READING MATERIAL

Read About Adaptations

DEFINITIONS OF PLANT & ANIMAL ADAPTATIONS

An *adaptation* is a characteristic of a living thing that helps it survive in its environment. An *environment* includes everything living and non-living in the area that a plant or animal lives in. All living things have adaptations, even humans.

To better understand how adaptation work...

LET'S BREAK IT DOWN!

Animals adapt to their environment.

Adaptation is all about survival. When the environment changes dramatically, some animals die, others move to another location, and some develop adaptations over generations that help them survive.

Sometimes the environment changes dramatically due to a natural disaster and sometimes it changes slowly over thousands of years. In each case, over many generations, animals may develop new adaptations to help them survive in their new home.

Animals adapt to protect themselves.

Many different animals have adaptations that protect them from predators. Some of these adaptations are behavioral, allowing them to act a certain way to avoid being seen by a predator.

For example, sloths move very slowly through trees making them hard to spot. Their long, hairy bodies have algae growing on them to blend in with the trees.

Some adaptions allow animals to escape, such as lizards with tails that snap off when a predator tries to capture it.

Other adaptations make animals difficult to eat, such as an armadillo. This unique animal is covered by “armored” plates and it can roll into a tight ball when it feels threatened.

Adaptations help animals obtain food.

Hummingbirds have long, skinny beaks that help them drink nectar deep inside of flowers. This special adaptation, plus its ability to hover over flowers, make the hummingbird very specialized. Since it can use a food source that most other birds cannot get to, it does not need to compete with most other birds for food.

Other birds have interesting beak adaptations that help them gather food. Pelicans have large pouch-like beaks to scoop up fish. Hawks have hook-like beaks to rip apart their prey. In all these cases, the special beaks help the animal survive.

Some animals have unique adaptations.

Some animals, such as giraffes, have more than one unique adaptation. A giraffe's long neck allows it to reach food sources in the Serengeti region of Africa that other land animals cannot reach. Giraffes also have very long tongues, reaching 16-18 inches. They use their tongues as tools to pull leaves from branches. Look carefully at the tip of the giraffe's tongue. The end is darker than the back! That protects the tongue from sunburn.

Echidna are found in the deserts of Australia and also have unique adaptations. Their long nose helps them locate food by sensing the electrical movements created by ants and termites. Then they use their long tongues to get into ant and termite mounds.

Their large feet are powerful digging tools which they use to bury themselves underground to keep cool.

PLANT AND ANIMAL ADAPTATION EXAMPLES

A dog's sense of smell is 1 million times more sensitive than humans. This adaptation allows them to find their food and detect territorial markings from other dogs. Some dogs are trained to use their powerful sniffers to aid in search and rescue operations.

A cat's eyes are adapted for night-time hunting. Cats also have retractable claws used for climbing, hunting, and defending themselves.

The strong leg muscles of deer help them run up to 30 miles per hour. Speed is an adaptation that animals use to escape from predators. It helps them survive.

PLANT AND ANIMAL ADAPTATIONS VOCABULARY

Adaptation	A characteristic of a living thing that helps it survive in its environment.
Environment	The environment includes everything living and nonliving in an area. For example the environment of a giraffe has grass, tress, water, other animals and non-living things like rocks and soil.
Armadillo	A mammal that is covered in armor made of bony plates. They are usually the size of a small dog and some can roll into a ball to protect themselves.
Sloth	A slow-moving mammal found in tropical forests that hang from trees and eat mostly leaves. Sloths are known for moving extremely slowly.
Predator	An animal that eats other animals.
Prey	An animal that is eaten by other animals.

PLANT AND ANIMAL ADAPTATIONS DISCUSSION QUESTIONS

Why is a giraffe's long tongue an adaptation?

Giraffe's long tongues help them obtain food in the wild, which are leaves from very tall and thorny plants. Their long tongues help them bend back the thorns to pull the leaves off without getting pricked by the thorns.

What evidence supports the argument that giraffe's tongues are protected from sunburn?

The tip of giraffe's long tongue is exposed to the sun for many hours a day as they feed. Having a dark colored tongue is thought to be an adaptation to keep the tip of the giraffe's tongue from getting sunburned.

What is an adaptation besides its tongue that helps a giraffe obtain food?

A giraffe's long neck is an adaptation that helps the giraffe reach foods that other animals can't eat, such as leaves that are very high up in trees.

What adaptations does the armadillo have to defend itself?

The armadillo has tough plates on its back to defend it from predators. The armadillo in the video also has the ability to roll into a ball to further protect its soft underside.

What types of adaptations do sloths have to help them survive?

Sloths have long arms and claws to help them hang from trees. They also have camouflage, which means they are similar in color to the trees around them, which makes it difficult for predators to see them. They also move slowly, which makes them even more difficult to see.

What adaptation do echidnas have that helps them find their food?

Echidnas have elongated noses that can sense where food is based on electrical movement of their prey. This is similar to how a shark can sense fish hiding around them.