

Science- Skeletons and Movement- Year 4 Spring Term

Prior Learning:

You should know...

There are different types of vertebrates such as mammal, fish, bird, amphibian and reptile.

Living things have basic needs for survival (food, water and air)

The importance of exercise and the need for a balanced diet.

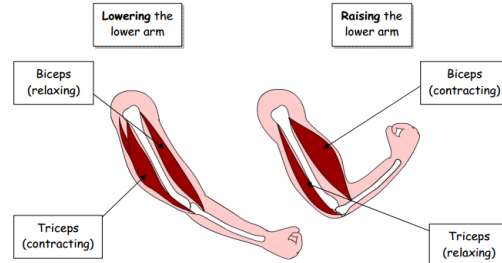
Key Vocabulary

Bone	The material which endoskeletons are made of.
Endoskeleton	A skeleton on the inside of an animal's body.
Exoskeleton	A skeleton on the outside of an animal's body
Invertebrate	An animal without a backbone.
Joint	The point where two bones come together- this usually allows motion.
Muscle	Soft tissue which is connected to bone. These allow movement.
Skeleton	A hard framework of bone which supports and protects a human or animal.
Vertebrate	An animal with a backbone.

Job- Radiologist



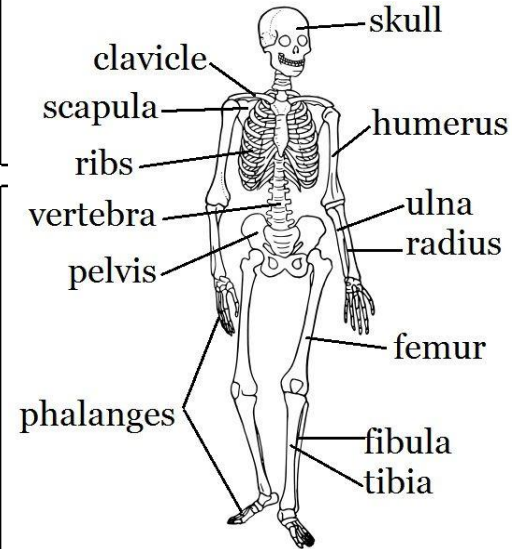
Radiologists use X-rays to examine bones.



Purposes of a skeleton:

Movement- Our bones help us to be able to move.

Protection- Our bones provide protection for our organs. For example our ribs protect our heart and lungs.



Muscles:

Muscles work in pairs to help movement. As one muscle contracts (pulls), the other muscle relaxes.

When we 'warm up' our bodies before exercise more blood goes to the muscles.

Types of skeleton:

Exoskeleton- An exoskeleton is a hard covering that supports and protects the bodies of some types of animals. The word exoskeleton means "outside skeleton." Many invertebrates, or animals without backbones, have exoskeletons.

Endoskeleton- An endoskeleton is a skeleton that holds an animal from inside. Vertebrates- animals which have a backbone- have endoskeletons.

Joints:

Ball and socket- can be found on your hip and shoulders. These allow movement in different directions.

Hinge- can be found in the elbow. These allow movement up and down but not side to side.

Gliding- can be found in wrists and ankles. These work as the flat bones glide over one another.



Key Learning

- Animals have different types of skeleton (Endoskeleton, exoskeleton and hydrostatic-skeleton).
- Humans have an endo skeleton to protect our organs and to support us.
- Skeletons are made of bones- attached to these are muscles- these help us to move
- Are bones are 'fitted together' by joints- there are three different type of joint.

Can I answer?

Do all animals have a skeleton?

Why do we have a skeleton?

What are the most important bones in our bodies?

Why do we have muscles and how do they work?

What different types of joints do we have and how do they work?