

Topic:	Year group	Term
Skeletons and Movement	3	Autumn

Background knowledge

It is important that children are aware of the function of the skeleton and also the jobs of specific bones. They should be able to describe the importance of humans having a skeleton with reference to movement, support and protection.

It is important that children are shown a wide range of animal skeletons including mammals, birds, fish, amphibians and reptiles. This allows them to label the bones of the skeleton and spot any similarities or differences between them. Children do not need to use the term "vertebrate" because this is not introduced until Year 4

Children should use the terms "with a spine" and "without a spine" when grouping animals, not "vertebrate" and "invertebrate" because this vocabulary is not introduced until Year 4. They are introduced to the term "exoskeleton" to describe an animal with a skeleton on the outside of its body. Children should explore a wide range of animals including insects, spiders, slugs and snails to allow them to further their understanding of animals with a spine and without a spine.

In Year 3, children do not need to name and label major muscle groups in the human body. They identify and label only the biceps and triceps in the upper arm. Children can use labelled diagrams, simple practical models and relevant scientific language to show their understanding.

Common misconceptions

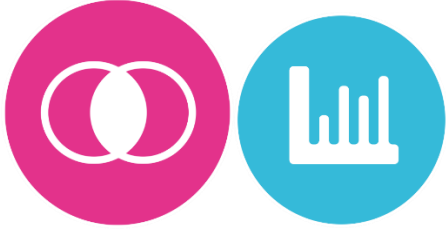
- Children may think that the skeleton is one large bone, rather than lots of bones.
- Children may believe that bones in the body do not have specific names, for example, they may think all bones in the leg are called "leg bones".
- Children may think that the arms and legs have one long bone, rather than multiple bones.
- Children may think that bones within the skeleton do not have a function.
- Children may believe that all bones must protect an internal organ, like the skull and ribcage do.
- Children may think that all bones have the same function.
- Children may think that humans are not mammals and that other mammals have a different skeletal system to humans.

- Children may think that all animals have a skull, spine, femur, pelvis and ribcage. Show examples of a wide range of animals to challenge this misconception.
- Children may think that if an animal does not have a spine, then it cannot move.
- Children may believe that all animals without a spine have no form of skeleton.
- Children may think that all animals without a spine have an exoskeleton. They should be shown a range of animals without a spine or exoskeleton to address this.

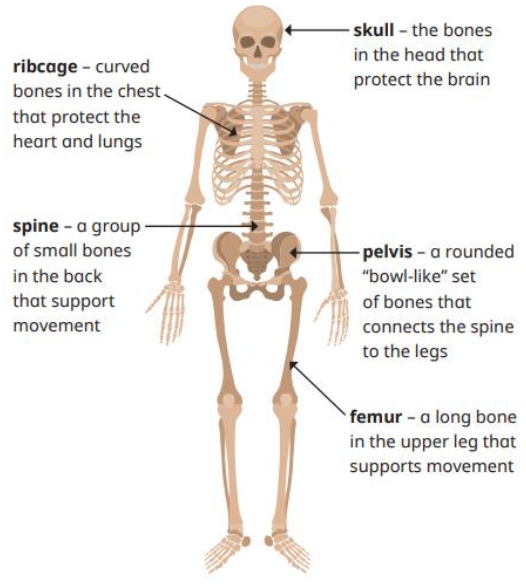
What should I already know?

Children should be already aware that humans and animals have skeletons that are made up of different bones. Some children may have heard the term muscle.

National Curriculum Objectives / Key Skills	The Journey
Identify that humans and some other animals have skeletons and muscles for support, protection and movement. <u>Working Scientifically</u> Asking relevant questions and using different types of scientific enquiries to answer them. Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables. Talk about criteria for grouping, sorting and classifying (non-statutory). Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions <u>Scientific enquiry</u>	1. Identify and name bones in the human body 2. Functions of the skeleton 3. Identify and name bones in a range of animals 4. Animals with and without a spine 5. Are all skeletons the same? 6. Joints 7. How we move

	
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Outcomes
An overview of what children will know / can do Working towards: Expected: Exceeding:

Key Vocabulary	Timeline / Diagrams
Key vocabulary / spellings with definition	 skull – the bones in the head that protect the brain ribcage – curved bones in the chest that protect the heart and lungs spine – a group of small bones in the back that support movement pelvis – a rounded “bowl-like” set of bones that connects the spine to the legs femur – a long bone in the upper leg that supports movement

Key people / places

Nutritionist. (STEM career.)

Sport scientist (STEM career)

Marie Curie

Scientist

Marie Curie was a brilliant scientist who discovered special materials called radium and polonium. These gave off radiation, which helped doctors use X-rays to look inside the body.

During World War I, Marie used her science to help soldiers. She created mobile X-ray vans, which helped doctors see broken bones quickly.

Marie's determination helped her succeed, even when things were difficult. She was brave, hardworking, and always wanted to help others with her discoveries.



Question of the Week

Lesson 1

Question of the week

What do you know about skeletons?



Lesson 2

