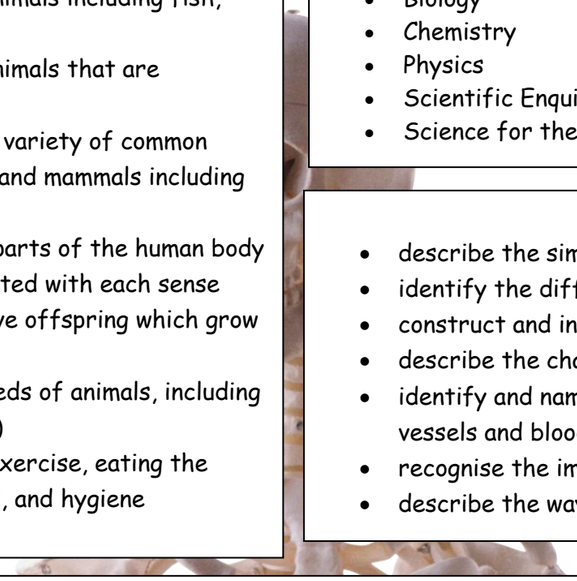
Subject Knowledge Organiser – Animals Including Humans – Year 3



What I have already learnt (KS1)

- identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals
- identify and name a variety of common animals that are carnivores, herbivores and omnivores
- describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals including pets)
- identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense
- notice that animals, including humans, have offspring which grow into adults
- find out about and describe the basic needs of animals, including humans, for survival (water, food and air)
- describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene

Key Concepts/Strands

- Biology
- Chemistry
- Physics
- Scientific Enquiry
- Science for the future

What I will have learnt by the end of the unit

- 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.

What I will have learnt by the end of my Key Stage

- describe the simple functions of the basic parts of the digestive system in humans
- identify the different types of teeth in humans and their simple functions
- construct and interpret a variety of food chains, identifying producers, predators and prey
- describe the changes as humans develop to old age
- identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood
- recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function
- describe the ways in which nutrients and water are transported within animals, including humans

Key Knowledge

BALANCED DIET
Unlike plants, humans do not make their own energy so they need to eat to get energy. In order to be healthy we need to eat a balanced diet with more of some things and less of others.
PROTEIN – required for growth and repair of our bodies. Found in meats, poultry, fish, dairy products, eggs and beans.
CARBOHYDRATES – provide energy for the body. Found in grains, cereals, potatoes, bread, pasta and in some fruits and vegetables.
FATS – provide energy and help with building our bodies. Found in dairy products, red meats and some poultry and fish.
FIBRE – Help you digest your food. Found in cereals, fruit and bread.

Humans (and many other animals) have a system of muscles in their bodies.

The main purpose of the muscles is for movement. As they contract, muscles move parts of the body around.

Muscles are also important for maintaining posture, helping humans/animals sit, stand and walk.

Some muscles (e.g. the heart) move by themselves – they are involuntary.

Humans (and many other animals) have a system of bones called a skeleton.

Skeletons help support your body and give it shape.

Skeletons are also important for movement. Muscles are attached to bones.

Skeletons help protect important parts of the body. E.g. the ribs protect the heart and lungs.

Key Skills I Will Learn/Use

- asking relevant questions and using different types of scientific enquiries to answer them
- setting up simple practical enquiries, comparative and fair tests
- making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers
- gathering, recording, classifying and presenting data in a variety of ways to help in answering questions
- recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables
- reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions
- using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions
- identifying differences, similarities or changes related to simple scientific ideas and processes
- using straightforward scientific evidence to answer questions or to support their findings

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KEY VOCABULARY

Energy – the property that gives us strength of body or mind to do things or work.

Nutrition – the process of providing or obtaining the food necessary for health and growth.

Skeleton – a framework of bones supporting the body.

Muscle – a soft tissue in the body that contracts and relaxes to cause movement of the skeleton.

Healthy – in good physical condition.

Consumers – living things that eat other living things to get energy.

Vitamins – substances found in foods that keep you healthy.

Diet – the foods that a person, animal or community habitually eat.

