce only 10 J of energy for the ecosystem represented by this diagram?

- A. grasshopper
- B. mouse
- C. plant
- D. snake

6. Which of these best describes biomes?

- A. large ecosystems that have distinctive organisms and a particular climate
- B. a group of individuals of the same species that live together in the same area
- C. a system made up of parts that work together
- D. external conditions that affect an organism

7. The table shows information about a biome.

Biome Description

Temperature	Summer: 37–54°F Average Winter: -30°F
Yearly precipitation	6 to 10 inches
Vegetation	Simple structure No deep roots
Biodiversity of animals	Low: Few varieties of animals
Biodiversity of plants	Low: Plants include low shrubs, mosses, grasses, and lichen.
Drainage	Limited
Growing season	Short

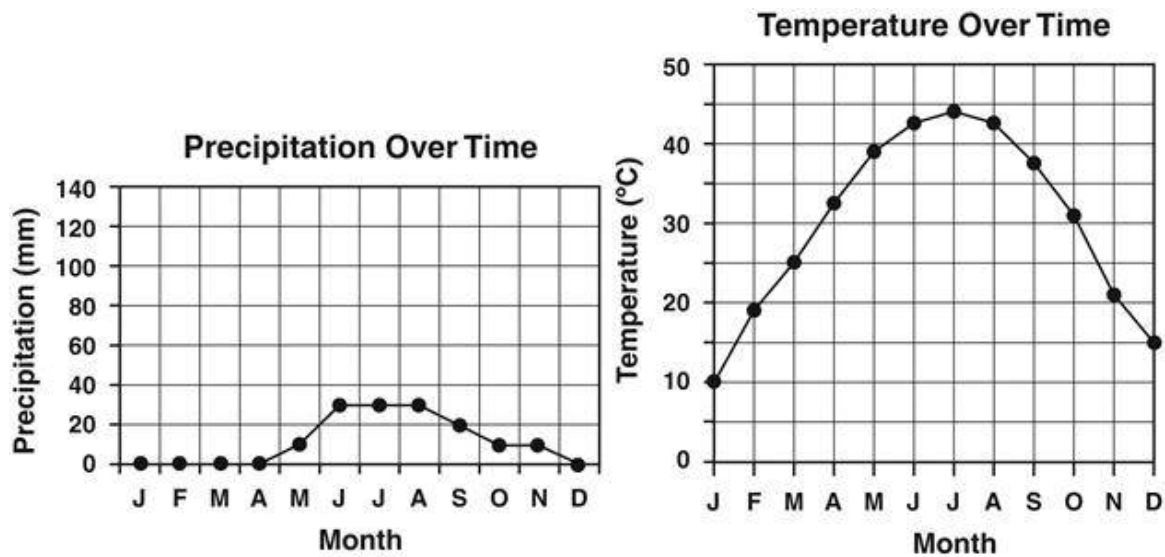
Which biome is best described in the table?

- A. desert
- B. rainforest
- C. tundra
- D. savanna

8. An ecosystem is a community of organisms interacting with their physical environment. Why are decomposers an important part of ecosystems?

- A. They break down dead organisms to return nutrients to the soil.
- B. They produce their own food for survival.
- C. They play a role in preventing weathering and erosion.
- D. They provide most of the energy to consumers.

9. The graphs show temperature and precipitation information for an area.



Which biome best describes the area represented by the graphs shown?

- A. desert
- B. tundra
- C. grassland
- D. forest

10. Which environmental factor would most likely prevent an orange tree from surviving in the desert?

- A. the lack of moisture
- B. the high levels of heat
- C. the extra amount of wind
- D. the low levels of sunlight

11. High average daily temperature and heavy annual rainfall is found in a

- A. desert.
- B. grassland.
- C. rainforest.
- D. tundra.

12. When entire communities in an ecosystem change over time, it is known as

- A. migration.
- B. extinction.
- C. overpopulation.
- D. ecological succession.

