



Whole-School Science Progression Map

	EYFS	KS1		KS2			
	Playgroup Nursery Reception Early Learning Goals	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Autumn Term	<p>Repeat actions that have an effect. • Explore materials with different properties. • Explore natural materials, indoors and outside. • Explore and respond to different natural phenomena in their setting and on trips.</p> <p>Understand 'why' questions, like: "Why do you think the caterpillar got so fat?"</p> <p>Make healthy choices about food, drink, activity and toothbrushing.</p> <p>Use all their senses in hands-on exploration of natural materials.</p> <p>Explore collections of materials with similar and/or different properties.</p> <p>Talk about what they see, using a wide vocabulary.</p>	<p>Identify, name, draw and label the basic parts of the human body</p> <p>Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals</p> <p>Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets)</p> <p>Explore/compare the differences between things that are living, dead, and things that have never been alive</p>	<p>Notice that animals, including humans, have offspring which grow into adults</p> <p>Find out about and describe the basic needs of animals, including humans, for survival (water, food and air)</p> <p>Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene</p> <p>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</p>	<p>Identify that animals, including humans, need the right types and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat</p> <p>Identify that humans and some other animals have skeletons and muscles for support, protection and movement</p> <p>Compare and group together different kinds of rocks on the basis of appearance and simple physical properties (hardness and permeability) (rock survey around the area)</p> <p>Recognise that soils are made from rocks and organic matter</p>	<p>Identify common appliances that run on electricity</p> <p>Recognise some common conductors and insulators, and associate metals with being good conductors</p> <p>Construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers</p> <p>Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit</p> <p>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</p>	<p>Describe the life process of reproduction in some plants and animals- (Sexual reproduction, Asexual reproduction)</p> <p>Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird</p> <p>Describe the changes as humans develop to old age (fetal development, birth to 5, puberty, physical and mental)</p> <p>key milestones in a human life and how they impact on the body)</p>	<p>Describe how living things are classified into broad groups according to common observable characteristics- microorganisms, plants and animals</p> <p>Give reasons for classifying plants and animals based on specific characteristics (botanical plants)</p> <p>Describe key characteristics of unusual living things from around the world</p> <p>Recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents</p> <p>Recognise that living things have changed over time</p>

	<p>Begin to make sense of their own life-story and family's history.</p> <p>Explore how things work. Plant seeds and care for growing plants.</p> <p>Understand the key features of the life cycle of a plant and an animal.</p> <p>Begin to understand the need to respect and care for the natural environment and all living things.</p> <p>Explore and talk about different forces they can feel.</p> <p>Talk about the differences between materials and changes they notice.</p>		<p>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</p>				<p>Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution</p> <p>Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago</p>
<p>Spring Term</p>	<ul style="list-style-type: none"> Learn new vocabulary. Ask questions to find out more and to check what has been said to them. Articulate their ideas and thoughts in well-formed sentences. Describe events in some detail. Use talk to help work out problems and organise thinking 	<p>Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees</p> <p>Observe changes across the four seasons</p> <p>Observe and describe weather associated with the seasons and how day length varies</p>	<p>Observe and describe how seeds and bulbs grow into mature plants.</p> <p>Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy</p> <p>Describe how plants need water, light and a suitable temperature to grow and stay healthy</p>	<p>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</p> <p>Identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers</p> <p>To classify food plants according to the part of the plant</p>	<p>Compare and group materials together, according to whether they are solids, liquids or gases (sand & water, gas)</p> <p>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)</p> <p>Identify the part played by evaporation and</p>	<p>Describe the movement of the Earth and other planets relative to the Sun in the solar system</p> <p>Describe the Sun, Earth and Moon as approximately spherical bodies</p> <p>Use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky</p> <p>Explain that unsupported objects fall towards the Earth</p>	<p>Identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood</p> <p>(Demonstrate how blood transports nutrients, water, gases and waste around the body)</p> <p>Describe the ways in which nutrients and water are transported within animals, including humans</p>

