

Science Progression by Area

Plants	
EYFS	Children will talk about changes they have observed and record it in their own way when watching cress grow and observing a daffodil in coloured water. Children will learn how to grow potatoes and sunflowers. They will learn this through stories and drawing simple lifecycles.
(Recap EYFS) Year 1 and Year 2	Children will learn 4 common trees and their leaf shape and what they produce. Children will understand the difference between evergreen and deciduous. Children will be able to name 4 the different parts of a plant (roots, stem, Leaves and flowers) This will include growing rocket. Children will learn some common and wild plants by name. Children will observe and describe how seeds and bulbs grow into mature plants. Children will find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.
(Recap Year 1/2) Year 3 and Year 4	Children will identify and describe the functions of different parts of flowering plants. Children will investigate the way in which water is transported in plants. Children will explore the part that flowers play in the life circle of flowering plants (including pollination, seed formation and seed dispersal).
Year 5 and 6	

Seasons	
EYFS	Children will learn about the changing seasons by observing and discussing the weather and seasonal features throughout the year, developing an understanding of the effect of the changing seasons on the world around them.
(Recap EYFS) Year 1 and Year 2	Describe the weather in Autumn and Spring and compare the differences of the weather in the seasons. Children will learn the key features of each season (winter is cold, summer usually warmer, spring when things grow, autumn when the leaves fall off the trees). Children will describe the weather in Summer and Winter and compare the differences of the weather in the seasons (winter is cold, summer usually warmer, spring when things grow, autumn when the leaves fall off the trees).
Year 3 and Year 4	
Year 5 and 6	

Materials and Properties and Changes of Materials

EYFS	Children will learn that bricks are stronger than straw through the story of the three little pigs.
(Recap Year 1/2) Year 1 and Year 2	Children will match an object to its original material, they will name the object and the material (wood, glass, metal, plastic) Children will distinguish the different between an object and what it is made from. Children will learn how to group and sort objects made from wood, glass, metal, plastic based on their properties (strong, weak, heavy, light, translucent). Children will find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching
Year 3 and Year 4	
(Recap Year 1/2) Year 5 and 6	Children will compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity and response to magnets. Children will learn to carry out comparative and fair tests. Children will use their knowledge of solids, liquids and gases to decide how mixtures might be separated. Children will demonstrate that dissolving, mixing and changes of state are reversible. Children will complete experiments to show that some changes of state are not reversible.

States of Matter

EYFS	
Year 1 and Year 2	
Year 3 and Year 4	Children will compare and group materials together, according to whether they are solids liquids or gases. Children will name materials that are solids, liquids or gases. Children will observe that some materials change state when they are heated or cooled, and measure the temperature at which this happens in degrees Celsius.
Year 5 and 6	

Forces and Magnets	
EYFS	
Year 1 and Year 2	
Year 3 and Year 4	<p>Observe how magnets attract or repel each other. Children will learn how magnets are attracted or not attracted to everyday materials using the vocabulary north and south pole. Children will predict if magnets will attract or repel each other. Children will learn that a force can be thought of as a push or a pull. Children will learn that there are 3 types of contact force (impact, friction and strain). Children will compare how objects move on different surfaces (smooth, rough, flat and inclined to different degrees). Children will notice that some forces need contact between two objects, but magnetic forces can act at a distance.</p>
(Recap Year 3/4) Year 5 and 6	<p>Children will observe and describe the effect of the force of gravity, air resistance and changing gears on a bicycle. Children will learn how to interpret data about the rate that different materials all towards Earth. Children will explain their ideas how these forces are working.</p>

Living things and their habitats	
EYFS	<p>Children will explore the natural world of woodland and learn the names of woodland animals.</p> <p>Children will observe learn the lifecycle of a caterpillar and a butterfly.</p>
(Recap EYFS) Year 1 and Year 2	<p>Children will learn the features of things that are living, dead and things that have never been alive. Children will identify that most living things live in habitats that they are suited. Children will learn to describe why an animal/plant is suited to its habitat. Children will match common animals and plants to their habitats. Children will learn why a habitat is suitable for a particular animal.</p>
(Recap Year 1/2) Year 3 and Year 4	<p>Children will recognise that living things can be grouped in a variety of ways (describe and group animals and plants). Children will begin to explore and use classification keys to help group, identify and make a variety of living things in their local and wider environment. Use knowledge of habitats and plants and animals to recognise that environments can change and can pose a danger to living things.</p>
(Recap Year 3/4) Year 5 and 6	<p>Children will learn to draw and describe the life cycle of a mammal, amphibian, insect and bird. They will be able to explain the similarities and differences in the life cycle of these animals.</p> <p>Children will look at and copy classification keys for common insects, birds and plants. They will learn to identify plants, mammals, amphibians, insects and birds from classification keys.</p>

