Science – Long term plan/progression 2024/2025

Subject	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 1	**Animals including humans (ourselves)** Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense.	**Animals including humans (pets)** 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)	**Animals including humans (pets)** 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)	**Materials** Distinguish between an object and the material from which it is made. Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock. Describe the simple physical properties of a variety of everyday materials. Compare and group together a variety of everyday materials on the basis of their simple physical properties.	**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.	
Seasonal Changes (Weather) Observe changes across the 4 seasons.						

	Observe and describe weather associated with the seasons and how day length varies.				
Year 2	**Living things and their habitats.** Classify things by living, dead or never lived. Know how a specific habitat provides for the basic needs of things living there (plants and animals). Match living things to their habitat. Name some different sources of food for animals. Know about and explain a simple food chain.	**Materials** Identify different materials. Name everyday materials. Properties of materials. Know how materials can be changed by squashing, bending, twisting and stretching. Compare the use of different materials.	**Animals including humans.** 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.	**Plants** Know and explain how seeds and bulbs grow into plants. Know what plants need in order to grow and stay healthy (water, light & suitable Temperature).	
Year 3	**Rocks** Compare and group rocks based on their appearance and physical properties, giving reasons. Know how soil is made and how fossils are formed. Know about and explain the difference between sedimentary,	**Forces and magnets** Know about and describe how objects move on different surfaces. Know how a simple pulley works and use to on to lift an object. Know how some forces require contact and some do not, giving examples. Know about and explain how magnets attract and repel. Predict whether magnets will attract or repel and give a reason.	**Animals including humans** Know about the importance of a nutritious, balanced diet. Know how nutrients, water and oxygen are transported within animals and humans. Know about the skeletal and	**Light and Shadow** Know that dark is the absence of light. Know that light is needed in order to see and is reflected from a surface. Know and demonstrate how a shadow is formed and explain how a	**Plants** Know the function of different parts of flowing plants and trees. Compare different factors for growth. Know how water is transported within plants. Know the plant life cycle, especially

	metamorphic and igneous rock.			muscular system of a human.	shadow changes shape. Know about the danger of direct sunlight and describe how to keep protected. find patterns in the way that the size of shadows change.	the importance of flowers.
Year 4	**Animals including humans** Identify and name the parts of the human digestive system. Know the functions of the organs in the human digestive system. Identify and know the different types of human teeth. Know the functions of different human teeth. Use and construct food chains to identify producers, predators and prey.		**States of matter** Group materials based on their state of matter (solid, liquid, gas.) Know the temperature at which materials change state. Know about and explore how some materials can change state. Know the part played by evaporation and condensation in the water cycle.	**Electricity** Identify and name appliances that require electricity to function. Construct a series circuit. Identify and name the components in a series circuit (including cells, wires, bulbs, switches and buzzers) Predict and test whether a lamp will light within a circuit. Know the function of a switch.	**Sound** Know how sound is made, associating some of them with vibrating. Know how sound travels from a source to our ears. Know the correlation between pitch and the object producing a sound. Know the correlation between the volume of a sound and the strength of the vibrations that produced it. Know what happens to a sound as it	**Living things and their habitats** Use classification keys to group, identify and name living things. Know how changes to an environment could endanger living things.

				Know the difference between a conductor and an insulator; giving examples of each.	travels away from its source.	
Year 5	**Earth & Space** Know about and explain the movement of the Earth and other planets relative to the Sun. Know about and explain the movement of the Moon relative to the Earth. Know and demonstrate how night and day are created. Describe the Sun, Earth and Moon (using the term spherical).	**Forces** Know what gravity is and its impact on our lives. Identify and know the effect of air and water resistance. Identify and know the effect of friction. Explain how levers, pulleys and gears allow a smaller force to have a greater effect**.**	**Materials** Compare and group materials based on their properties (e.g. hardness, solubility, transparency, conductivity, [electrical & thermal], and response to magnets. Know and explain how a material dissolves to form a solution. Know and show how to recover a substance from a solution. Know and demonstrate how some materials can be separated (e.g. through filtering, sieving and evaporating) Know and demonstrate that some changes are reversible and some are not. Know how some changes result in the formation of a new material and that this is usually irreversible.		**Living things & their habitats** Know the life cycle of different living things e.g. mammal, amphibian, insect and bird. Know the differences between different life cycles. Know the process of reproduction in plants. Know the process of reproduction in animals.	**Animals including humans** Changes as humans develop from birth to old age. Create a timeline to indicate stages of growth in humans.

Year 6	**Animals including humans** 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. .	**Living things & their habitats** 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.	**Evolution & inheritance** Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago. Recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents. Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.		**Electricity** Associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit. Compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches. Use recognised symbols when representing a simple circuit in a diagram.	**Light** Recognise that light appears to travel in straight lines. Use the idea that light travels in straight lines to explain that objects are seen because they give out or reflect light into the eye. Explain that we see things because light travels from light sources to our eyes or from light sources to objects and then to our eyes. Use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them.