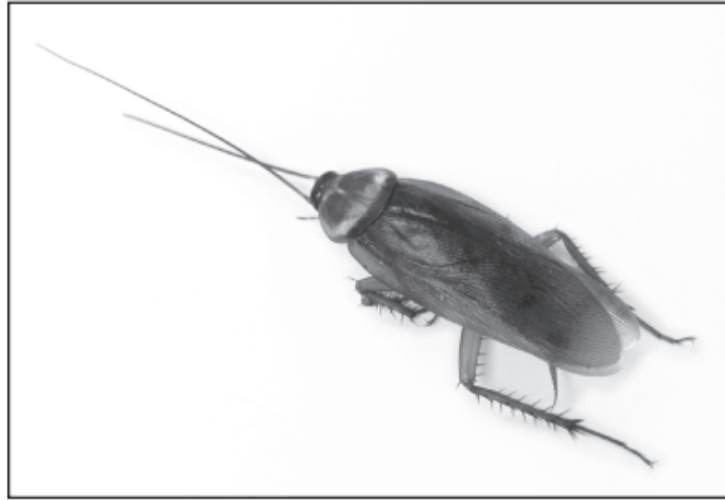


5 The whiskers of a river otter and the antennae of a cockroach are shown below.



© photobypixie777/Fotolia



© R_/Fotolia

How do structures such as whiskers and antennae benefit organisms?

- A They help the organisms detect their surroundings.
- B They help the organisms eat food quickly.
- C They help the organisms fight predators.
- D None of these

34 Some animals, such as lions, have pointed teeth, while other animals, such as cattle, have flat teeth.



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© Eric Luedtke/Fotolia

The difference in the shape of these animals' teeth is most closely related to —

- F the type of organisms the animals consume
- G the sounds the animals make
- H the habitat the animals live in
- J the type of predators the animals have

13 The shells of sea turtles are flatter than the shells of land turtles.



Sea turtle



Land turtle

Sea turtles are also different from land turtles because sea turtles cannot pull their head or limbs into their shell to protect themselves from predators. Instead, the head, shell shape, and flippers of sea turtles help them escape from predators mainly by allowing them to —

- A** dig deep holes for their eggs
- B** swim and dive easily
- C** blend into their surroundings
- D** hold their breath for several minutes

- 23** Many types of grazing animals live in Africa. The pictures show two of these animals that have about the same mass and height at the shoulder.



Thomson's gazelle



Gerenuk

Based on observations of the pictures of these animals, which statement describes an advantage that only one of these animals has in obtaining food?

- A** The Thomson's gazelle has a body shape that allows it to run faster when chasing prey.
 - B** The Thomson's gazelle has horns that can be used to move tree branches out of the way to reach food.
 - C** The gerenuk has a sharp, pointed nose for detecting the scent of predators.
 - D** The gerenuk has a long neck that allows it to reach high to eat from trees.
- 16** The ocotillo is a desert plant with long, straight branches. Its leaves are small and appear for only a short time after a rain. Most of the time, the branches of the ocotillo do not have leaves. Maple trees grow in areas where water is more abundant than in the desert. Maple leaves can be very large and are present for most months of the year.



Ocotillo leaves

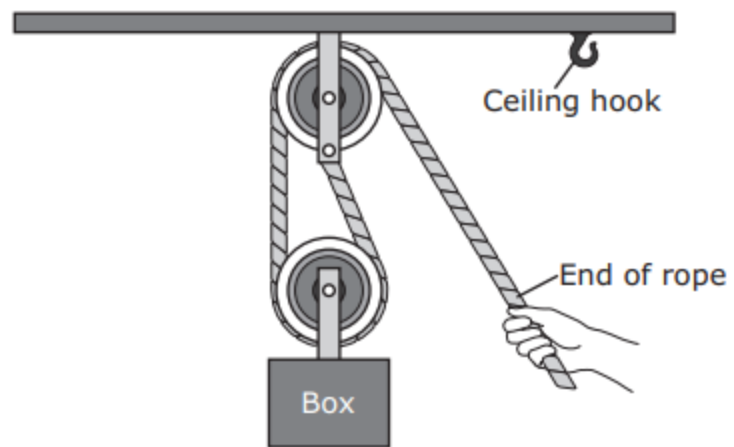


Maple leaves

Ocotillo plants are better adapted for surviving in the desert than maple trees because the characteristics of ocotillo leaves —

- F** allow more sunlight to reach the soil
- G** prevent the plant from producing flowers
- H** encourage the release of carbon dioxide from the stems
- J** reduce the amount of water lost through evaporation


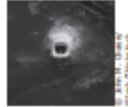


36 The picture below shows a pulley system that can be used to lift a box.



Which of these should a person do to lift the box?