13. European starlings are birds that take over the nests of other birds. When they move into an area, starlings reproduce quickly. Taking over the nests of other birds most likely increases the number of starlings by helping them to do what?

- A. attract a better mate
- B. compete for resources
- C. migrate during the winter
- D. blend in with the environment

14. Farmers in Wyoming were concerned because some of their chickens were being preyed upon by hawks that lived in areas around their ranches. The farmers grouped together and hunted the hawks until they were no longer in their area. Which would most likely happen next?

- A. The chicken population would go down.
- B. Populations of mice and rats would increase.
- C. Another bird of prey would replace the hawk.
- D. The chickens would have a lower rate of disease.

15. Changes to abiotic factors in an environment can impact biotic factors. Which statement is the BEST example of this situation?

- A. Heavy rainfall increases soil erosion.
- B. Melting glaciers cause sea levels to rise.
- C. Cold temperatures cause rocks to weather.
- D. Drought conditions increase competition among consumers.

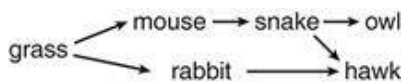
16. During the Siberian summer, reindeer graze on young roots, fungi, grass, and other vegetation. In the cold winter months, they migrate south and rely on available, but less nutritious food, such as lichen. Increased snowfall during the entire winter in southern areas would result in reindeer having to

- A. return to their summer feeding area.
- B. hibernate until the snows have stopped.
- C. hunt for organisms such as small rodents.
- D. move to other areas to compete for resources.

17. Black bears and white-tailed deer are sometimes found in the same habitat, but they occupy different niches. Which best explains the difference between habitat and niche?

- A. Habitat is where the animal finds food, but niche describes its physical characteristics.
- B. Habitat is where the animal hibernates, but niche determines how well it competes.
- C. Habitat is where the animal lives, but niche defines its role in the ecosystem.
- D. Habitat is where the animal sleeps, but niche explains how it defends itself.

18. The diagram below shows a partial terrestrial food web.



Based on the diagram, which of the following would most likely happen if a disease caused the snake population to become extinct?

- A. The owl population would decrease.
- B. The rabbit population would increase.
- C. The grass population would increase.
- D. The mouse population would decrease.

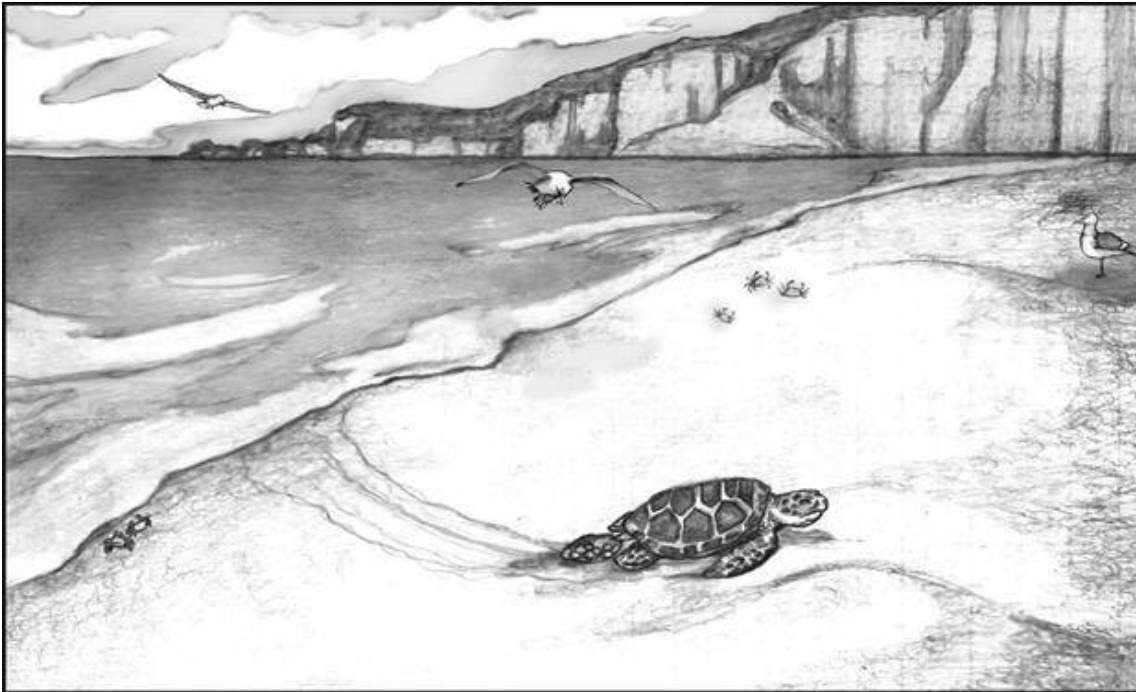
19. A certain species of snake in an ecosystem consumes frogs, salamanders, and small rodents. Which change in the ecosystem will most likely cause an increase in the snake population?

