

# KEY LEARNING YEAR 1

## Animals, Including Humans

- 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 humans body and say which part of the body is associated with each sense.

## Plants

- Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees.
- Identify and describe the basic structure of a variety of common flowering plants, including trees.



## Enrichment

London Zoo  
Camley Street Nature Park Visit

## SCIENCE TEACHING AND LEARNING AT ROBSON HOUSE

The science curriculum at Robson House aims to ensure that each child, regardless of their background, ability, and individual needs, develops a rich and expansive understanding of the world around them. During their time at the school, the children develop their scientific knowledge and conceptual understanding through a range of immersive science-led topics, which frame the learning for two half terms per academic year. Within these topics, class teachers plan exciting and thought-provoking lessons which are aligned to both the National Curriculum, as well as the children's emerging interests and natural curiosity.

During these lessons, teachers deliver subject specific content through 'hands-on' learning experiences, so that children develop their knowledge of 'working scientifically' and prioritise opportunities for the children to see science in application by drawing upon the school's strong relationships with local organisations, including the Francis Crick Institute and ZSL London. Teachers dedicate time within these lessons, to actively assessing the children's understanding and providing additional support to those who require it. In parallel, teachers ensure children are given explicit opportunities to develop their language skills, including their understanding of specific vocabulary, so that they feel confident in communicating their thinking or talking about their work in a scientific way.

## Materials

- Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses.
- Investigate how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting stretching.

## Living Things and Their Habitats

- Explore and compare the differences between things that are living, dead, and things that have never been alive.
- Identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other.
- Identify and name a variety of plants and animals in their habitats, including micro-habitats.
- Describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different sources of food.



# KEY LEARNING YEAR 2

# KEY LEARNING YEAR 3



## Plants

- Identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers.
- Explore the requirements of plants for life and growth (air, light, water, nutrients from soil, and room to grow) and how they vary from plant to plant.
- Investigate the way in which water is transported within plants.
- Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.

## Scientists and Inventors

- Identify changes related to scientific ideas by exploring inventions and discoveries made by female scientists across the world.
- Explore the life and contributions made to science by, Marie Curie, Hayat Sindi, Sarah Gilbert, Mary Anning, Mae C. Jemison, Maggie Aderin-Pocock and Ada Lovelace.
- Identify that humans and some other animals have skeletons and muscles for support, protection, and movement.
- Describe in simple terms how fossils are formed when things that have lived are trapped within a rock.

## Enrichment

- Kew Gardens  
Crick Institute Visit  
Science Museum



## Electricity

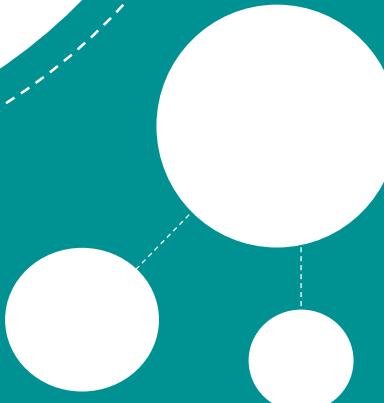
- Identify common appliances that run on electricity.
- Construct a simple series electrical circuit, identifying and naming its basic parts
- Identify whether or not a lamp will light in a simple series circuit
- Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit.
- Recognise some common conductors and insulators, associate metals with being good conductors.

## Forces

- Compare how things move on different surfaces.
- Notice that some forces need contact between 2 objects, but magnetic forces can act at a distance.
- Observe how magnets attract or repel each other and attract some materials and not others.
- Compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet, and identify some magnetic materials.
- Describe magnets as having 2 poles.
- Predict whether 2 magnets will attract or repels each other, depending on which poles are facing.



# KEY LEARNING YEAR 4



UKS2

# KEY LEARNING YEAR 5



## Living Things and Their Habitats

- Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird.
- Describe the life process of reproduction in some plants and animals.
- Describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including micro-organisms, plants and animals.
- Give reasons for classifying plants and animals based on specific characteristics.

## Sound

- Identify how sounds are made, associating some of them with something vibrating.
- Recognise that vibrations from sounds travel through a medium to the ear.
- Find patterns between the pitch of a sound and features of the object that produced it.
- Find patterns between the volume of a sound and the strength of the vibrations that produced it.
- Recognise that sounds get fainter as the distance from the sound source increases.

## Enrichment

- Music Studio Visit
- Stadium Visit
- Royal Observatory

## The Body, Exercise and Diet

- Describe the changes as humans develop to old age, including the changes experienced in puberty.
- Recognise the impact of diet, exercise, drugs and lifestyle on the way the body functions.
- Identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood.
- Describe the ways in which nutrients and water are transported within animals, including humans.

## Earth and Space

- Describe the movement of the Earth and other planets relative to the sun in the solar system.
- Describe the movement of the moon relative to the Earth.
- Describe the sun, Earth and moon as approximately spherical bodies.
- Use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky.



## INTENDED OUTCOME BY END OF KEY STAGE 2

The science curriculum at Robson House, aspires to support the children to develop their ability to think critically and make informed and responsible choices about themselves, the environment and society.

At conclusion of their time at Robson House, children will have had the opportunity to develop their ability to carry out scientific investigations safely and skilfully, think analytically and creatively to solve problems, communicate ideas and opinions confidently and work effectively and supportively as members of a group. They will have acquired the key scientific knowledge, understanding and skills needed for enter they next stage of their learning and will be eager to further their understanding about science and the natural world.



# KEY LEARNING YEAR 6