

Science High Level Plan 2023 - 24

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Nurs	<p>Me and my community This project supports children with settling into the new rules and routines of school and encourages them to make new friends and feel confident in their class. It teaches children about being helpful, kind and thoughtful at home and at school. This project also teaches children how they are unique and special, the importance of friendship and how people in their family, school and local community are important and can help them.</p> <p><i>Understanding the World:</i> Show interest in different occupations. Talk about what they see, using a wide vocabulary</p> <p>Curriculum Threads: IDENTITY</p>	<p>Sparkle and shine This project teaches children about the celebrations that take place during the autumn and winter seasons, and focus on the significance and symbolism of light at this time of year.</p> <p><i>Understanding the World:</i> Use all their senses in hands-on exploration of natural materials. Explore collections of materials with similar and/or different properties. Talk about what they see, using a wide vocabulary.</p> <p>Curriculum Threads: IDENTITY CIVILISATION</p>	<p>Animal safari This project teaches children about the animals that live around the world, how to look after animals and the importance of caring for our local and global environments.</p> <p><i>Understanding the World:</i> Talk about what they see, using a wide vocabulary.</p> <p>Curriculum Threads: IDENTITY NATURAL WORLD</p>	<p>Ready, steady, grow This project teaches children about food and farming and explores themes, including where food comes from, what plants and animals need to grow and survive and what constitutes a healthy lifestyle.</p> <p><i>Understanding the World:</i> Talk about what they see, using a wide vocabulary. Plant seeds and care for growing plants. Understand the key features of the life cycle of a plant and an animal. Begin to understand the need to respect and care for the natural environment and all living things. Explore and talk about different forces they can feel.</p> <p>Curriculum Threads: IDENTITY</p>	<p>Marvellous machines This interest-led project teaches children about the technology that is part of their daily lives and how machines help us. The project gives children the opportunity to build and create marvellous machines.</p> <p><i>Understanding the World:</i> Talk about what they see, using a wide vocabulary. Show interest in different occupations. Explore how things work Explore and talk about different forces they can feel</p> <p>Curriculum Threads: IDENTITY INNOVATION</p> <p>Creep, crawl, wriggle This mini project teaches children about invertebrates that live in their gardens and local environment.</p>	<p>Sunshine and sunflowers This seasonal project provides opportunities for outdoor learning and teaches children how to care for the plants and animals in their local environment and how to stay safe in the sun.</p> <p><i>Understanding the World:</i> Plant seeds and care for growing plants. Understand the key features of the life cycle of a plant and an animal. Use all their senses in hands-on exploration of natural materials. Explore collections of materials with similar and/or different properties</p> <p>Curriculum Threads: IDENTITY NATURAL WORLD</p>



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				<p>NATURAL WORLD CIVILISATION</p>	<p><i>Understanding the World:</i> Explore the natural world around them, making observations and drawing pictures of animals and plants. Develop scientific knowledge through play activities, sharing stories and non-fiction books and discussion. Curriculum Threads: IDENTITY NATURAL WORLD</p>	
Rec	<p>Me and my community This project supports children with settling into the new rules and routines of school and encourages them to make new friends and feel confident in their class. It teaches children about being helpful, kind and thoughtful at home and at school. This project also teaches children how they are unique and special, the importance of friendship and how people in their family, school and local community are</p>	<p>Sparkle and shine This project teaches children about the celebrations that take place during the autumn and winter seasons, and focus on the significance and symbolism of light at this time of year. <i>Understanding the World:</i> Understand the effect of changing seasons on the natural world around them Curriculum Threads: IDENTITY NATURAL WORLD</p>	<p>Ready, steady, grow This project teaches children about food and farming and explores themes, including where food comes from, what plants and animals need to grow and survive and what constitutes a healthy lifestyle. <i>Understanding the World:</i> Explore the natural world around them. Describe what they see, hear and feel whilst outside.</p>	<p>Animal safari This project teaches children about the animals that live around the world, how to look after animals and the importance of caring for our local and global environments. <i>Understanding the World:</i> Understand the effect of changing seasons on the natural world around them. Curriculum Threads: IDENTITY NATURAL WORLD</p>	<p>Marvellous machines This interest-led project teaches children about the technology that is part of their daily lives and how machines help us. The project gives children the opportunity to build and create marvellous machines. <i>Understanding the World:</i> Describe what they see, hear and feel whilst outside Curriculum Threads: IDENTITY</p>	<p>Sunshine and sunflowers This seasonal project provides opportunities for outdoor learning and teaches children how to care for the plants and animals in their local environment and how to stay safe in the sun. <i>Understanding the World:</i> Understand the effect of changing seasons on the natural world around them. Recognise some environments that are</p>