	<p>and activities, and to explain how things work and why they might happen.</p> <ul style="list-style-type: none"> • Use new vocabulary in different contexts. • Know and talk about the different factors that support their overall health and wellbeing: • regular physical activity • healthy eating • toothbrushing • sensible amounts of 'screen time' • having a good sleep routine • being a safe pedestrian • Explore the natural world around them. • Describe what they see, hear and feel while they are outside. • Recognise some environments that are different to the one in which they live. • Understand the effect of changing seasons on the natural world 			<p>that is eaten</p> <p>Investigate the way in which water is transported within plants</p> <p>Explore the part that flowers play in the life cycle of flowering plants</p> <p>(Bees & pollination), how fruits develop from pollinated flowers, seed dispersal)</p>	<p>condensation in the water cycle and associate the rate of evaporation with temperature</p> <p>Identify how sounds are made, associating some of them with something vibrating</p> <p>Recognise that vibrations from sounds travel through a medium to the ear</p> <p>Find patterns between the pitch of a sound and features of the object that produced it</p> <p>Find patterns between the volume of a sound and the strength of the vibrations that produced it</p> <p>Understand that sound travels slower than light</p> <p>Recognise that sounds get fainter as the distance from the sound source increases</p>	<p>because of the force of gravity acting between the Earth and the falling object</p> <p>Identify the effects of air resistance that acts between moving surfaces</p> <p>Recognise that some mechanisms, including levers and pulleys, allow a smaller force to have a greater effect</p> <p>Recognise that gear mechanisms allow a smaller force to have a greater effect</p> <p>Identify the effects of friction that acts between moving surfaces</p> <p>Identify the effects of water resistance that acts between moving surfaces</p>	<p>Recognise the impact of diet, exercise, drugs and lifestyle on the way their body's function</p> <p>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>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>Use recognised symbols when representing a simple circuit in a diagram (include a dimmer switch)</p> <p>Give reasons for variations in how components function</p>
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	around them.						
Summer Term	<p>Explore the natural world around them, making observations and drawing pictures of animals and plants; - Know some similarities and differences between the natural world around them and contrasting environments, drawing on their experiences and what has been read in class; - Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter</p>	<p>Distinguish between an object and the material from which it is made</p> <p>Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water and rock</p> <p>Describe the simple physical properties of a variety of everyday materials</p> <p>Compare and group together a variety of everyday materials on the basis of their simple physical properties</p> <p>Identify, name, draw and label the basic parts of the human body and say which parts of the body is associated with which sense</p>	<p>Identify and compare the suitability of a variety of everyday materials for particular uses (Paper towels)</p> <p>Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock (building materials) (fabrics) (manmade and natural objects) (wax)</p> <p>Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching (heat & materials)</p>	<p>Compare how things move on different surfaces</p> <p>Notice that some forces need contact between two objects, but magnetic forces can act at a distance</p> <p>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</p> <p>Observe how magnets attract or repel each other and attract some materials and not others</p> <p>Predict whether two magnets will attract or repel each other, depending on which poles are facing</p> <p>Recognise that they</p>	<p>Recognise that living things can be grouped in a variety of ways</p> <p>Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment</p> <p>Construct and interpret a variety of food chains, identifying producers, predators and prey-carnivore, herbivore and omnivore</p> <p>Recognise that environments can change and that this can sometimes pose dangers to living things (climate change, impact)</p> <p>Can we make a positive impact to a local environment?</p>	<p>Compare and group together everyday materials on the basis of their properties, including their hardness, transparency, and conductivity (electrical and thermal, insulating properties of a range of materials as well as those that will conduct electricity)</p> <p>Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials glass, plastic, paper (most absorbent)</p> <p>Use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating</p>	<p>Recognise that light appears to travel in straight lines</p> <p>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</p> <p>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 (Splitting white light into rainbow colours, effects of coloured light on coloured materials)</p> <p>Use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them.</p>

				<p>need light in order to see things and that dark is the absence of light</p> <p>Notice that light is reflected from surfaces</p> <p>Recognise that light from the sun can be dangerous and that there are ways to protect their eyes</p> <p>Recognise that shadows are formed when the light from a light source is blocked by an opaque object</p> <p>Find patterns in the way that the size of shadows change</p>	<p>Reflect on the types of actions you could take at home to improve the environment</p>	<p>Explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda</p> <p>Know some changes in materials can't be reversed and they can produce new materials in the process- oxidation</p>	
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