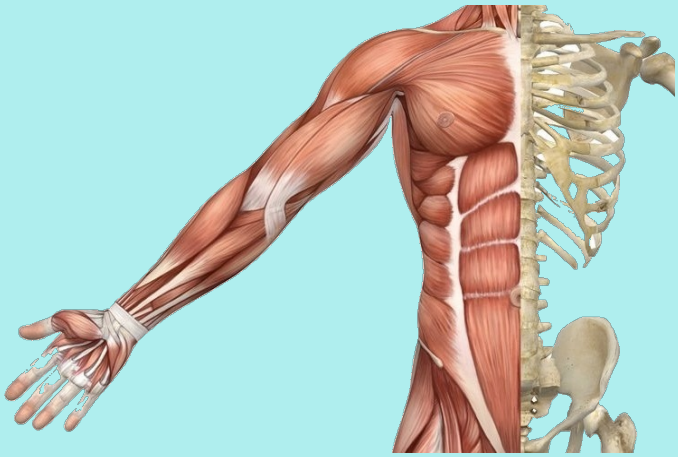
Science!



Monday 10th May 2021

LO: To identify and understand the function of muscles and joints

Starter:

Ricky is thinking about bones. He is wondering if he would be better off without bones. What do you think?



Our Key question this half term is...

Are all skeletons the same?

Our Key question this half term is...

This means we're going to be looking at humans and animals, and the ways our bodies work.

Interesting question for today:

What are joints and muscles?

Vertebrates and Invertebrates

Animals can be classified as either vertebrates or invertebrates.

Vertebrates are animals that have a backbone inside their body. The major groups include fish, amphibians, reptiles, birds and mammals.

Invertebrates don't have a backbone. They either have a soft body, like worms and jellyfish, or a hard outer casing covering their body, like spiders and crabs.

Can you sort the animals on your tables into vertebrates and invertebrates?



Vertebrates	Invertebrates
Cat Dog Jellyfish Octopus Bee Snake Shark	Crab Spider Snail Worm Ladybird

Vertebrates		Invertebrates	
Cat	Shark	Crab	Ladybird
Dog	Snake	Octopus	Worm
Bee		Jellyfish	Snail
		Spider	

Questions:

I do:

- How many muscles are in your body?

We do:

- What are the three types of muscle?
- What is an example of a cardiac muscle?
- What are the three types of joints?

Text: Muscles and Joints

Key vocabulary: pumping, tissue, fibres, cardiac, skeletal, hinge, glide, rotate

Muscles



Did you know you have more than 600 muscles in your body? They do everything from pumping blood throughout your body to helping you lift your heavy backpack. You control some of your muscles, while others — like your heart — do their jobs without you thinking about them at all.

Muscles are all made of the same material, a type of elastic tissue (sort of like the material in a rubber band). Thousands, or even tens of thousands, of small fibres make up each muscle. You have three different types of muscles in your body: **smooth** muscle, **cardiac** muscle, and **skeletal** muscle.

Muscles are important to your body because they help us move. Without muscles, we wouldn't be able to lift, walk, or even hold up our own weight. Not all muscles are like the ones in our arms and legs. Our heart is a muscle. It moves and helps pump blood around our body. The heart is a cardiac muscle.



Joints

Our joins are specially designed bones that help us move our skeleton. Because our bone are solid, it is impossible to bend or move our bones. Our joints connect two bones so we can move them in the middle. There are three types of joints: hinge joints, ball and socket joints, and gliding joints.



Hinge Joints are where two bones are connected to each other, and can only move in one direction. They are called hinge joints because they work a bit like a hinge on a door. Examples of hinge joints are elbows, knees, and fingers.

Gliding joints are when two bones can glide against each other to move. There can be found in our wrists and ankles.

Ball and socket joints are designed so that a joint can move in any direction. The best example of this is your shoulder joint. It is exactly what it sounds like. One bone has a large ball on the end, the other bone has a space for that ball to sit in. The bones then move against each other, and the joint allows your arm to rotate all the way around.





Questions:

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We do:

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https://www.bbc.co.uk/teach/class-clips-video/science-ks2-how-do-muscles-and-bones-work/zfgtscw



We are going to draw a diagram of an elbow or knee joint, showing how it works.

What sort of joint is an elbow joint?