

Springboard^{into} Comprehension

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Identifying Detail Why Are There Bears in the Sky?

Main Idea Show Some Backbone

Sequencing Life on Venus

Compare and Contrast Communities of the Desert

Fact and Opinion The Birds at Waders Flat

Cause and Effect Global Changes



Show Some Backbone



Written by Victoria St John

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Show Some Backbone

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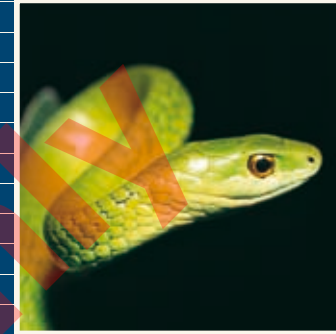
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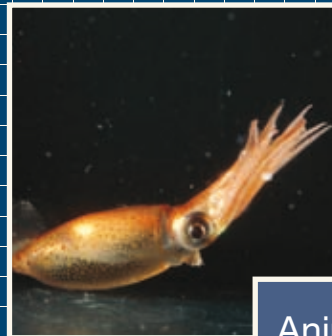
Introduction

Animals with a backbone are called **vertebrates**. Amphibians, reptiles, birds, fish, and mammals are all vertebrates. Vertebrates have other internal bones as well. All vertebrates also have internal organs, such as a heart. They all have muscles attached to their bones. Strings of tissue that send signals, or **nerves**, connect their brain and their body.

Animals without a backbone are called invertebrates. They do not have internal bones like vertebrates.



Vertebrates come in all shapes and sizes.



Animals such as squid, worms, and insects are invertebrates.

Features of Vertebrates

The Body

Vertebrates have a body with a head and a trunk. Most vertebrates also have a tail. Most have two pairs of limbs. The limbs have different shapes. In some vertebrates, such as birds, one pair of limbs are wings. Some vertebrates, such as apes, have no tail.

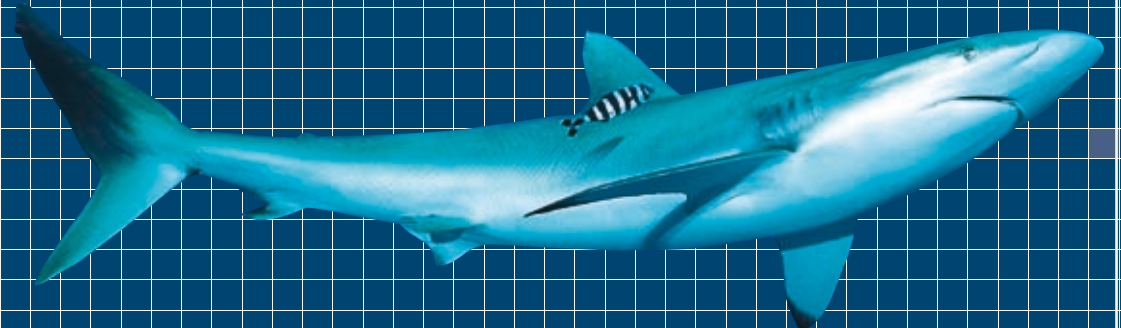
A snake is a vertebrate with no limbs at all.



The framework that supports an animal's body is called the **skeleton**. The skeletons of vertebrates are made up of bones. Their skeleton is inside their body. The **skeleton** keeps the body's shape. It also protects the organs inside the body. The flesh of the body protects the skeleton.

Bones are hard tissue that has calcium in it. As well as bones, the skeleton has flexible tissue that is softer than bone, called **cartilage**. People's ears and nose have cartilage. It keeps the shape of the ears and nose.

A shark's skeleton has cartilage, but no bones.



Like all vertebrates, people have a backbone, or **spine**. The bones that make up the spine are called vertebrae. The vertebrae protect the cord of nerves inside the spine, or **spinal cord**. The spinal cord has many nerves that carry signals between the brain and the body.



A person's spine is in the middle of their back.

Location of the Spine

