



# Jr. Animal Scientist

OCTOBER 2019



# SKELETONS!



# Types of

## Invertebrates

Animals that do not have an internal skeleton. These animals, such as insects and crustaceans, have external body coverings made of hard chitin and other tough proteins, known as exoskeletons.

### Why is the skeletal system important?

Your skeleton gives your body protection and support. The skeletal system works very closely with the muscular system to help you move. Your bones create a framework to which muscles and organs can connect. The skeleton is very important for protection, especially of the head! The bones of your skull protect the all-important brain, and your ribs protect most of your internal organs.

### How does the body work with the skeletal system?

Your muscles are connected to your skeleton. As you move your muscles, they contract to move your skeleton. For example, your knees bend thanks to muscles in your legs. To keep these movements smooth, tissue called cartilage provides a softer surface where bones meet. Your bones also keep your blood healthy. The marrow inside bones helps produce both red and white blood cells.



# Skeletons

## Vertebrates

Animals that are supported by internal skeletons, also known as endoskeletons. These skeletons are made from calcium and various organic tissues. Humans, cats, dogs and cows are all examples of vertebrates.

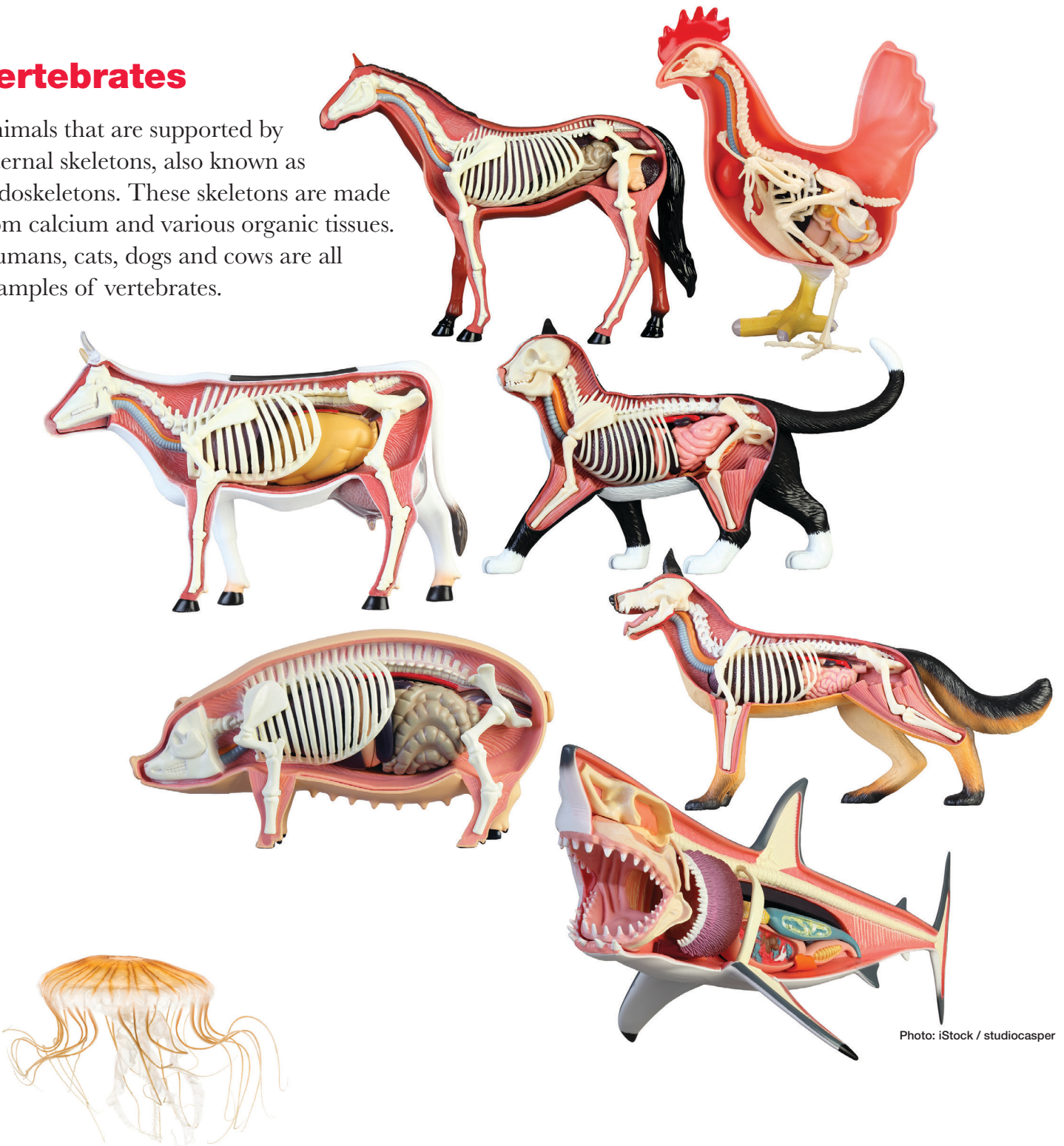


Photo: iStock / studiocasper

**Fun Fact:** Animals like soft-bodied jellyfish, sponges and worms do not have a hard skeleton. Their skeletal system is made of fluids inside tubes and is known as hydrostatic.

## Bones

The skeletal system is made of both **compact** and **spongy** bones. Compact bones house tissues, blood vessels, nerves and living cells. Working together, the tissues, blood vessels, nerves and living cells rebuild and reshape the bone after a stress or break. Spongy bone is light and strong. This bone makes up most of the limbs, ribs, vertebrae and skull. Red blood cells are made and stored in spaces inside spongy bones.

