

## Science Y3 Summer 2 – Animals including the human body

In this unit of work the children will be sorting and classifying a variety of foods, finding out about their nutritional value and the importance of having a balanced diet. Through first-hand experience they will investigate how muscles and joints work and construct human and animal skeletons. They will classify animals and humans into those with endoskeletons and those with exoskeletons, discussing similarities and differences.

### In this unit children will:

- 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
- Find out what nutrition means.
- Classify food in a range of ways
- Use secondary sources to research the different food groups and the types of food that contain different nutrients.
- Use food labels to explore the nutritional content of a range of food items and answer enquiry questions e.g how much fat do different types of pizzas contain?
- Investigate what the right type and amount of nutrition is needed for humans and animals and ways that humans can stay healthy.
- Use secondary sources to research the parts and functions of the human and animal skeleton. Compare, contrast and classify skeletons of different animals.
- Investigate how skeletons and muscles move and are used for support, protection and movement
- Identifying and grouping animals with and without skeletons

### Prior Learning

**FS** – Learning new vocabulary whilst sorting and categorising

**Y1** – Know the structure of a variety of common animals. Name the basic parts of the human body.

**Y2** – Know the basic needs of animals inc humans for survival and the importance of exercise, eating the correct foods and being hygienic.

### Cross Curricular Links

**PSHCE** – Families

### Key Vocabulary

**Carbohydrates** – A type of nutrient that gives us energy.

**Contract**– To make smaller by drawing together; shrink or make tighter.

**Elbow** – The bend or joint between the upper arm and lower arm.

**Endoskeleton**–Internal skeleton of an animal, especially the bony part skeleton of vertebrates.

**Exoskeleton**– Protective or supporting structure covering the outside of the body of many animals.

**Joints**– Junction between 2 or more bones.

**Muscles**– Connects 2 bones inside your body and is used when you make a movement.

**Nutrition** – Getting the food they need to grow and be healthy

**Organs** – Internal parts of your body which have a particular purpose.

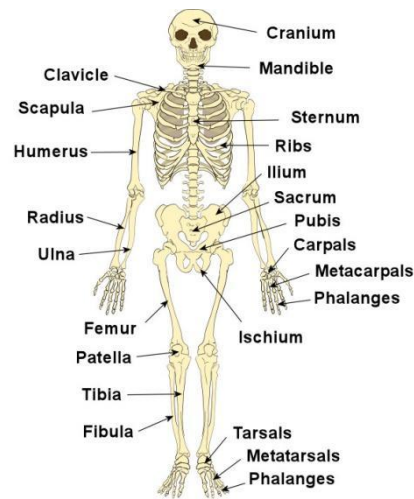
**Protein** – Nutrient needed for growth and repair

**Tendons**– A strong cord in a person's or animal's body which joins a muscle to a bone.

**Vertebrate**– A creature which has a spine

## Key Knowledge

- There are 2 different types of skeleton.
- Vertebrates are animals that have a backbone. These skeletons are called endoskeletons – this means that the skeletons are on the inside of their bodies. These skeletons grow with their bodies and include a fish, dog and a goose.
- When the skeleton exists outside the body, it is called an exoskeleton is a covering that supports and protects animals. These have to be shed and a new skeleton is grown. This includes a crab and a grasshopper.
- The 3 most important things an endoskeleton does are –
  - to provide support and shape to an animal's body
  - allow movement through the joints
  - protect organs (skull, head, brain)
- Joints are where bones meet and allow our bodies to move.
- Muscles contract and relax.
- If you place your elbow on a desk and lift up your arm, 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.



- Nutrition means animals getting the food they need to grow and be healthy.
- Humans can't make their own food and need to get it from either growing it (planting seeds that they can harvest), hunting it (hunt other animals to eat) or gathering it (find foods grown in the wild to eat).
- To be healthy humans need to have a balanced diet, exercise regularly and be hygienic.

## Key Questions

- What is the junction between 2 or more bones called?
- Which part of the skeleton protects the brain?
- What does the prefix exo- tell us about an exoskeleton?
- What connects a muscle to a bone?