My Skills and Knowledge that I may use from other subjects

Literacy- I can use my literacy knowledge to write about my findings

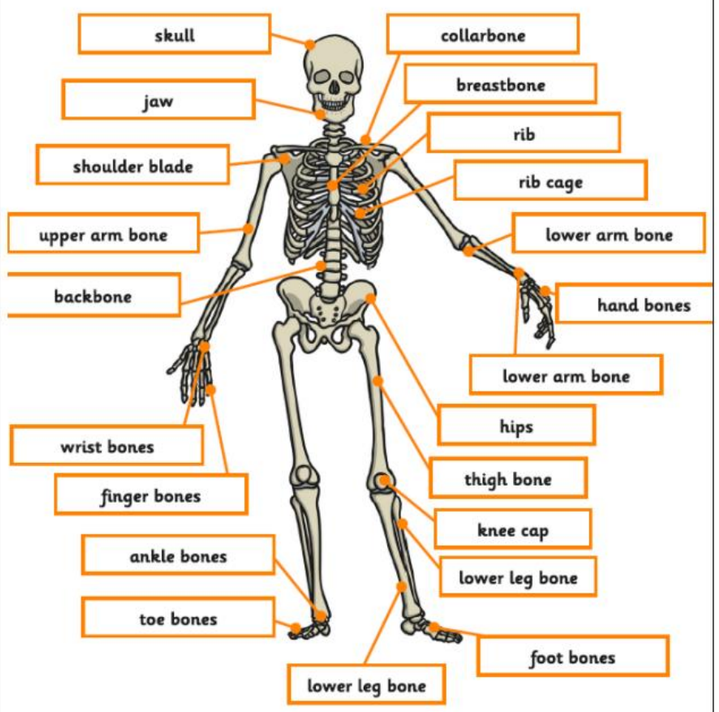
Mathematics- I can use my measuring skills to carry out simple tests and record my findings using diagrams and graphs

Geography- I can use my knowledge about animals and their habitats in different countries around the world.

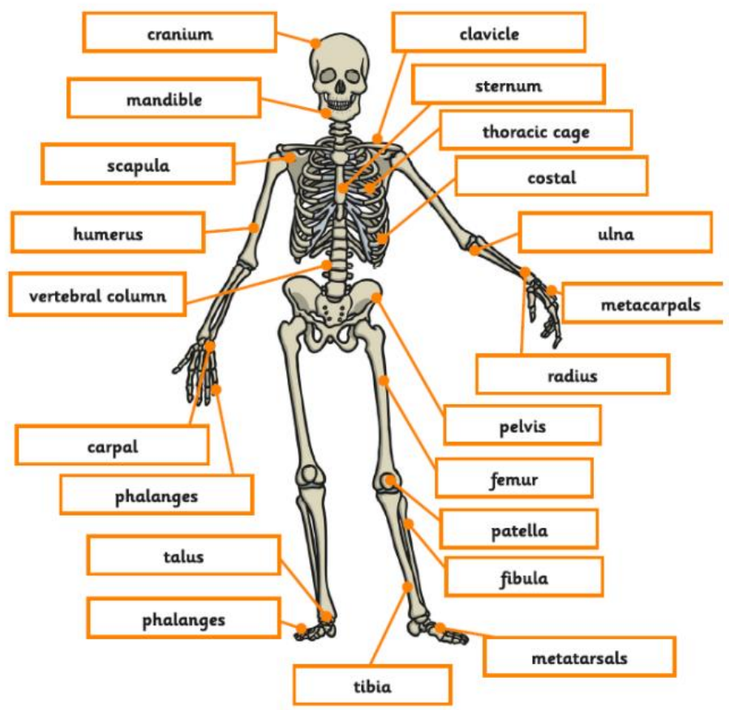
Key Questions

Why do animals and humans need food?
What are the 5 main food groups?
What are the main nutrients and what jobs do they do?
How much water does a child need per day?
What are the two types of fat? Which one is bad for you?
What is a vertebrate and invertebrate?

Using Common names for bones:



Using the Scientific names for bones:



Recall and remember

Which part of the skeleton protects the brain?

Which part of the skeleton protects the heart and lungs?

: What does the prefix exo- tell us about exoskeletons?

What connects a muscle to a bone?

What is the purpose of a skeleton?

All animals that have a backbone are called…

Describe something that might happen if we did not have a skeleton.

Opportunities for teaching Diversity, Equality (including protected characteristics) and expanding Cultural Capital

Explore animals from different countries and watch live cameras from different zoo's

- Live Panda cam | Edinburgh Zoo
- Live Cameras | San Diego Zoo

Get to meet a scientist! Explore people who use science in their jobs.

- I'm a Scientist, Get me out of here! – A super-curricular science outreach education & engagement activity (imascientist.org.uk)
- Science for Everyone (science4everyone.org)