

Science spiral curriculum Year A

Autumn 1: Animals including Humans: Identify that humans and some other animals have skeletons and muscles and understand their basic purpose. 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. Recognise the impact of diet, exercise, drugs and lifestyle on the body and how it functions. **Autumn 2: Electricity:** To be able to create a simple circuit. To be able to use recognised symbols in a circuit. Associate lamp brightness, buzzer volume in relation to number and voltage of cells used in a circuit, compare and give reasons for variation.

Spring 1: Earth and Space: Describe the sun, Earth and moon as approximately spherical bodies. 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. Explain day and night and the apparent movement of the sun across the sky. **Spring 2: Evolution and Inheritance:** Recognise that living things produce offspring of the same kind, understand that offspring are not identical to parents. Describe the changes as humans develop. Recognise that living things change over time and that fossils provide information about living things that inhabited the Earth millions of years ago. Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.

Summer 1: Sound: Recognise that vibrations from sounds travel through a medium to the ear. Find patterns between the pitch of sound and features of the object that produced it and the volume of a sound and the strength of the vibrations that produced it. **Summer 2: Materials:** Compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets. Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials.

Autumn 1: Forces and Magnets: Observe how magnets attract and repel each other. Describe magnets as having 2 poles. Compare and group together a variety of everyday materials to say if they attract to magnets. Predict whether two magnets will attract or repel each other, depending on which poles they were facing. **Autumn 2: Living Things and their habitats:** Recap and identify that most living things live in habitats to which they are suited to and why. Recognise that environments can change and the dangers this can pose to living things. Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment.

Spring 1: Animals including Humans: Identify and name a variety of common animals. Identify which animals are carnivores, herbivores and omnivores. Describe and compare the structure of animals. **Spring 2: Light:** Compare and understand light and darkness. Notice light reflection from surfaces. Recognise how shadows are formed and why. Find patterns in sizes of shadows.

Summer 1: Rocks and Soils: Compare and group together different kinds of rocks according to appearance and simple properties. Recognise that soils are made from rocks organically. Begin to describe how fossils are formed. **Summer 2: Scientific observations:** Understand how to carry out some scientific observations, carry out investigations and be able to record simple findings. Research and discuss scientific inventions. Recall and identify previous investigations that they have carried out in previous science lessons.

Autumn 1: Animals including Humans: Identify, name, draw and label the basic parts of the human body, identifying which part of the body is associated with each sense. Investigate the basic needs of human survival. **Autumn 2: States of Matter:** Identify solids and liquids, observe that some materials change state when they are heated or cooled.

Spring 1: Light: Identify sources of light, including the sun. Recognise that light from the sun can be dangerous and identify ways of protecting eyes. Observe that light and darkness and observe shadows and how they are formed. **Spring 2: Seasonal Change:** Observe and describe the weather associated with the seasons, how days varies and the different changes in the seasons.

Summer 1: Sound: Observe and create sounds practically. Identify that our ears allow us to hear sounds. Experiment with making different sounds and think critically as why different sounds from different instruments occur. **Summer 2: Plants:** Identify and name a variety of common wild and garden plants, identify dangerous plants. Identify and describe the basic structure of flowers and trees. Observe and describe how seeds and bulbs grow into mature plants.

Notices difference between plants and animals, identifying environmental sounds, basic experiments (e) rolling, throwing, pushing, pulling, magnets, viewing panels, exploring different materials & textures

Blue
Phase

Yellow
Phase

Red
Phase

EYFS

Purple

Class