- F** Tie the end of the rope to the box
- G** Tie the end of the rope to the ceiling hook
- H** Pull the end of the rope downward
- J** Allow the end of the rope to move upward

- 8 The table gives information about four types of fish. These fish all have mouth structures that allow them to eat different types of food.

Fish	Photograph	Description of Mouth
Parrotfish		<ul style="list-style-type: none"> Jaws form a strong, parrot-like beak Grinding plates inside the mouth
Koi		<ul style="list-style-type: none"> Soft mouth with no teeth Mouth located on the underside of the head
Goby		<ul style="list-style-type: none"> Small mouth Lower jaw extends out farther than upper jaw
Seahorse		<ul style="list-style-type: none"> Small mouth Mouth located at the end of a long, tube-like snout

Which of these fish has mouth structures that allow it to eat algae by taking large bites of the hard coral on which the algae grows?

- F Parrotfish
 G Koi
 H Goby
 J Seahorse

- 31 Newly hatched chicks of many types of birds, such as parrots, are covered in soft, fluffy down feathers. These feathers contain many small spaces where air gets trapped.

In some animal species, such as Arctic foxes, the fur covering the animal's body consists of hollow strands of hair filled with air.

The primary role of the air trapped in the down feathers and fur is most likely to —

- A act as a cushion to prevent injuries from falls
 B decrease the amount of energy needed for running or flying
 C provide a layer of insulation to help control body temperature
 D supply oxygen to be absorbed through the skin for transport to the lungs

- 15 This chart describes some beak and toe adaptations that help four bird species survive in different habitats.

Bird 1	Bird 2	Bird 3	Bird 4
<ul style="list-style-type: none"> • Long, sharp beak for hammering into tree trunks • Special toe placement that helps with support on tree trunk 	<ul style="list-style-type: none"> • Sharp beak for spearing fish • Long toes for walking on mud and grasping plants 	<ul style="list-style-type: none"> • Heavy, pointed beak with sharp edges for splitting open seeds • Special toe placement that helps with perching and hopping 	<ul style="list-style-type: none"> • Grooved beak for straining food from water • Webbed toes for moving through water

Based on these adaptations, which table best matches the bird species to its environment?

A

Species	Type of Environment
Bird 1	Prairie
Bird 2	Forest
Bird 3	Pond
Bird 4	Marsh

C

Species	Type of Environment
Bird 1	Prairie
Bird 2	Marsh
Bird 3	Pond
Bird 4	Forest



B

Species	Type of Environment
Bird 1	Forest
Bird 2	Pond
Bird 3	Marsh
Bird 4	Prairie

D

Species	Type of Environment
Bird 1	Forest
Bird 2	Marsh
Bird 3	Prairie
Bird 4	Pond

- 35 The raccoon can be found in most areas of Texas. The coati has a smaller territory and is found from Big Bend to Brownsville. These two species are related. The chart shows the characteristics of these two species.

Raccoon	Coati
 <ul style="list-style-type: none"> • Sharp teeth and powerful claws • Paws with flexible toes • Good eyesight at night • Eats fruits, berries, insects, rodents, frogs, fish, eggs, corn • Long fluffy tail 	 <ul style="list-style-type: none"> • Sharp teeth and long claws • Paws with flexible toes • Good eyesight at night • Eats insects, lizards, frogs, roots, fruits, nuts, and eggs • Long tail that helps in balancing

Which statement does NOT describe how the body structures of these animals help them escape predators?

- A** Paws with long claws on flexible toes help them climb trees.
B Sharp teeth allow them to catch prey on land or in water.
C Long tails allow them to balance on branches in trees.
D Good eyesight helps them to see at night.

26 The picture shows two animals that live in Texas.



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© texracz/Stockphoto #7216571



Texas Nine-banded Armadillo

Texas Horned Lizard

Both animals have structures that help them survive. Which sentence best describes the function of the structures that these animals have in common?

- F** Both animals have small eyes that help them see clearly at night.
 - G** Both animals have tough skin to keep them warm in cold weather.
 - H** Both animals have sharp claws that help them to dig in sand.
 - J** Both animals have pointed tails to attract predators.
- 31** Unlike humans, otters have special flaps that close off their nostrils and ears. These flaps help otters survive in an environment that is —
- A** terrestrial
 - B** snowy
 - C** windy
 - D** aquatic

- 3 After a trip to an aquarium, some students compared the tail fin of sharks with the tail fin of bony fish. The students made a chart listing characteristics of each type of tail fin.

