Animal Adaptations

What You Already Know

Animals have adaptations for survival. An adaptation is a trait that allows an organism to survive better in its environment. Adaptations protect animals from predators as well as from severe weather, starvation, and other threats.

Useful traits in the body parts of an animal are called structural adaptations. Behavioral adaptations are behaviors that are inherited. Behavioral adaptations are sometimes called instincts. Instincts do not have to be learned.

Animal species develop adaptations through the process of natural selection. The strongest and healthiest animals are the ones most likely to survive and have offspring. Those offspring are likely to inherit the useful adaptations of their parents. Over time, the adaptations that made a group of animals strong and healthy become common throughout the population. If a species does not adapt, it will become extinct.

Lions

The African lion can be found mostly in the grasslands of Africa. It is a fierce predator. Many of its adaptations help it hunt.

The most recognizable structural adaptation of the male lion is his thick mane. The mane helps the lion look bigger and protects his neck from an attack. The rest of the lion’s body is covered in yellow-brown fur. This helps him hide in the similarly colored grass. Lions are nocturnal, or most active at night. At night they are able to see six times as clearly as humans can.

Lions are social cats. They live in groups called prides. In a pride, females do most of the hunting. They work together to catch prey, and they share it with the pride. Males protect the cubs while the females hunt.
While the lion is adapted to be a strong predator, it must rest to save the energy it needs to hunt. Lions can spend up to 20 hours a day resting. During this time, the lion cubs play. Cubs learn to wrestle and pounce as they play. These behaviors later help them hunt and reproduce, improving their chances of survival.

Geese

Canada geese live primarily in Canada and the United States. In areas where lakes and rivers freeze, the geese are unable to swim and find food. The geese migrate, or move, together south to warmer places where food is available. Successful migration is the result of physical and behavioral adaptations.

A flock of geese migrates along the same route every year. The group travels in a V-shaped formation. Geese use less energy in this formation, so they can fly longer distances.

The Canada goose has many structural adaptations to help it feed. Its webbed feet help it swim efficiently as it searches for food. The goose’s long neck enables it to search below the surface of the water. Its bill has jagged edges for straining water and a spiny tongue for sifting through food. The front of the goose’s bill can cut grass, seaweed, or hard kernels.

If a goose is threatened, it opens its wings as widely as possible. This makes it look bigger to predators.
Sea Turtles

After hatching under a sand dune, a young sea turtle knows to start digging upward through the sand. It will reach the surface of the sand in three to seven days. The hatchling instinctively knows to wait for nightfall before crossing the beach to the water. Upon reaching the ocean, it will swim quickly to reach deeper water, where there are fewer predators. Every move of the young sea turtle is a behavioral adaptation. The information is contained in its genes. Parents pass these instincts on to their young.

Sea turtles also have many structural adaptations for survival. Their front flippers are long and paddle-shaped for swimming. A sea turtle moves its front flippers with powerful, wing-like strokes. The flippers are flat and can be rotated so that the turtle can swim in the water and crawl on land.

Sea turtles have hard shells that protect their soft bodies. Unlike many other turtles, though, the sea turtle cannot pull its head or limbs into its shell. This adaptation helps the turtle glide better in the water.

Sharks

Sharks have many structural adaptations for survival in the ocean. A shark has fins and a sleek body that help it glide through water. This body shape requires the shark to use only a little energy to swim.

Sharks also have many sharp teeth. If a shark breaks a tooth while eating, a new one grows in its place. Some sharks have different adaptations. For example, the hammerhead shark has a hammer-shaped head. The shape enables the shark to look on its left and right for food. The mako shark is very fast and is able to jump out of the water to catch its prey.
Most sharks live alone. There are some exceptions, though. Hammerhead sharks live in schools for protection. The large whale shark attracts many other fish. Some swim nearby for protection, and some eat the whale shark’s leftovers. Thresher sharks work together to catch fish. They use their tails to round up schools of fish.

**Ants**

Ants have been living on Earth for more than 100 million years and can be found almost everywhere on the planet. Ants have adapted as their environments have changed over time.

Ants live in large colonies, or groups of the same kind of organism living together. Some colonies consist of millions of ants. Ants communicate by touching each other with their antennae. They also leave scent trails for other ants to follow.

Ants have jaws, eyes, and antennae on their heads. Their eyes are made up of many lenses. The lenses help the ants see movement very well. The antennae help the ant smell, touch, taste, and hear.

Ants build many types of homes. Some ants build simple mounds out of dirt or sand. Others add small sticks for protection from rain. Army ants live in temporary nests that they make by linking together their own bodies! An ant knows by instinct how to build the right home for its colony.
Platypuses

The platypus is an animal with an unusual combination of adaptations. It has a bill and webbed feet like a duck’s. It also has a broad, flat tail like a beaver’s and a sleek, furred body like an otter’s. The thick fur repels water. Each of the other structural adaptations helps the duckbill platypus survive in water too.

The platypus has a clumsy walk on land. The webbing on its feet pulls back and uncovers claws that help the platypus move on the ground. The claws also help the platypus build dirt burrows on the shore. The platypus is one of only two mammals that lay eggs.

The platypus glides through the water, looking for food. It paddles with its front webbed feet and steers with its back feet and tail. Extra skin covers its eyes and ears. Its nostrils close to keep out water. These adaptations help the platypus stay underwater.

The platypus hunts underwater. By instinct, it knows to scoop up small rocks with the worms, insect larvae, and shellfish it catches. The platypus stores the rocks and food in its cheek pouches. It uses the small rocks to mash up food after it surfaces.
## Glossary

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
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<tbody>
<tr>
<td><strong>colony</strong></td>
<td>a group of the same kind of organism living together</td>
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<tr>
<td><strong>flock</strong></td>
<td>a group of birds or animals living together</td>
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<tr>
<td><strong>hatchling</strong></td>
<td>an animal newly hatched from an egg, such as a baby sea turtle</td>
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<tr>
<td><strong>instinct</strong></td>
<td>a behavioral adaptation that does not have to be learned</td>
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<tr>
<td><strong>migrate</strong></td>
<td>to move to a new place</td>
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<tr>
<td><strong>offspring</strong></td>
<td>a new animal that is a result of reproduction</td>
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<tr>
<td><strong>pride</strong></td>
<td>a group of lions living together</td>
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<tr>
<td><strong>school</strong></td>
<td>a group of fish living together</td>
</tr>
<tr>
<td><strong>structural adaptation</strong></td>
<td>a useful trait of the body parts of an adaptation animal</td>
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