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	<p>important and can help them.</p> <p><i>Understanding the World:</i> Explore the natural world around them. Understand the effect of changing seasons on the natural world around them.</p> <p>Curriculum Threads: IDENTITY NATURAL WORLD</p> <p>Long ago This project teaches children about how they have grown and changed since they were babies and how life in the past was different from today.</p> <p><i>Understanding the World:</i> Understand the effect of changing seasons on the natural world around them.</p> <p>Curriculum Threads: IDENTITY NATURAL WORLD</p>		<p>Understand the effect of changing seasons on the natural world around them.</p> <p>Curriculum Threads: IDENTITY NATURAL WORLD</p>		<p>NATURAL WORLD INNOVATION</p> <p>Creep, crawl, wriggle This mini project teaches children about invertebrates that live in their gardens and local environment.</p> <p><i>Understanding the World:</i> Understand the effect of changing seasons on the natural world around them. Recognise some environments that are different from the one in which they live. Describe what they see, hear and feel whilst outside. Explore the natural world around them.</p> <p>Curriculum Threads: IDENTITY NATURAL WORLD CIVILISATION EQUITY</p>	<p>different from the one in which they live. Describe what they see, hear and feel whilst outside. Explore the natural world around them.</p> <p>Curriculum Threads: IDENTITY NATURAL WORLD</p> <p>Moving on This project celebrates the children's successes throughout their Reception year. It explores how they have grown and changed and supports them with the changes to come as they move into Year 1.</p> <p><i>Understanding the World:</i> Discuss simple changes as they have grown from being a baby.</p> <p>Curriculum Threads: IDENTITY NATURAL WORLD</p>
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Y1	<p>Human senses This project teaches children that humans are a type of animal known as a mammal. They name and count body parts and identify similarities and differences. They learn about the senses, the body parts associated with each sense and their role in keeping us safe.</p> <p>Curriculum Threads: IDENTITY INNOVATION</p>	<p>Seasonal changes This project teaches children about the seasons, seasonal changes and typical seasonal weather and events. They learn about measuring the weather and the role of a meteorologist. Children begin to learn about the science of day and night and recognise that the seasons have varying day lengths in the UK.</p> <p>Curriculum Threads: NATURAL WORLD</p>	<p>Materials This project teaches children that objects are made from materials. They identify a range of everyday materials and their sources. Children investigate the properties of materials and begin to recognise that a material's properties define its use.</p> <p>Curriculum Threads: INNOVATION NATURAL WORLD</p>	<p>Plants This project teaches children about wild and garden plants by exploring the local environment. They identify and describe the basic parts of plants and observe how they change over time.</p> <p>Curriculum Threads: IDENTITY NATURAL WORLD</p>	<p>Animals This project teaches children about animals, including fish, amphibians, reptiles, birds, mammals and invertebrates. They identify and describe their common structures, diets, and how animals should be cared for.</p> <p>Curriculum Threads: IDENTITY NATURAL WORLD</p>
Y2	<p>Human survival This project teaches children about the basic needs of humans for survival, including the importance of exercise, nutrition and good hygiene. They learn how human offspring grow and change over time into adulthood.</p> <p>Curriculum Threads:</p>	<p>Habitats This project teaches children about habitats and what a habitat needs to provide. They explore local habitats to identify and name living things and begin to understand how they depend on one another for food and shelter.</p> <p>Curriculum Threads:</p>	<p>Animal survival This project teaches children about growth in animals by exploring the life cycles of some familiar animals. They build on learning about the survival of humans by identifying the basic needs of animals for survival, including food, water, air and shelter.</p> <p>Curriculum Threads: INNOVATION NATURAL WORLD</p>	<p>Plant survival This project teaches children about the growth of plants from seeds and bulbs. They observe the growth of plants first hand, recording changes over time and identifying what plants need to grow and stay healthy.</p> <p>Curriculum Threads: INNOVATION</p>	<p>Uses of materials This project teaches children about the uses of everyday materials and how materials' properties make them suitable or unsuitable for specific purposes. They begin to explore how materials can be changed.</p> <p>Curriculum Threads: INNOVATION</p>