Shark Tail Fin	Bony Fish Tail Fin
<ul style="list-style-type: none"> • Fin with two lobes of different sizes • Stiff fin • No bone in fin • No muscle control of fin • Can swim only forward 	<ul style="list-style-type: none"> • Fin with two lobes of the same size • Flexible fin • Thin, bony spines in fin • Control of fin by muscles • Can swim forward and backward
	

Based on this information, what is most likely an advantage of the bony fish tail fin over the shark tail fin?

- A It is easier for a bony fish to change direction quickly since muscles control the movement of the tail fin.
- B The bones in the tail fin help a bony fish sink to lower depths in the water when searching for food.
- C The flexible tail fin is fanned by the water, so a bony fish uses less energy to swim.
- D The thin spines of the tail fin prevent a bony fish from being seen by larger predator fish.

- 20 The leaves of two types of plants that live in different environments are shown in the pictures.



Giant water lily leaves

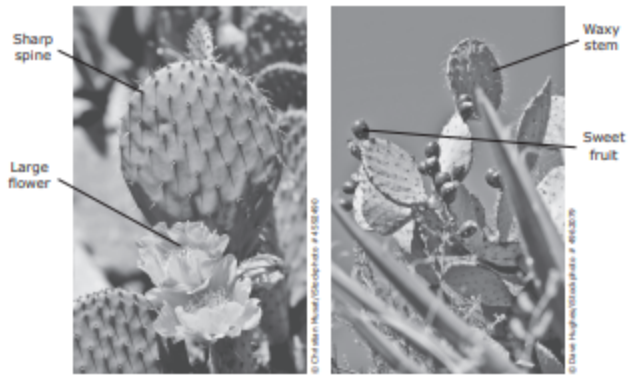


Mesquite leaves

The leaves of both plants have different structures. What differences in the structure of the leaves of these plants likely help them survive in their environments?

- F The pan-like shape of the giant water lily leaves helps them catch rainwater. The slim shape of the mesquite leaves helps them avoid sunlight.
- G The broad shape of the giant water lily leaves helps them stay on the water surface. The slim shape of the mesquite leaves helps them prevent water loss.
- H The pan-like shape of the giant water lily leaves helps them attract small fish. The slim shape of the mesquite leaves helps them avoid herbivores.
- J The broad shape of the giant water lily leaves helps them attract aquatic birds. The slim shape of the mesquite leaves helps them attract pollinators.

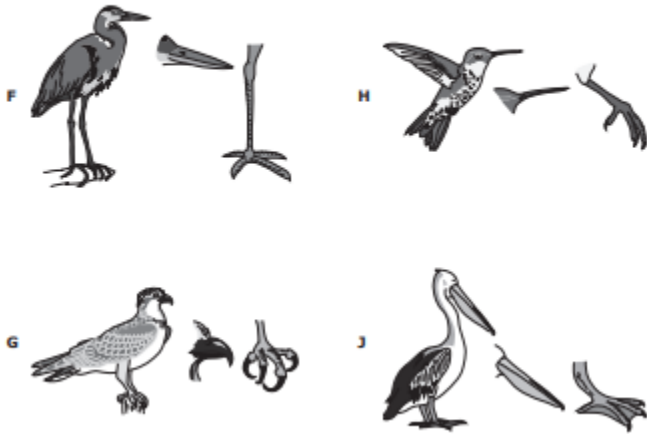
Prickly Pear Cactus



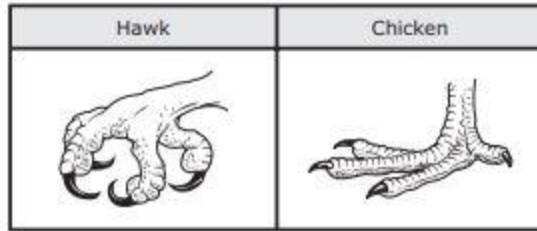
22 Which two traits best help a cactus conserve water in the dry conditions of a West Texas desert ecosystem?

- F Large flowers and sweet fruit
- G Sweet fruit and sharp spines
- H Sharp spines and waxy stems
- J Waxy stems and large flowers

44 Eagles catch fish in rivers with their talons. They fly with the fish to a tree branch and tear the fish into small pieces. Which bird most likely catches and eats its food the way an eagle does?



15 The foot of a hawk and the foot of a chicken are shown.



The difference between the shapes of their feet is most likely associated with the —

- A predators that hunt them
- B climate in which they live
- C way they get their food
- D distance they can fly

21 Butterflies have very long, tubelike tongues. Hummingbirds have very long tongues.



Which statement best describes why butterflies and hummingbirds both have long tongues?

- A Butterflies and hummingbirds both migrate.
- B Butterflies and hummingbirds are attracted to brightly colored flowers.
- C Butterflies and hummingbirds eat the same food.
- D Butterflies and hummingbirds have the same predators.