

Science Overview 1 year rolling programme 2023-2024

One year rolling programme

	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
Year Group						
			Careers week	Science week		
<p>Year 1</p> <p>Seasonal changes <i>(to be taught across the year)</i></p> <p>Children will observe changes across the 4 seasons, as well as describing the associated weather for each season and how day length varies.</p> <p>Our changing world: plants <i>(to be taught across the year)</i></p> <p>Children will look at how trees, leaves and plants change throughout the year, in addition to discovering which flowers we can find in different seasons.</p>	<p>Seasonal changes including weather</p> <p>Everyday materials</p> <p>The children will identify, name, compare and group together different everyday materials using their simple properties, in addition to distinguishing between an object and the material from which it is made.</p>	<p>Seasonal changes including weather</p> <p>Everyday materials</p> <p>The children will identify, name, compare and group together different everyday materials using their simple properties, in addition to distinguishing between an object and the material from which it is made.</p>	<p>Our changing world: plants</p> <p>Animals including Humans</p> <p>The children will study and name different animals, learn about which group the animal belongs to and discover what they need to survive.</p> <p>This will include looking at the different animal groups including fish, amphibians, reptiles, birds and mammals. Also children will learn the difference between carnivores, herbivores and omnivores.</p>	<p>Seasonal changes including weather</p> <p>Animals including Humans</p> <p>The children will study and name different animals, learn about which group the animal belongs to and discover what they need to survive.</p> <p>This will include looking at the different animal groups including fish, amphibians, reptiles, birds and mammals. Also children will learn the difference between carnivores, herbivores and omnivores.</p>	<p>Seasonal changes including weather</p> <p>Humans</p> <p>The children will learn about their bodies and the five senses.</p>	<p>Our changing world: plants</p> <p>Plants</p> <p>The children will identify and name a variety of common wild and garden plants, as well as describing the basic structure of flowering plants including trees.</p>
<p>Year 2</p> <p>Our changing world: plants</p> <p>Pupils should use the local environment throughout the year to observe how different plants grow. Pupils should be introduced to the requirements of plants for germination, growth and survival, as well as to the processes of reproduction and growth in plants.</p>	<p>Uses of everyday materials</p> <p>Children will identify and compare the suitability of a variety of everyday materials for particular uses. They will also discover how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.</p>	<p>Plants</p> <p>Our changing world</p> <p>Children will observe and describe how seeds and bulbs grow into mature plants. Additionally, they will find out and describe how plants need water, light and a suitable temperature to grow and stay healthy</p>	<p>Living things and their habitats</p> <p>Our changing world</p> <p>Children will compare the differences between things that are living, dead and things that have never been alive. They will look at how different habitats are suitable for kinds of animals and plants. Children will also identify and name a variety of plants and animals in their habitats, including microhabitats and they will explore food chains.</p>	<p>Animals including Humans</p> <p>Children will learn how animals, including humans, have offspring which grow into adults. They will describe the basic needs of animals, including humans, to survive and study the importance for humans to exercise, eat the right amounts of different types of food and be hygienic.</p>		

