



## Knowledge Organiser

Science: Animals Including Humans

Year 3/4

Theme: Cause and Effect

Spring Term A 2023

### Prior Knowledge

Name animals and their young (farm animals)

Observe and describe the life cycle of an animal – insect/ chick

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.

### Application of Knowledge

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.

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.

### What I will know by the end of this topic

**Name the 6 main nutrients that our body needs? Carbohydrates, proteins, fats, fibre, minerals and vitamins, water**

**Know the right types and amounts of food we need to stay healthy.**  
**We need to eat mostly fruit and vegetables to provide vitamins and minerals and starchy carbohydrates. We need to eat little amounts of foods high in fat and sugar.**

**What are the 3 functions of a skeleton? Protection, Support, Movement**

**Name the bones in the arms and legs. Tibia, Fibula, Femur and Patella. Humerus, Ulna, Radius**

**Name the parts of the skeleton that protect the vital organs.**  
**Skull protects the brain. Ribcage protects the heart and lungs.**

### Vocabulary

Nutrition	The process of providing or obtaining the food necessary for health and growth.
Nutrients	A substance that provides nourishment, essential for the maintenance of life and for growth.
Food groups	A collection of foods that share similar nutritional properties or biological classifications.
Healthy	In good physical or mental condition.
Balanced	Having different elements of something e.g. food in the correct proportions.
Skeleton	An internal or external framework of bone, supporting or containing the body of an animal or plant.
Protection	The action of protecting someone or something.





## Knowledge Organiser

Science: Electricity

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Theme: Cause and Effect

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### Prior Knowledge

In KS1, all children should be taught to:

Explore and comment on how colours change.

Know that light helps us to see.

Working scientifically, understanding the concept of what light is.

Begin to explore light and dark, with a specific link to day and night.

Explain that we see things because light travels.

Have an understanding of what a light source is and how it connects to our eyes or from light sources to objects and then to our eyes.

### Application of Knowledge

Identify common appliances that run on electricity.

Construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers.

Identify whether or not a lamp will light in a simple series circuit, based on whether or not the lamp is part of a complete loop with a battery.

Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit.

Recognise some common conductors and insulators, and associate metals with being good conductors.

### What I will know by the end of this topic

**What common appliances run on electricity?** The fridge, TV, tumble dryer, electric hob, dishwasher.

**What do you need to construct a simple electrical circuit?**  
Battery, wires, lamp

**What is a circuit?** A circuit is a path that an electric current travels in.

**What does a switch do?** A switch is an electrical component that can disconnect or connect the conducting path in an electrical circuit.

**What's the difference between a conductor and insulator?**  
Conductors allow electrical charge to pass through, insulators are materials that impede the free flow of electrons.

**Can you name some common conductors?** Silver, gold, aluminium, iron, steel, brass, bronze.

### Vocabulary

Electricity	Electricity is the flow of tiny particles called electrons and protons. It can also mean the energy you get when electrons flow from place to place
Circuit	A path for electricity to travel
Switch	An electrical component that can open or close a circuit
Conductor	An material that allows electricity to travel through it
Insulator	A material that restricts or stops electricity from travelling
Lamp	A device for giving off light
Battery	a container consisting of one or more cells, in which chemical energy is converted into electricity and used as a source of power.
Cells	A <b>cell</b> pushes the electric current from the positive terminal round to the negative one
wires	metal drawn out into the form of a thin flexible thread or rod

