

Preston Primary School Knowledge Organiser




Topic: Science- Animals including humans- skeletons.

Term: Autumn 2

Year: Unit 3

Duration: 6 Weeks

The Powerful Knowledge we will take away from this Learning Enquiry (what children will be learning):

 	<ul style="list-style-type: none"> I can identify important bones from the human skeleton. I can identify the function of the skeleton in humans and some animals. I know that some animals don't have a skeleton, or that their skeletons are external. I understand that muscles have important roles in helping animals and humans to move. I know how muscles work in pairs to allow movement. I know why humans and some animals have joints.
	<ul style="list-style-type: none"> I can ask relevant scientific questions. I can communicate findings from a practical investigation.

Our Key Vocabulary:

Word	Meaning
Invertebrate	An animal without a spine.
Vertebrate	An animal with a spine.
Spine	A group of small bones stacked on top of each other to form a 'backbone'.
Exoskeleton	A form of external skeleton on some animals that provides support and protection.
Skeleton	The system of our bones. The skeleton provides support for the organs of the bodies of animals and humans.
Muscle	Works with joints and bones to allow movement.
Joint	A point where two or more bones meet.
Function	The role played by something. What it does.
Fair testing	Setting up an experiment where only one 'control' measure is changed. This means our results are correct.
Investigation	Asking question and conducting research to find the answers.

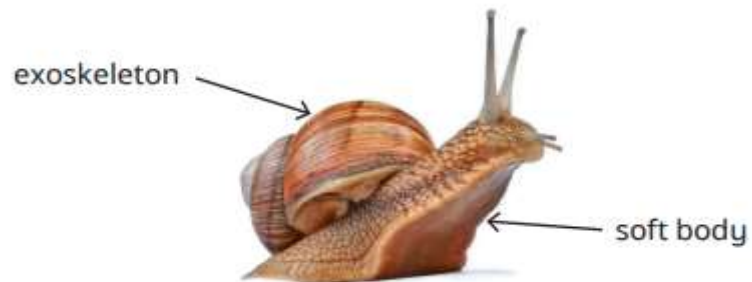
Steps in learning



- Name and identify the bones in the human skeleton.
- Identify the functions of the bones that make up the human skeleton.
- I know that invertebrates don't have a skeleton and that some animals have an exoskeleton. I know the difference between the two.
- I know that muscles work with bones and joints to enable movement in humans and some animals.
- I know that muscles work in pairs and how this looks.



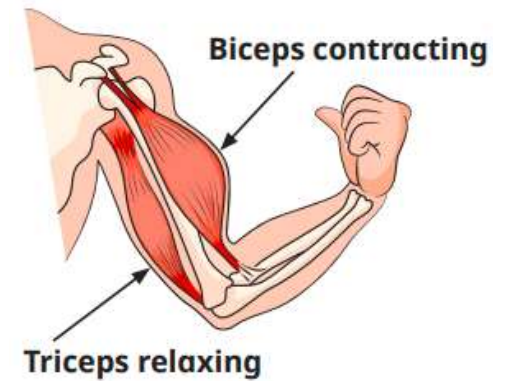
- I can conduct a practical investigation to explain how joints, bones, and muscles work together to allow for movement.
- I can communicate my findings to my peers.



A snail does not have a spine. A snail has an exoskeleton.

What I already know:

In Key Stage One, children have learnt about the offspring of animals, including humans. They also found out about and described the basic needs of animals, including humans, for survival. They also explored the importance of exercise, eating well, and hygiene. In Autumn 1, children have explored the importance of nutrition and a healthy diet in humans and animals. They have explored how humans and animals cannot make their own food and how plants can.



Factual knowledge:

- Muscles can only pull on bones and cannot push.
- Muscles work in pairs by contracting and relaxing.
- Bones, muscles, and joints work together to allow movement.
- Mammals, birds, fish, amphibians, and reptiles have skeletons.
- Bones have specific functions.
- The skull protects the brain.
- The femur helps humans to stand and move.
- The pelvis helps to support the spine.
- The spine helps humans to twist and be held upright.
- The ribcage protects the heart and lungs.