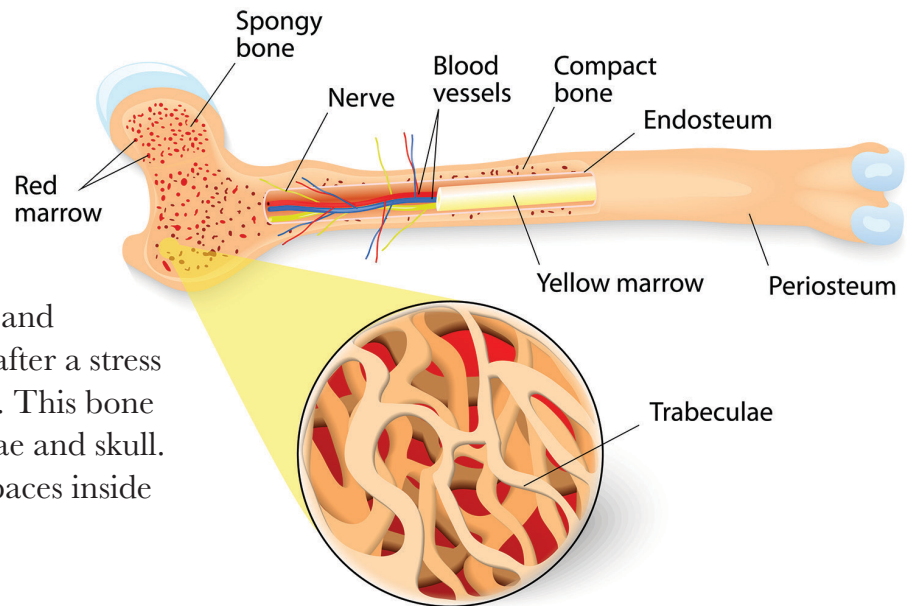


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## Bird Skeletons

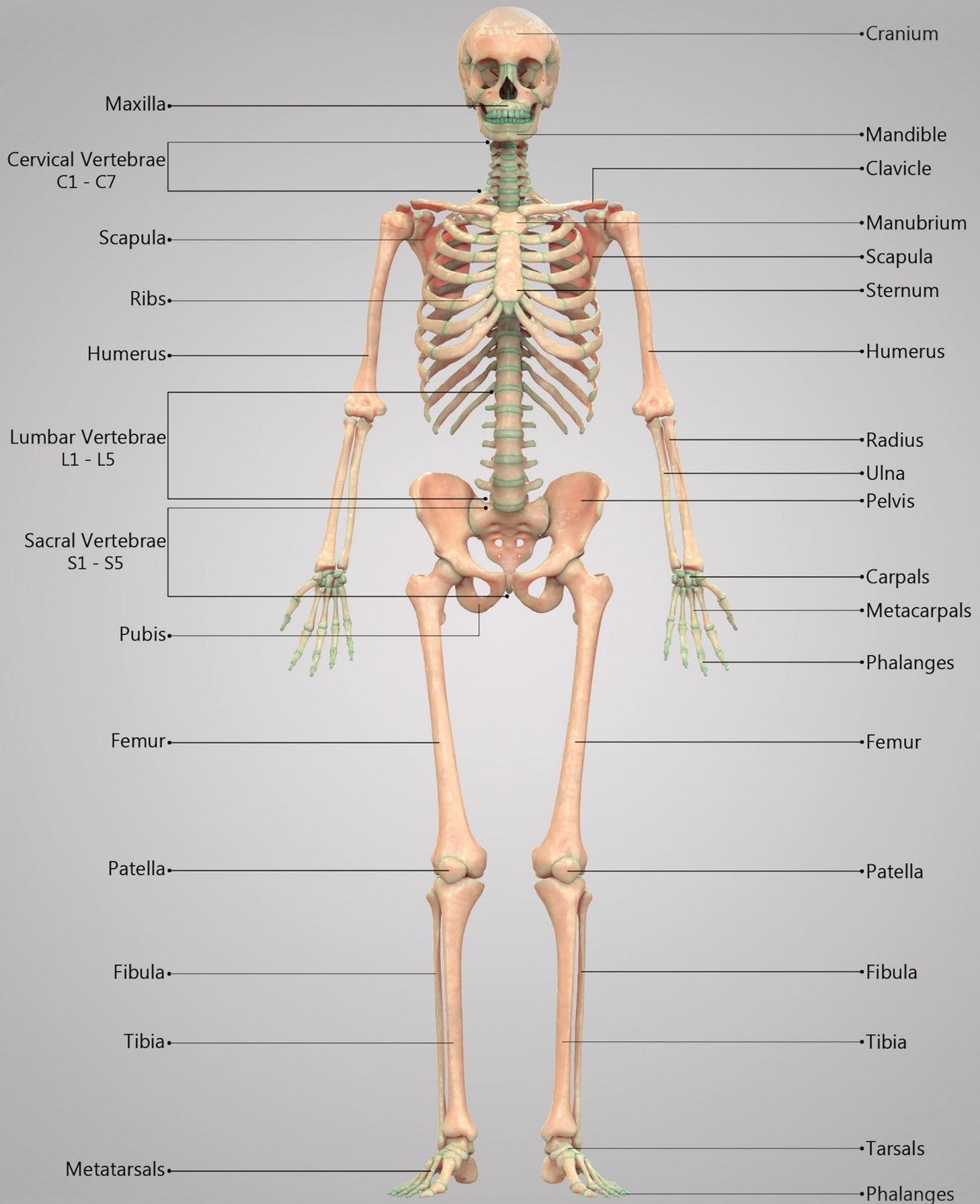
At first glance, a bird skeleton looks a lot like a mammal skeleton. Birds have legs, ribs and skulls, of course. But, bird skeletons are unique because most are made for flying! The biggest difference is that their bones of the forelimbs are elongated—stretched out to work as wings. Plus, many bird bones are hollow, which helps them stay light in flight!

## How do animals travel?

Different animals place different parts of the foot or forelimb on the ground when walking or running. Humans and bears put their whole foot on the ground when walking. This is known as **plantigrade** locomotion. Dogs and cats walk on their toes. This is known as **digitigrade** locomotion. Horses and pigs walk on their “toenails” or hoofs. This is called **unguligrade** locomotion.