- A. A new species that eats frogs enters the ecosystem.
- B. The population of small rodents in the ecosystem decreased.
- C. The kinds of insects that salamanders eat increase in number.
- D. A kind of animal that eats the snake species increases in number.

20. Which of the following is an abiotic factor in a river ecosystem?

- A. dragonfly
- B. trout
- C. water
- D. frog

21. The picture shows a beach ecosystem.



Which scenario demonstrates the interaction of biotic and abiotic factors in this ecosystem?

- A. turtles eating crabs
- B. birds eating turtle eggs
- C. sun radiating to the ocean
- D. a turtle burying eggs in the sand

22. The chart shows some of the inhabitants of a wetland community and their food sources.

Wetland Community Organisms and
Their Food Sources

Organism	Food Source
Algae	Makes its own food by photosynthesis
Snail	Algae and dead plants
Minnow	Algae, small insects
Sunfish	Snails, minnows, small insects
Bass	Minnows, small sunfish

Fishermen have removed most of the adult bass from the wetlands community. Based on the information in the chart, which of these would most likely occur?

- A. Minnows have more difficulty reproducing.
- B. Snails need to find another food source.
- C. Young bass migrate to other areas.
- D. Sunfish become overpopulated.

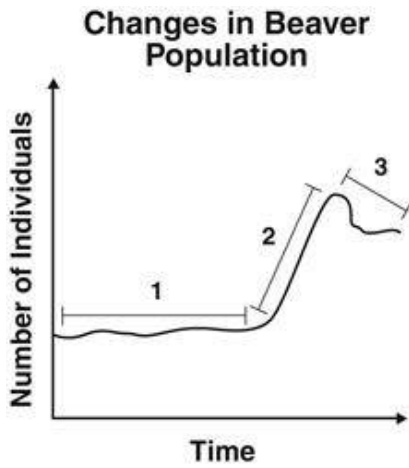
23. A marsh food chain is shown.

Grass → Grasshopper → Toad → Snake →
Hawk

According to the food chain, how would an increase in the toad population most likely affect the other populations?

- A. The grass population would decrease.
- B. The hawk population would decrease.
- C. The snake population would decrease.
- D. The grasshopper population would decrease.

24. The graph shows changes in a population of beavers over a period of 300 years.

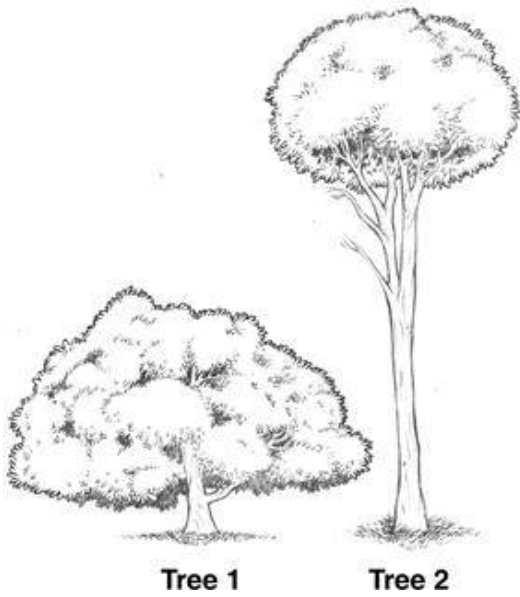


Which is the most likely explanation for the change in the beaver population during period 2?