<p>Year 3</p> <p>Our changing world</p> <p>Children will learn about how leaves and flowers change throughout the year, as well as which seeds, we can find at different times and they will grow sunflowers from seeds.</p>	<p>Rocks and soils</p> <p>Children will compare and group different kinds of rocks by appearance and simple physical properties. They will learn how fossils and soils are formed.</p>	<p>Light</p> <p>Children will understand light and dark, learn about how light is reflected and recognise that light from the sun can be dangerous. They will also study shadows: how they are formed and the patterns as shadows change size.</p>	<p>Forces</p> <p>Children will compare how things move on different surfaces.</p>	<p>Our changing world</p> <p>Animals including humans</p> <p>Children will learn about the nutrition of animals, including humans, as well as studying the skeletons and muscles that humans and some animals have for support, protection and movement.</p>	<p>Our changing world</p> <p>Plants</p> <p>Children will identify and describe the functions of different parts of flowering plants, in addition to exploring what plants need/requirements to survive and grow and how water is transported within plants. They will learn about how flowers are important for pollination, seed formation and seed dispersal.</p>	<p>Magnets</p> <p>Children will compare how things move on different surfaces and learn all about magnets, including how they attract and repel some materials.</p>
<p>Year 4</p>	<p>States of Matter</p> <p>Children will compare and group materials together, according to whether they are solids, liquids or gases. They will observe that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius (°C). Additionally, they will identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.</p>	<p>Electricity</p> <p>Children will identify common appliances that run on electricity and construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers. Children will also 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. They will recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit as well as recognising some common conductors and insulators, and associate metals with being good conductors.</p>	<p>Sound</p> <p>Children will identify how sounds are made, associating some of them with something vibrating and recognise that vibrations from sounds travel through a medium to the ear. They will also find patterns between the pitch of a sound and features of the object that produced it as well as finding patterns between the volume of a sound and the strength of the vibrations that produced it. Additionally, children will recognise that sounds get fainter as the distance from the sound source increases.</p>	<p>Animals including humans</p> <p>Children will describe the simple functions of the basic parts of the digestive system in humans. They will also identify the different types of teeth in humans and their simple functions. Additionally, they will construct and interpret a variety of food chains, identifying producers, predators and prey.</p>	<p>Living things and their habitats</p> <p>Children will recognise that living things can be grouped in a variety of ways. They will also explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment. Additionally, children will recognise that environments can change and that this can sometimes pose dangers to living things.</p>	<p>Living things and their habitats</p> <p>Children will recognise that living things can be grouped in a variety of ways. They will also explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment. Additionally, children will recognise that environments can change and that this can sometimes pose dangers to living things.</p>
<p>Year 5</p>	<p>Forces</p>	<p>Earth and space</p>	<p>Properties & changes of materials</p>	<p>Properties & changes of materials</p>	<p>Living things and their habitats</p>	<p>Animals including humans</p>

	Children will learn about gravity, air resistance, water resistance and friction through carrying out different investigations. They will also recognise that some mechanisms allow a smaller force to have a greater effect.	Children will describe the movement of the Earth and other planets relative to the sun in the solar system, as well as the movement of the moon relative to the Earth. They will also use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky.	Children will compare, group together and give uses for everyday materials based on their properties, know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution. They will learn about how mixtures might be separated, including through filtering, sieving and evaporating. Children will investigate reversible and irreversible changes	Children will compare, group together and give uses for everyday materials based on their properties, know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution. They will learn about how mixtures might be separated, including through filtering, sieving and evaporating. Children will investigate reversible and irreversible changes	Children will describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird, as well as learning about reproduction in some plants and animals.	(reproduction) Links with PSHE Children will describe the changes as humans develop to old age, including the changes experienced in puberty and how reproduction occurs.
Year 6 For this academic year (2023-2024) only, current Year 6 children will follow the Y5 Curriculum objectives due to science being arranged in a 2 year programme last year. All Year 6 objectives have already been taught to this year group.	Light Children will recognise that light appears to travel in straight lines. They will also 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, as well as explaining that we see things because light travels from light sources to our eyes or from light sources to objects and then to our eyes. Additionally, they will use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them.	Electricity 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. They will also 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. Additionally, they will use recognised symbols when representing a simple circuit in a diagram.	Evolution and inheritance Children will recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago. They will also recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents. Additionally, they will identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.	Classification Living things and their habitats Children will 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. They will also give reasons for classifying plants and animals based on specific characteristics.	Animals including humans Children will identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood. They will also recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function. Additionally, they will describe the ways in which nutrients and water are transported within animals, including humans.	Animals including humans Links with PSHE Pupils should learn how to keep their bodies healthy and how their bodies might be damaged – including how some drugs and other substances can be harmful to the human body. Pupils might work scientifically by: exploring the work of scientists and scientific research about the relationship between diet, exercise, drugs, lifestyle and health.