Animals including Humans

EYFS	
Year 1 and Year 2	<p>Children will learn the basic needs for animals for survival (water, food, air)</p> <p>Children will learn the importance for humans of exercise, eating, and hygiene.</p> <p>Children will learn the basic food groups. They will learn to take a pulse before and after exercise. Children will identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals. Children will identify and name a variety of common animals that are carnivores, herbivores and omnivores. Children will describe and compare the structure of a variety of common animals.</p>
(Recap Year 1/2) Year 3 and Year 4	<p>Children will learn to describe and label the simple functions of the basic parts of the digestive system in humans. Children will learn the different types of teeth in humans and their simple functions. Children will build on prior knowledge to construct and interpret a variety of food chains, identifying producers, predators and prey. Children will identify how plants and animals, including humans, resemble their parents in many features.</p> <p>Children will identify that animals, including humans need the right types and amount of nutrition and they cannot make their own food. Children will identify that humans and some animals have skeletons and muscles for support, protection and movement.</p>
(Recap Year 3/4) Year 5 and 6	<p>Children will describe and compare the main changes in the human body from childhood to adulthood to old age. Children will describe and compare the physical signs of ageing.</p> <p>Children will learn to draw and label diagrams of the human circulatory system and describe the functions of the heart, blood vessels and blood. Children will recognise the impact of diet, exercise drugs and lifestyle of their bodies function. Children will identify and describe how nutrients are important for animals and humans.</p>

Electricity

EYFS	
Year 1 and Year 2	
Year 3 and Year 4	<p>Children will learn to identify common appliances that run on electricity.</p> <p>Children will learn to construct a simple series electrical circuit. Children will be able to identify and name its basic parts (cells, wires, bulbs, switches and buzzers). Children will identify that a circuit needs wires, a battery pack and a light bulb to work. Children will know that electrical current can flow if there is a complete circuit.</p>
(Recap Year 3/4) Year 5 and 6	<p>Children will associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit.</p> <p>Children will 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.</p> <p>Children will use recognised symbols when representing a simple circuit in a diagram.</p>

Lights	
EYFS	
Year 1 and Year 2	
Year 3 and Year 4	Children will recognise that they need light in order to see things and that dark is the absence of light. Children will notice that light is reflected from surfaces through experiments with light on a variety of different surfaces. Children will recognise that light from the sun can be dangerous and that we can protect our eyes. Children will observe and record the effect of blocking light with solid objects and recognise how shadows are formed.
(Recap Year 3/4) Year 5 and 6	Draw and label diagrams to show how light appears to travel in straight lines. Observe and describe how light diverges from a source. To 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.

Evolution and Inheritance	
EYFS	
Year 1 and Year 2	
Year 3 and Year 4	
Year 5 and 6	Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago. Observe and describe differences between living things and their offspring. Recognise that offspring that are not identical to their parents. Identify how animals and plants adapt to suit their environment and that adaptation may lead to evolution.

Earth and Space	
EYFS	Children will learn about Earth during their space learning. Children will know that Earth orbits the sun and this causes day and night.
Year 1 and Year 2	
Year 3 and Year 4	
(Recap EYFS) Year 5 and 6	Children will describe the movement of the Earth relative to the Sun. Children will describe the movement of the Moon relative to the Earth. Children will learn explain why the Moon effects the tides of oceans and seas on Earth.

Rocks	
EYFS	
Year 1 and Year 2	
Year 3 and Year 4	Children will learn to compare and group together different kinds of rocks on the basis of their appearance and simple physical properties. Children will describe in simple terms how fossils are formed when things that have lived are trapped within rock.
Year 5 and 6	

Sound	
EYFS	
Year 1 and Year 2	
Year 3 and Year 4	<p>Children will identify how sounds are made, associating some of them with something vibrating. Children will recognise that vibrations from sounds travel through a medium to the ear. Children will learn to label a diagram to show how vibrations travel through a medium to the ear.</p> <p>Children will find patterns between the pitch of a sound and features of the object that produced it.</p> <p>Children will recognise that sounds get fainter as the distance from the sound source increases.</p>
Year 5 and 6	