- A. The fish population decreased.
- B. The wolf population increased.
- C. A natural predator suffered a disease.
- D. A new predator was introduced.

25. The picture shows two different white oak trees. Tree 1 grows in an open field. Tree 2 grows in a forest with many other trees.

White Oak Trees



Tree 2 grew tall because it is competing for a resource. For what resource is Tree 2 most likely competing?

- A. birds
- B. insects
- C. rain
- D. sunlight

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What is the abiotic factor in this food chain?

NLS.07.SCI.7.LS.1.1.a

RBT: Remembering

A. Sunlight

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C. Rabbit

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2. Carbon dioxide is removed from Earth's atmosphere due to

NLS.07.SCI.7.LS.1.1.a

RBT: Applying

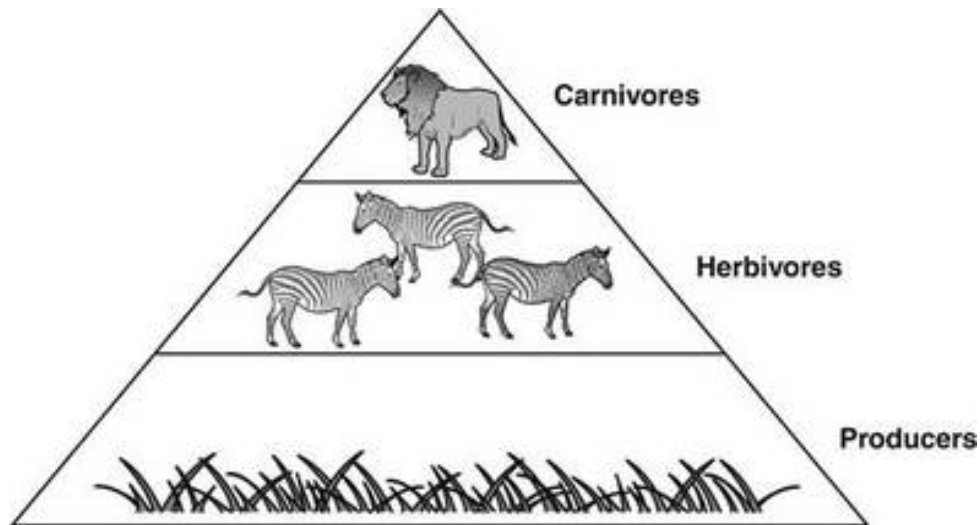
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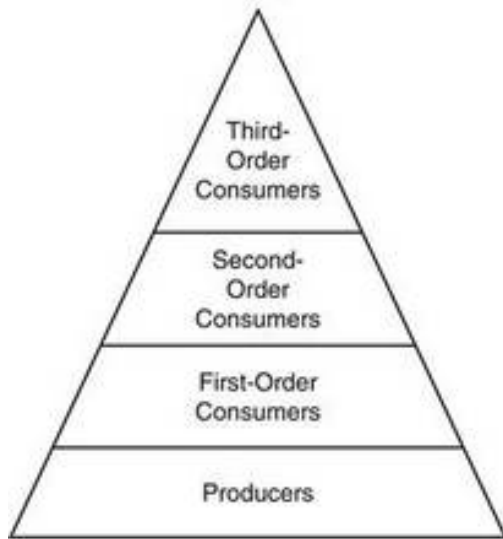
NLS.07.SCI.7.LS.1.1.b

