READING MATERIAL

Read About Structure and Function

STRUCTURE OF LIVING THINGS DEFINITION

A *structure* is anything made up of parts held together. Plants and animals have many structures that help them survive. Some structures are internal, like the lungs, brain, or heart. Other structures are external, like skin, eyes, and claws. Some structures are unique, like the long neck of a giraffe. Other structures are more common, like a heart.

To better understand the structure and function of living things....

LET'S BREAK IT DOWN!

Animal Structure: All animals have structures that help them survive.

All animals have structures that help them survive in their environment. Some structures help animals find food, like the amazing eyesight of an eagle. Other animals have camouflage to help them hide from predators. Some structures are very unique to certain animals, like the water monitor lizard's long, forked tongue. They use it to smell and find food.

One special structure that insects have is their hard outer skeleton, called an *exoskeleton*. Exoskeletons are like wearing armor. It protects insects from predators and keeps insects from drying out. Exoskeletons can also have special structures on them, like the horns on some beetles that are used to compete with other beetles for mates.

Plant Structure: Plants also have structures that help them survive.

Plants have different parts, like roots, stems, leaves, flowers, and fruit. These structures help them survive.

Some plants have really long roots that help the plant gather water from deep below the surface of the Earth.

Other plants have flowers that are the perfect shape for insects to visit and help with pollination.

Plants that live in really dry areas, like a desert, have special leaves. The spines on a cactus help protect it from animals that might try to eat the cactus in order to get the water stored inside.

Animal and Plant Structures: Each structure has a specific function.

Each plant and animal structure has a special purpose. When you think of elephants, you probably envision their long trunks and floppy ears. Both of those structures have a specific function that helps elephants survive. An elephant's trunk is a special structure that helps gather food. The big floppy ears help elephants hear noises that are far away.

Plant structures also have specific functions. Corn has special roots that help support the plant and keep it from falling over when fruit is growing on it.

Pine trees have leaves that look like needles instead of big and flat leaves like an oak tree. This helps them conserve water.

EXAMPLES OF THE STRUCTURES & FUNCTIONS OF LIVING THINGS

Whip spiders capture prey with unique legs. The special claw-like grabbers are a specialized structure used for gathering food.

Geckos have the ability to stick to almost any surface. Scientists were inspired by the gecko to create a super sticky tape that is really strong but doesn't leave residue when it is taken off surfaces.

The "sea coconut" is the largest and heaviest seed in the world. These extra large seeds hold nutrients for the growing plant, and they also float so they can travel far across the ocean.

ANIMAL AND PLANT STRUCTURES VOCABULARY

Structure	Anything made up of a number of parts held together in a particular way.
Internal Structures	Structures found on the inside of living things, such as the heart, lungs or brain.
External Structures	Structures found on the outside of living things like skin, eyes and claws.
Whip Spider	Also called a tailless whip scorpion, they are harmless to humans. They have eight legs but only six are used for walking. They are found in tropical regions worldwide and like to come out at night. They eat mostly insects and have many interesting internal and external structures discussed in the video.
Exoskeleton	A type of skeleton found on the outside of a living thing that covers its body for protection. Common examples include ants, beetles and crabs. While an exoskeleton provides protection, it also needs to be shed for an animal to grow larger.
Endoskeleton	"Endo" means internal or within so an endoskeleton is a skeleton that is on the inside of a

living thing. Humans and all mammals have endoskeletons. Bugs and beetles for example have exoskeletons.

ANIMAL AND PLANT STRUCTURES DISCUSSION QUESTIONS

What are some of the functions of Bob the Monitor Lizard's claws?

Bob's claws are used for digging, climbing and catching prey.

What structure gives the Monitor Lizard an enhanced sense of smell?

Bob the Monitor Lizard has a forked tongue, which enhances his sense of smell and helps him find prey. This is the same type of tongue a snake has. It is very sensitive to particles of matter in the air.

What are some of the structures and functions of the whip spider?

The whip spider has big arm-like jaws at the front of its body to help it catch prey. It also has a pair of very long thin legs covered in hairs that it uses to sense things in its environment.

What is an exoskeleton?

Exoskeletons are hard structures found on the outside of the body of some animals. Common examples include ants, beetles and crabs.

What is the function of the coloring on a butterfly wing?

Some butterfly wings are colored to look exactly like a leaf, which camouflages it and protects it from predators.

What are some functions of different plant seed structures?

Some seeds are large to provide lots of nutrients to the new plant that grows from it. Some seeds are tiny and light enough to be moved long distances by the wind. Some plants have seeds that float and can be carried long distances on ocean currents.