

	EYFS and KS1 Science CURRICULUM PROGRESSION MAP		
Scheme:	Intent - Our intent is to provide a hands-on science curriculum where children are engaged in practical and interesting learning which will enable them to make sense of the world around them and develop a positive attitude to science. We want children to behave as scientists and develop their knowledge and understanding of our world by exploring questions.		
	Year R	Year 1	Year 2
Autumn Term	<u>The Natural World in our school</u> In this topic, children will learn: - To explore the natural world in our school grounds - Harmony garden, digging patch, pond, plants and flowers, minibeasts. <u>What happens in autumn?</u> <u>Leaf Man and The Gruffalo</u> In this topic, children will learn: - About what happens in autumn and life in the woodland. - To explore the natural world, make observations and draw pictures. - About some important processes and changes in the natural world. - About similarities and differences in relation to objects, materials and living things. - To make observations and draw pictures of animals. - To name a variety of animals.	<u>Humans and senses</u> In this topic, children will learn: - To name the parts of the body. - The five sense organs are the eyes (for seeing), nose (for smelling), ears (for hearing), tongue (for tasting), and skin (for touching and feeling). - Animals and humans use their senses to help them survive. - Exercise keeps animals' bodies in good condition and increases chances of survival. - All animals are born, which is when they can eat and breathe. They grow and develop as they get older. - Humans of the same age can be very different. - The importance of exercise and eating the right amounts of different types of food. <u>Describing materials</u> In this topic, children will learn: - There are many different materials that have different describable properties. (Thinking about strength, softness, weight, texture - soft/hard, shiny/not shiny, bendy/not bendy, rough/smooth, heavy/light, colourful - Materials that have similar properties are grouped into rocks, fabrics, wood, plastic, metals and ceramics. - To distinguish the difference between an object and the material it is made from. - To observe closely using appropriate senses. - To label diagrams. - To identify and classify – using observations and testing to compare materials.	<u>Materials</u> In this topic, children will learn: - To distinguish objects from materials. - To describe the properties of materials (flexible/rigid, transparent/opaque, shiny/dull, rough/smooth, hard/soft). - To identify and group everyday materials based on properties. - To compare the suitability of materials for different purposes. - To observe closely. - To identify and classify. - To recognise what we change and what we measure/observe in a test. - To complete a planning mind map to show what we change and what we measure/observe. - To perform simple tests. - To record results in a table. <u>Animals and how they survive - rainforest animals</u> In this topic, children will learn: - To know that animals have developed a range of ways to find prey or avoid being eaten (camouflage, movement, protective adaptations). - To name different plants and animals and describe how they are suited to different habitats. - To describe the importance of senses for survival for animals. - To know the five sense organs are the eyes (for seeing), nose (for smelling), ears (for hearing, tongue (for tasting) and skin (for touching or feeling). - To describe and compare the observable features of animals from a range of groups. - To know there is variation in all living things. - To perform simple tests. - To gather and record evidence. - To gather evidence in order to answer a question. - To use secondary sources.



Spring Term	<u>Walking through the Jungle</u> In this topic, children will learn: • About similarities and differences between the natural world around them and contrasting environments. • About similarities and differences in relation to objects, materials and living things. • To compare the jungle and the animals that live in it with the British woodland. <u>Once upon a time</u> In this topic, children will learn: • About similarities and differences in relation to objects, materials and living things. • To describe the properties of some materials when comparing brick, wood and straw houses.	<u>Habitats</u> In this topic, children will learn: • There is variation in all living things. • Animals and plants have adapted to survive in different habitats. • Animals and plants live in a variety of different places called habitats. • Wild Plants such as daisies, nettles and dandelions grow randomly. • Garden plants such as daffodils, lavender and pansies are planted intentionally. • To observe closely. • To observe closely using equipment. • To gather and record data in order to answer questions using tables and pictograms.	<u>Forces</u> In this topic, children will learn: • To describe how objects move (roll, bounce, slide). • To recognise that pushing and pulling can affect motion. • To know that pushing or pulling an object can slow down, speed up or change the direction of an object. • To recognise that the larger the push or pull the bigger the effect on motion. • To compare the effect of pushes and pulls. • To observe closely. • To use their observations to suggest answers to questions with a focus on descriptions of movement. • To ask simple questions and recognise they can be answered in different ways - focus on how a affects b type of questions. • To perform tests (comparative and fair tests). • To identify the change and measure in a fair test. • To gather and record data to help in answering questions (use of graphs to record). • To use a table to record results.
	<u>Spring Walk</u> In this topic, children will learn: • About spring and changes that take place in the natural world such as blossom growing on trees, buds starting to grow and new life. • To explore the natural world, make observations and draw pictures. • About some important processes and changes in the natural world. • To make observations and draw pictures of plants and animals.	<u>Animals and how they survive</u> In this topic, children will learn: • That some things are living, some were once living but are now dead and some things have never lived. • There are many different groups of animals including birds, fish, mammals, reptiles and amphibians. • Animals are groups of organisms that need to consume food to survive. Some animals eat other animals, some eat plants and some eat plants and animals. • Animals move to get their food. Animals move in different ways. (predators and prey). • Animals’ feeding relationship can be shown in a food chain. • To identify and classify. • To observe closely.	<u>Plants</u> In this topic, children will learn: • To describe what plants need to survive (light and water. Some plants need warmth). • To describe and compare the impact of changing what plants need to survive. • To describe the purpose of different parts of plants (roots, leaves) and know a seed produces roots for water to get into the plant and a seed produces shoots to produce leaves to collect sunlight.) • To observe closely. • To perform simple tests and to identify what should be changed and measured/observed. • To observe closely over time. • To gather and record data to help in answering questions.
Summer Term	<u>Down on the farm</u>	<u>How do plants grow?</u>	<u>Animal life cycles and how animals get their food</u>

