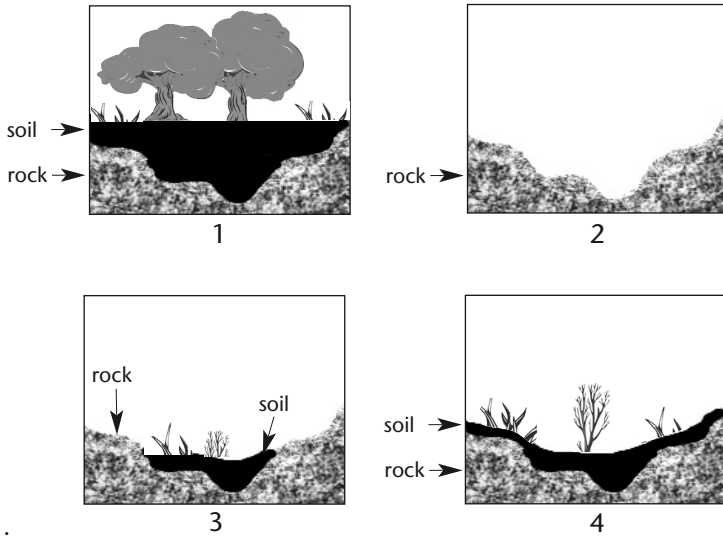


1. Look at the pictures below.



Which of the following shows the correct sequence of events in the development of an environment?

- A 2, 4, 1, 3 C 1, 4, 3, 2
B 3, 2, 4, 1 D 2, 3, 4, 1

2. The picture below shows a jackrabbit and a lizard in a desert environment.

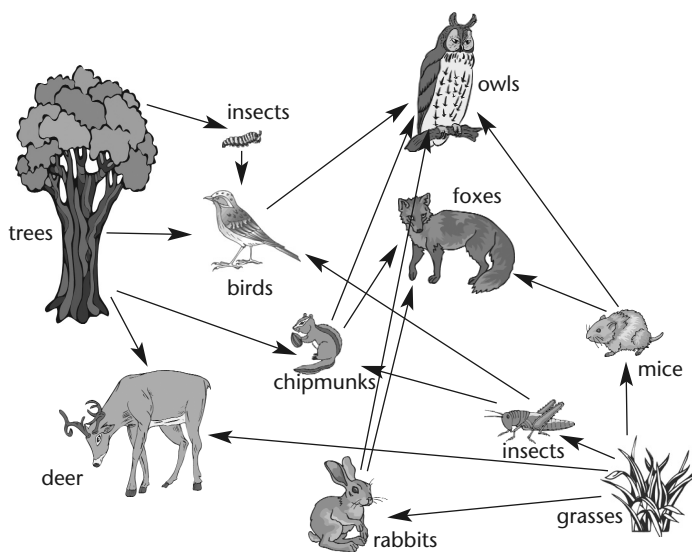


In the desert environment, the jackrabbit and lizard would most likely compete for—

- A air
B food
C space
D water

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Use the diagram below and your knowledge of science to answer questions 3 and 4.



3. Based on the diagram, it is clear that all the animals in the food web obtain energy by—

- A absorbing sunlight
B producing their own food
C consuming other organisms
D taking nutrients from the soil

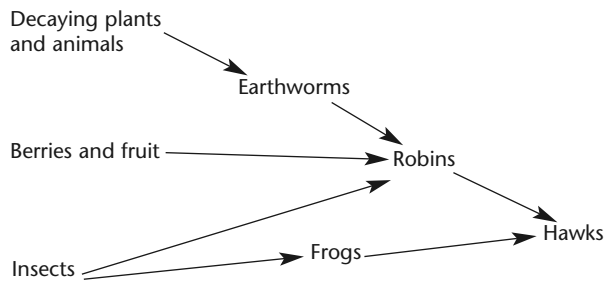
4. What would most likely happen if the fox population suddenly disappeared?

- A Rabbits and insects would eat more grasses.
B The deer population would increase dramatically.
C A different animal would replace the fox in the food web.
D The rabbit and chipmunk population would increase at first.