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	IDENTITY INNOVATION	INNOVATION NATURAL WORLD		NATURAL WORLD	NATURAL WORLD
Y3	<p>Human and animal nutrition This project teaches children about the importance of nutrition for humans and other animals (unit split in two across Autumn)</p> <p>Curriculum Threads: IDENTITY NATURAL WORLD</p>	<p>Human and animal skeleton This project teaches children about the role of a skeleton and muscles and identify animals with different types of skeleton. (unit split in two across Autumn)</p> <p>Curriculum Threads: IDENTITY INNOVATION NATURAL WORLD</p>	<p>Plant nutrition and reproduction This project teaches children about the requirements of plants for growth and survival. They describe the parts of flowering plants and relate structure to function, including the roots and stem for transporting water, leaves for making food and the flower for reproduction.</p> <p>Curriculum Threads: IDENTITY NATURAL WORLD</p>	<p>Forces and magnets This project teaches children about contact and non-contact forces, including friction and magnetism. They investigate frictional and magnetic forces, and identify parts of a magnet and magnetic materials.</p> <p>Curriculum Threads: IDENTITY INNOVATION NATURAL WORLD</p>	<p>Light and shadow This project teaches children about light and dark. They investigate the phenomena of reflections and shadows, looking for patterns in collected data. The risks associated with the Sun are also explored.</p> <p>Curriculum Threads: IDENTITY INNOVATION NATURAL WORLD</p>
Y4	<p>Food and the digestive system This project teaches children about the human digestive system. They explore the main parts, starting with the mouth and teeth, identifying teeth types and their functions. They link this learning to animals' diets and construct food chains to show the flow of energy.</p>	<p>Grouping and classifying This project teaches children about grouping living things, known as classification. They study the animal and plant kingdoms and use and create classification keys to identify living things.</p> <p>Curriculum Threads: INNOVATION NATURAL WORLD</p>	<p>Electrical circuits and conductors This project teaches children about electrical appliances and safety. They construct simple series circuits and name their parts and functions, including switches, wires and cells. They investigate electrical conductors and insulators and identify common features of conductors. It also teaches children about programmable devices. They combine their learning to design and make a nightlight.</p> <p>Curriculum Threads: IDENTITY INNOVATION</p>	<p>States of matter This project teaches children about solids, liquids and gases and their characteristic properties. They observe how materials change state as they are heated and cooled, and learn key terminology associated with these processes.</p> <p>Curriculum Threads: NATURAL WORLD</p>	<p>Sound This project teaches children about sound, how sound is made and how sound travels as vibrations through a medium to the ear. They learn about pitch and volume and find out how both can be changed.</p> <p>Curriculum Threads: INNOVATION NATURAL WORLD CIVILISATION</p>



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	<p>Curriculum Threads: IDENTITY INNOVATION NATURAL WORLD</p>				
Y5	<p>Human reproduction and ageing This project teaches children about animal life cycles, including the human life cycle. They explore human growth and development to old age, including the changes experienced during puberty and human reproduction.</p> <p>Curriculum Threads: IDENTITY INNOVATION NATURAL WORLD</p>		<p>Properties and changes of materials This project teaches children about the wider properties of materials and their uses. They learn about mixtures and how they can be separated using sieving, filtration and evaporation. They study reversible and irreversible changes, and use common indicators to identify irreversible changes.</p> <p>Curriculum Threads: INNOVATION NATURAL WORLD</p>	<p>Forces This project teaches children about the forces of gravity, air resistance, water resistance and friction, with children exploring their effects. They learn about mechanisms, their uses and how they allow a smaller effort to have a greater effect.</p> <p>Curriculum Threads: IDENTITY INNOVATION NATURAL WORLD</p>	<p>Earth and space This project teaches children about our Solar System and its spherical celestial bodies. They describe the movements of the Earth and the other planets relative to the Sun, the Moon relative to Earth, and the Earth's rotation to explain day and night.</p> <p>Curriculum Threads: INNOVATION NATURAL WORLD</p>
Y6	<p>Circulatory system This project teaches children about the transport role of the human circulatory system, its main parts and primary functions. They learn about healthy lifestyle choices and the effects of harmful substances on the body.</p>	<p>Evolution and inheritance This project teaches children how living things on Earth have changed over time and how fossils provide evidence for this. They learn how characteristics are passed from parents to their offspring and how variation in offspring can</p>	<p>Electrical circuits and components This project teaches children about electrical circuits, their components and how they function. They recognise how the voltage of cells affects the output of a circuit and record circuits using standard symbols. It also teaches children about programmable devices, sensors and monitoring. They combine their learning to design and make programmable home devices.</p> <p>Curriculum Threads: IDENTITY</p>	<p>Light theory This project teaches children about the way that light behaves, travelling in straight lines from a source or reflector, into the eye. They explore how we see light and colours, and phenomena associated with light, including shadows, reflections and refraction.</p> <p>Curriculum Threads: IDENTITY NATURAL WORLD</p>	



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	<p>Curriculum Threads: IDENTITY INNOVATION NATURAL WORLD</p>	<p>affect their survival, with changes (adaptations) possibly leading to the evolution of a species.</p> <p>Curriculum Threads: IDENTITY INNOVATION NATURAL WORLD</p>	<p>INNOVATION</p>	
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