 Diversity	Subject: Science Year group: 3 Term: Summer Unit name: Animals including humans
<p>Prior Knowledge - The parts of the human body and what they do. There are five types of vertebrates (mammals, fish, reptiles, amphibians, birds). Vertebrates are animals that have a backbone. Invertebrates are animals that do not have a backbone. All animals need water, air and food to survive. The different ways in which humans can be healthy.</p>	
Scientific enquiry	
Classifying	Based on the children's own criteria: <ul style="list-style-type: none"> ▪ classify food items (leading to sorting by nutrients) ▪ classify animals (leading to sorting by whether or not they have skeletons).
Observing over time	Not relevant
Pattern seeking	<ul style="list-style-type: none"> • Children generate questions for investigation into objective 1 such as: <ul style="list-style-type: none"> ▪ Do 'healthy' drinks have less sugar? ▪ Does brown bread have more fibre? Children generate questions for investigation into objective 2 such as: <ul style="list-style-type: none"> ▪ Do people with long arms throw further? ▪ Can people with short legs jump higher? ▪ Can people with longer legs run faster? ▪ Can people with bigger hands catch a ball more easily?
Comparative/fair testing	Not relevant
Researching	Look at food packaging to identify the amount of nutrients in different food items. Research which types of food contain which nutrients. Generate questions to research about the human skeleton.
Spiritual Development	
Children will appreciate the role that the bones in the human body have in protecting its vital organs. <i>Isaiah 58: 1-13: I will always show you where to go. I'll give you a full life in the emptiest of places—firm muscles, strong bones. You'll be like a well-watered garden, a gurgling spring that never runs dry.</i>	

National curriculum:	
<ul style="list-style-type: none"> • Identify that animals, including humans, need the right types and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat • Identify that humans and some other animals have skeletons and muscles for support, protection and movement. 	
Key vocabulary	
Bones	the hard parts inside your body which form your skeleton
Carbohydrates	Compounds found in living things. Important source of energy.
Fat	Nutrients in food that the body uses to build nerve tissue. Fat is also used for fuel for the body.
Fibre	A type of carbohydrate that the body doesn't break down.
Joints	the junction between two or more bones
Minerals	Elements in foods that our bodies need to develop and function normally, e.g., calcium.
Muscles	Something inside your body which connects two bones and which you use when you make a movement.
Nutrients	the substances in food that our bodies process to enable it to
Nutrition	Providing nourishment, animals obtain nutrients through
Protein	Proteins build, maintain, and replace the tissues in your body.
Ribs	Long curved bones that form the rib cage and surround the chest.
Skeleton	the framework of bones in your body
Skull	A set of bones that make up the head of a vertebrate and keep in
Spine	A column of vertebrae in the back part of the torso (upper body).
Sugars	Sweet crystalline substance obtained from various plants (sugar cane/sugar beet) consisting of sucrose, and used as a sweetener
Vitamins	A group of organic compounds which are essential for normal growth and nutrition and are required in small quantities in the
Water	Human bodies contain up to 60% of water.

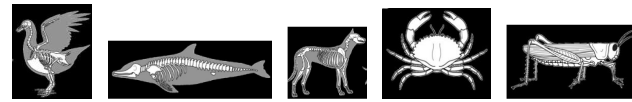
Key Learning Assessment Statements- what will the children know by the end of the unit?

Animals, unlike plants which can make their own food, need to eat in order to get the nutrients they need. Food contains a range of different nutrients – carbohydrates (including sugars), protein, vitamins, minerals, fats, sugars, water – and fibre that are needed by the body to stay healthy. A piece of food will often provide a range of nutrients. Humans, and some other animals, have skeletons and muscles which help them move and provide protection and support.

To know that different animals are adapted to eat different foods.

To name the different types of skeletons.

Vertebrates are animals that have a **backbone**. These **skeletons** are called **endoskeletons** - this means that the **skeletons** are on the inside of the bodies. These **skeletons** grow with the bodies. When the **skeleton** exists outside the body, it is called an **exoskeleton**. An **exoskeleton** is a covering that supports and protects animals. These have to be shed and a new **skeleton** is grown.



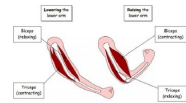
To understand that animals have skeletons to support their bodies and protect vital organs.

The three most important things a skeleton does are: provide support and shape to an animal's body; allow movement through the joints; protect organs (e.g. the skull protects the brain).

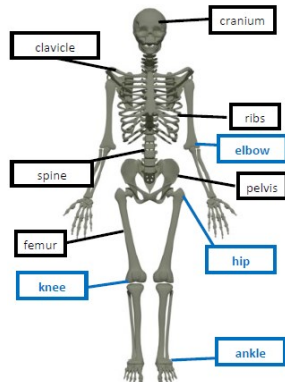
To explain how humans move.

Joints are where bones meet - they allow our bodies to move. Muscles contract and relax. If you place an elbow on a desk and lift your arm up, muscles in your upper arm (biceps) contract while muscles behind the upper arm (triceps) relax. The muscles work together and in opposition to allow your arm to move. Muscles are connected to bones by tendons.

To know that muscles are connected to bones and they move when they contract.



The name and label the main bones of the human body.



Assessment for Learning

Recapping prior knowledge- beginning of unit- what do children already know?

Beginning of each lesson- focus on recall of previous learning (quick quizzes)

Activity Ideas

- Classify food in a range of ways.
- Use food labels to explore the nutritional content of a range of food items.
- Use secondary sources to find out the types of food that contain the different nutrients.
- Use food labels to answer enquiry questions e.g. How much fat do different types of pizza contain? How much sugar is in soft drinks?
- Plan a daily diet to contain a good balance of nutrients.
- Explore the nutrients contained in fast food.
- Use secondary sources to research the parts and functions of the skeleton.