RBT: Creating

- A. how useful energy decreases as it flows through a food chain.
- B. the carnivores need more energy than other organisms for survival.
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A Food Pyramid



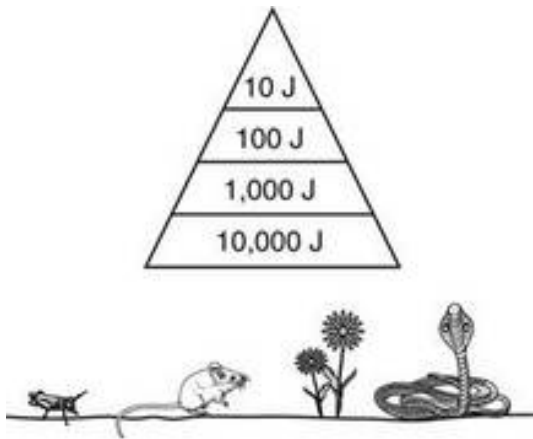
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NLS.07.SCI.7.LS.1.1.b

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RBT: Applying

- A. grasshopper
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6. Which of these best describes biomes?

NLS.07.SCI.7.LS.1.2.a

RBT: Evaluating

- A. large ecosystems that have distinctive organisms and a particular climate
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7. The table shows information about a biome.

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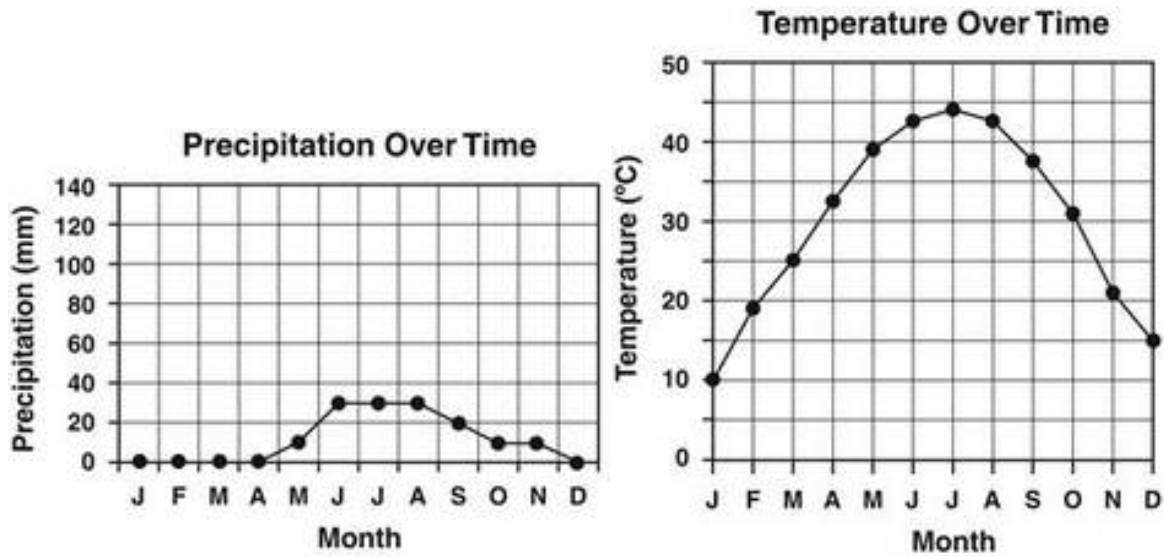
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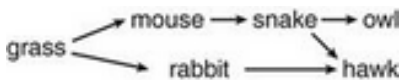
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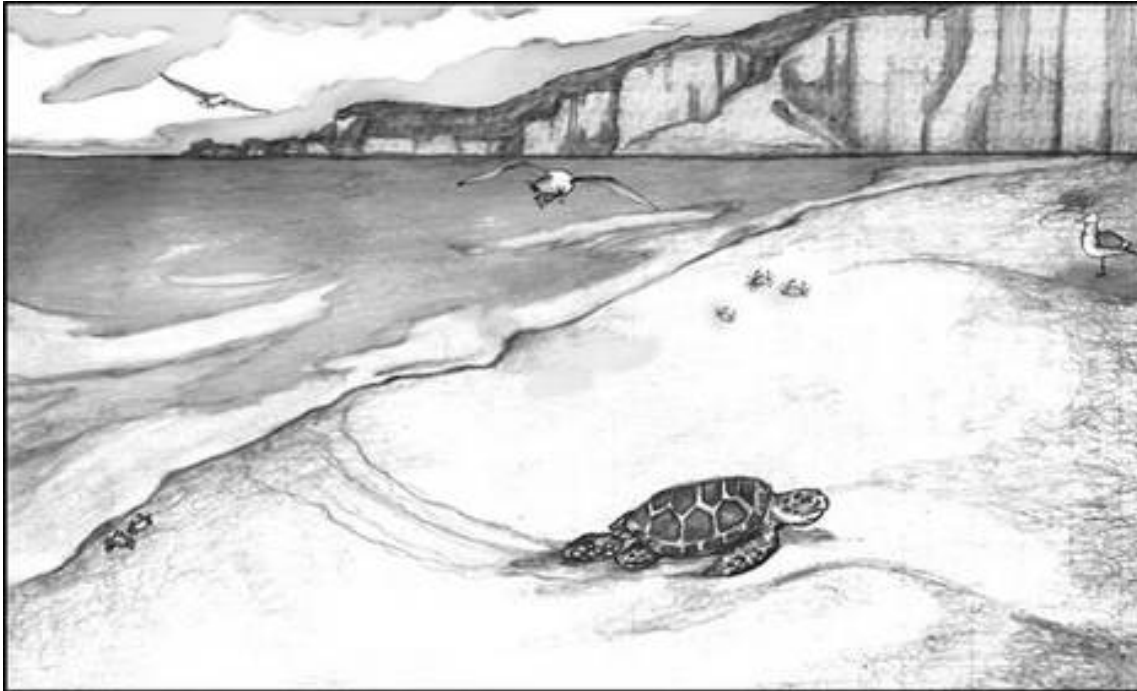
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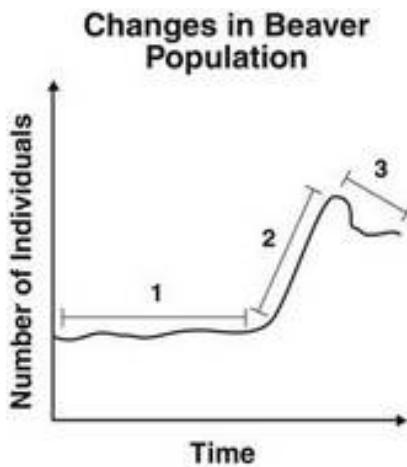
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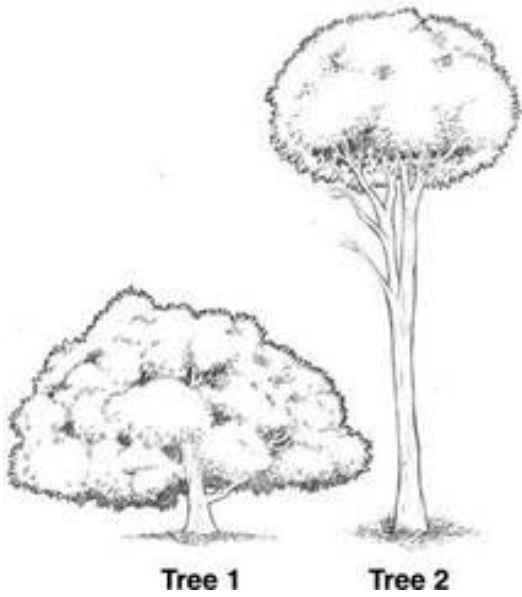
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- A. birds
- B. insects
- C. rain
- D. sunlight