	In this topic, children will learn: - About different life cycles. - To explore the natural world, make observations and draw pictures. - To make observations and draw pictures of animals. - To name a variety of animals. - About similarities and differences in relation to objects, materials and living things. <u>Eddy the penguin saves the world</u> In this topic children will learn: - Know some similarities and differences between the natural world around them and contrasting environments. - About the impact of humans on the world . - What changes people can make to help protect our world. - Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter.	In this topic, children will learn: - Plants grow from seeds and bulbs. - A bulb has underground vertical shoots which already have modified leaves. - A seed contains a miniature plant that can develop into a fully grown plant. - Seeds and bulbs have food stores inside them to help the plant start to grow. - Seeds and bulbs need water to grow but most do not need light (germination). - A basic plant structure can include leaves, flowers, petals, fruit, roots, bulb, seed, trunk, branches and stem. - To observe closely using simple equipment (magnifying glasses, digital microscope) - To use observations and ideas to suggest answers to questions. - To identify and classify – using their observations to compare seeds and bulbs and choose their own criteria for sorting. - Gathering and recording data to help in answering questions. – record observations using drawings/ photos/labelled diagrams. <u>How do plants survive?</u> In this topic, children will learn: - To survive plants need to get water and light. - To use their observations and ideas to suggest answers to questions. - To perform simple tests. - To gather and record data to help in answering questions. - To observe closely over time.	In this topic, children will learn: - That animals are groups of organisms that need to consume food to survive. - That different kinds of animals and plants depend on each other within a habitat. - Animals get their food from plants and other animals. This can be shown in a food chain. - A food chain begins with a producer. This is often a green plant because plants can make their own food. - A living thing that eats other plants is called a consumer. - Things that are living move, feed, grow, reproduce and use their senses. - Animals reproduce when they reach maturity. Different animals reach different sizes and ages before they are able to reproduce. - All animals eventually die. Different animals live to different ages. - Animals, including humans, have offspring which grow into adults. - To gather and record data to help in answering questions. - To look for patterns. <u>Changing materials</u> In this topic, children will learn: - To describe the properties of materials (brittle, plastic, elastic). - To identify and group everyday materials based on properties. - To describe how materials can be changed by a physical force (twisting, bending, squashing, stretching). - That the properties of a material determine whether it is suitable for a purpose. - That pushing and pulling objects can change their shape. - To observe closely. - To gather and record data to help in answering questions. - To identify and classify. - To perform simple tests. - To identify the change and measure. - To record results in a table (challenge - draw own table)
	Across the year <u>Looking at the seasons throughout then year and exploring changes in the local environment.</u>	<u>Longitudinal study - When should Billy the water boatman come and visit the pond?</u>	<u>Longitudinal study - What are flowers for?</u>

	See above.	In this topic, children will learn: - Plants and animals have adapted ways of surviving the changing seasons. These include hibernating, storing food, migrating, fattening up, loss of leaves - There are four seasons – spring, summer, autumn and winter. - Each season is about three months long. - In autumn the leaves fall off the trees and the amount of time we have in the daylight becomes less. - Winter has the shortest amount of time during the day and the weather is at its coldest. - In spring young animals like lambs and chicks are born, flowers bloom and the weather starts to become warmer. - In summer the trees are full of green leaves and the weather is at its warmest. - Trees can be evergreen or deciduous. Evergreen trees keep their leaves all year round. Deciduous trees lose their leaves every autumn. - To observe closely - To gather and record data to help in answering questions - using the same format each season to record what they observe at the pond.	Observing 4 plants growing, flowering and forming seeds over the year. In this topic, children will learn: - To know the seasons affect how plants grow (amount of light, warmth, rain etc). - To recognise that all flowering plants make seeds (reproduction)that can grow (germinate) into new plants. - To know plants need water, light and a suitable temperature to grow and stay healthy. - To know that sometimes a plant dies after it has produced its seed (annual) and sometimes the plant lives for many generations producing seeds each year (perennial). - To make close observations over a period of time. - To gather and record data to help in answering questions (recording data through drawings). - To identify and classify.
NC End of Key Stage Expectations	By the end of EYFS children should be taught to: The Natural world - 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.	By the end of KS1 children should be taught: Substantive knowledge - Plants: Identifying and naming common plants and trees; understanding basic plant parts (roots, stem/trunk, leaves, flowers/petals). What plants need to survive. Seeds and bulbs grow into mature plants. Plants need water, light and a suitable temperature to grow and stay healthy - Animals, including Humans: Classifying animals (fish, amphibians, reptiles, birds, mammals); identifying carnivores, herbivores, and omnivores; Understanding basic human body parts and senses. Animals, including humans, have offspring which grow into adults. The basic needs of animals, including humans, for survival (water, food and air). The importance for humans of exercise, eating the right amounts of different types of food, and hygiene. - Living things and their habitats: Recognising how plants and animals are adapted to survive in different habitats. Differences between living, dead, things that have never been alive. Identify and name plants and animals. Identifying habitats and microhabitats. Using simple food chains to show how animals obtain food. - Everyday Materials: Distinguishing between objects and materials; naming common materials (wood, plastic, glass, metal, water, rock, paper, cardboard) and describing their properties. Identifying and comparing the suitability of materials. - Changing materials: Identify how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching - Seasonal Changes: Observing and commenting on changes across the four seasons and associated weather patterns.	



		Working scientifically (disciplinary knowledge) • asking simple questions and recognising that they can be answered in different ways • observing closely, using simple equipment • performing simple tests • identifying and classifying • using their observations and ideas to suggest answers to questions • gathering and recording data to help in answering questions
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