Use the information below and your knowledge of science to answer questions 1 and 2.

DDT

During the 1950s, DDT (a pesticide) was used to control beetles carrying Dutch elm disease. In places where DDT was used, scientists discovered high levels of the pesticide in earthworms. Birds that eat earthworms are particularly sensitive to DDT. The diagram below shows a simple food web that includes earthworms.



- Based on the information above, which of the following conclusions could be made about the areas where DDT was found in earthworms?
 - The number of robins increased.
 - The number of robins decreased.
 - The robin population disappeared.
 - Robins avoided eating earthworms.
- Based on the information above, which of the following is most likely?
 - Hawks and frogs were not affected by the DDT.
 - DDT only affected the animals lowest in the food web.
 - Organisms migrated from areas where DDT was used.
 - The survival of species other than earthworms was threatened where DDT was used.

- Which of the following represents an adaptation that allows an animal to adjust to changes in its environment?
 - Efficiency
 - Migration
 - Production
 - Symbiosis

The diagram below shows a model of inheritance. Use the diagram and your knowledge of science to answer questions 4 and 5.

	F	f
F	FF	Ff
f	Ff	ff

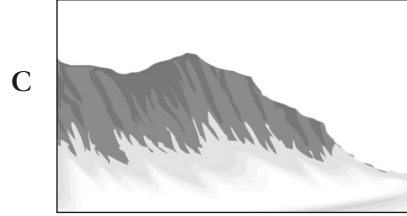
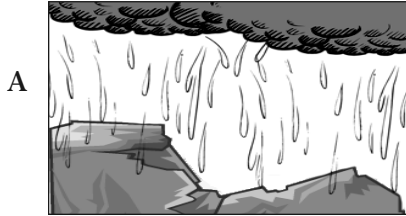
Key
F = Freckles
f = No freckles

- For the model above, what is the genetic makeup of the parents?
 - FF and ff
 - Ff and Ff
 - FF and Ff
 - Ff and ff
- Based on the diagram, what percentage of the parents' children would be expected to have freckles? Record and bubble in your answer.

				.		
0	0	0	0		0	0
1	1	1	1		1	1
2	2	2	2		2	2
3	3	3	3		3	3
4	4	4	4		4	4
5	5	5	5		5	5
6	6	6	6		6	6
7	7	7	7		7	7
8	8	8	8		8	8
9	9	9	9		9	9

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1. Over time, the earth's surface undergoes a natural break-down process called weathering. Which of the following pictures does NOT show an example of weathering?



Use the following information and your knowledge of science to answer questions 2 and 3.

Zebra Mussels

Zebra mussels (*Dreissena polymorpha*) originated in the Balkans, Poland, and the former Soviet Union. These mussels first appeared in North America in 1988 in Lake St. Clair, a small water body connecting Lake Huron and Lake Erie. The mussels have steadily invaded America's rivers and lakes since then. Biologists believe the zebra mussels were picked up in a freshwater European port in the ballast water of a ship and were later discharged into the Canadian side of Lake St. Clair.

Zebra mussels get their name from the striped pattern of their shells, though not all shells bear this pattern. A female zebra mussel can lay over one million eggs in a spawning season. Grown zebra mussels are usually about fingernail size, but they can grow to a maximum length of nearly two inches.

Zebra mussels attach to almost any hard surface, either natural or manmade. For example, they can grow and clog pipes until the water stops flowing. On boats, they may attach to the hull, motor, or any item immersed in the water.

Source of Information: U.S. Department of the Interior

2. Which of the following was the most likely impact of the introduction of zebra mussels to Lake St. Clair?
- A The quality of the lake's water improved.
 - B Mussels native to the lake increased in number.
 - C Other kinds of mussels disappeared from the lake.
 - D The zebra mussels disrupted the food web of the lake.
3. The zebra mussels' ability to attach to almost any hard surface would most likely lead to all of the following problems EXCEPT—
- A damaging recreational boats
 - B clogging pipes at power plants
 - C decreasing the water level of the lake
 - D obscuring various underwater landscapes