Photo: iStock / virginira



# Nutter Butter Skulls

Ask a parent for help with candy melts

## Ingredients

Nutter Butter Cookies

Melted white confectionery coating/candy melts

Black food coloring marker

## Instructions

Dip a Nutter Butter cookie into the melted white candy coating.

Lift out using a kitchen fork and allow excess candy coating to drip off.

Set on a baking sheet lined with parchment paper.

Freeze dipped cookies for 5 minutes.

Remove from freezer and allow to come to room temperature.

Use a black food coloring marker to draw on the features of each skull

Ask a parent for help with candy melts



Photos: <https://hungryhappenings.com/quick-and-easy-halloween-treats-nutter/>

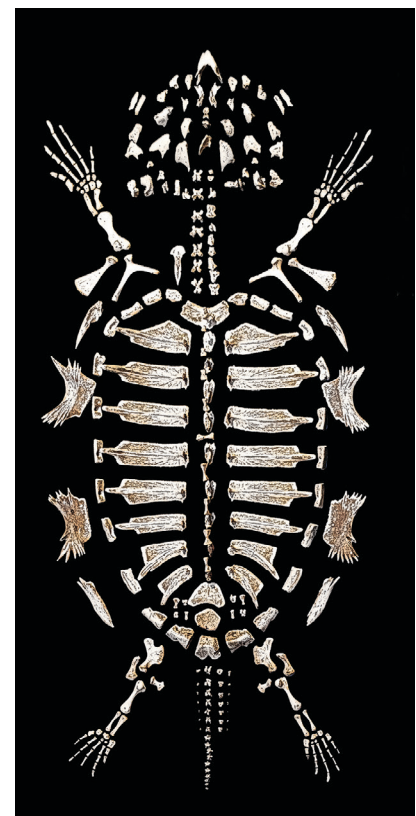
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 HOCK  
 FETLOCK  
 KNEE

## Fun Facts

- Elephant teeth and tusks are part of their skeleton.
- The joint between the femur and the tibia on the hind leg is our knee but the **stifle** in animals.
- Our ankle joint is the **hock** in animals
- Our knuckle joint is the **fetlock** in the horse.
- The “**knee**” on the horse is equivalent to our wrist.
- A turtle shells are made of many bones fused together.



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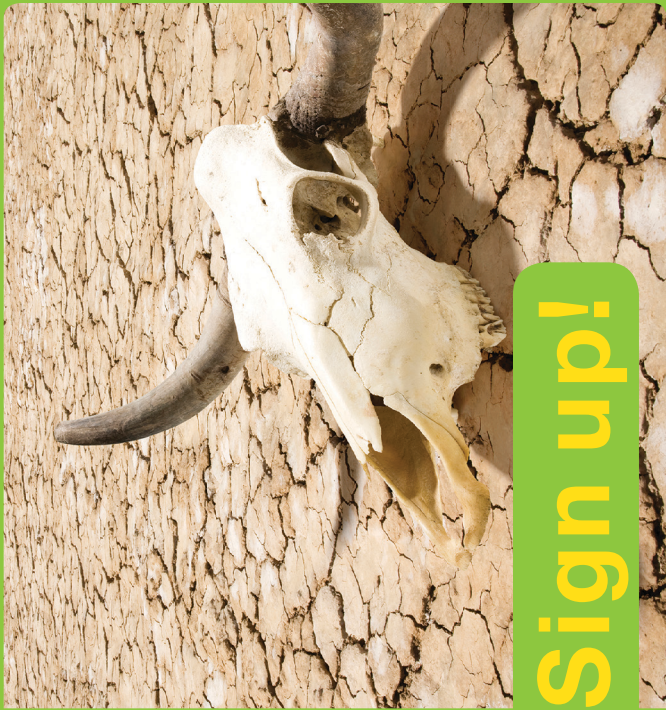


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