

Science

'Thus says God, the LORD, who created the heavens and stretched them out, who spread out the earth and what comes from it, who gives breath to the people on it and spirit to those who walk in it.' Isaiah (42:5)

At St Meriadoc CE Infant Academy our Science Curriculum follows the National Curriculum. Our school ethos celebrates all aspects of school life and endeavours to provide positive experiences for all pupils. This is reflected in our vision and mission statements.

The main aim is to enable pupils to observe, question and be curious about their surroundings and the world in which they live. Throughout their learning, pupils will be taught different types of scientific enquiry and guided how best to put them into practice. The types of scientific enquiry are as follows: observing changes over time, noticing patterns, grouping and classifying, carrying out simple tests and using secondary sources.

We believe that vocabulary underpins scientific understanding; at St Meriadoc CE Infant Academy we equip our pupils with scientific terminology, allowing them to effectively communicate their findings and understanding. These skills not only help our pupils become scientists, it also enables them to use these skills and vocabulary to further access the rest of the curriculum.

We enrich our science curriculum by varying the ways in which we reach our learning objectives through our exciting and engaging topics. By doing so, we can take a child's imagination and curiosity to the next level. Teaching different aspects of science through topic work and discretely, we believe, gives pupils the best of both structure and freedom in their learning, allowing them to apply their scientific knowledge to abstract contexts.

Outdoor learning is instilled in our ethos as a school and each year group receive sustainability lessons in our polytunnel. Children learn through hands on investigation and memories which bring their learning to life. They are able to use skills they have acquired in the classroom and apply these to real world scenarios. We believe that by integrating these three different approaches we are able to give children a broad and balanced introduction to science: igniting their passion, encouraging curiosity, promoting a love of learning as well as the world and phenomena around them. In doing this we know that when children leave St Meriadoc CE Infant Academy they are equipped to access and thrive in future scientific learning.

The Science Lead is responsible for supporting colleagues in their teaching, keeping them informed of current developments in the subject, and by providing a strategic lead and direction for Science including following the school's robust system for monitoring and assessing Foundation subjects for Science.





St. Meriadoc
CE Infant Academy



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Our children are supported through our five chosen rights from the United Nations Convention on the Rights of the Child and our core Christian Values, all embodied through our vision of **God Believes, We Believe, I Believe** and our mission statement:

‘Through enjoyable, memorable learning, supported by our core Christian Values and high expectations, we can aspire to make educated choices in order to flourish to live a rich and fulfilled life.’

Rights and Respect

At St Meriadoc CE Infant Academy, we are proud to teach and promote children’s rights. We learn about our five chosen rights from the United Nations Convention on the Rights of the Child:

A12: Right to a voice	A15: Right to a faith	A28: Right to an education	A29: Right to be the best you can be	A31: Right to relax and play
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Our School Council: Rights Ambassadors support that all children receive their rights across all areas of school life.

In addition to our five school rights, we reference other rights from the convention where appropriate and purposeful links can be made to support learning. Such as in Science when teaching about healthy living, we refer to Article 24 – the right to nutritious food and clean water. As with all areas of the curriculum, when planning, we also use our school Ethos document to weave Rights, British Values and RSHE teaching to ensure a holistic approach, rather than these areas being taught as ‘add ons’.

Christian Values

Our whole school ethos is underpinned by our core Christian Values of Faith, Love, Respect, Perseverance and Forgiveness. In Science, we further explore these values such as exploring how different scientist have persevered and made new discoveries and advances due to this quality.



Intent (curriculum design, coverage and appropriateness)	Implementation (curriculum delivery, teaching and assessment)	Impact (attainment and progress)
<p>The aim of the Science curriculum is to ensure all children:</p> <ul style="list-style-type: none"> • Develop an understanding of the world around them. • Develop an investigative approach which can be applied across the curriculum. • Understand different areas of scientific enquiry and their uses. • To develop basic scientific language. • To develop independent learning behaviours through choice and challenge. <ul style="list-style-type: none"> • Become confident, curious and passionate learners. • Progress from EYFS to Year Two and form a solid base to enter into KS2. • Cover the key aspects of the science national curriculum in engaging, immersive topics. <ul style="list-style-type: none"> • Receive high quality science lessons, taught by confident teachers. • Access a range of scientific equipment and understand how it is used 	<p>Termly topics have been designed to incorporate the science curriculum and ensure coverage.</p> <ul style="list-style-type: none"> • Children are made aware when they are learning aspects of science and how it is in everything we do. • Teachers have access to CPD to improve their confidence and ability to teach science effectively. • Children will be assessed termly to ensure gaps are being filled. • Progression and coverage is monitored closely to ensure continuation from EYFS to Year Two. • Curriculum leaders work alongside teachers from each year group to ensure the quality of teaching throughout the school. • Resources are checked to ensure they are suitable, appropriate and useful. • Our robust foundation subject monitoring system, includes planning scrutiny, book looks, subject data analysis, subject coverage checks, lesson observations and pupil conferencing will enable the curriculum leaders to check coverage and progression. 	<p>Enthusiastic, excited and curious children.</p> <ul style="list-style-type: none"> • Children will become more inquisitive, have a greater understanding of the world around them and will have the vocabulary to begin to communicate this. • Children are able to use different methods of scientific enquiry. • Children's progress is tracked using Jason Hurr tracking system as well as on our Foundation assessment grids, using the skills progression assessment records too. Any areas of development will have been identified. • Internal moderation of books provides evidence of consistent teaching and opportunities where all pupils have access to science and scientific enquiry. • Children are able to apply reasoning, enquiry and communication skills to all aspects of their life. • Children are equipped with the scientific knowledge which will enable them to understand the uses of science today and how vital it is to the world's future prosperity

Science - Skills and knowledge components: Progression document building from previous year's learning

	Foundation	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Working Scientifically	<p>Communication and language-Understanding</p> <p>Early Learning Goal</p> <p>Children follow instructions involving several ideas or actions. They answer 'how' and 'why' questions about their experiences and in response to events.</p>	<p>Ask simple questions when prompted</p> <p>Make relevant observations</p> <p>Perform simple tests, with support</p> <p>Identify and classify</p> <p>Use observations and ideas to suggest answers to questions</p> <p>With prompting, suggest how findings could be recorded</p>	<p>Ask simple questions and recognise that they can be answered in different ways</p> <p>Observe closely, using simple equipment</p> <p>Perform simple tests</p> <p>Identify and Classify</p> <p>Use their observations and ideas to suggest answers to questions</p> <p>Gather and record data to</p>	<p>Ask relevant questions when prompted</p> <p>Set up simple practical enquiries, comparative and fair tests</p> <p>Make systematic observations using simple equipment</p> <p>With prompting, use various ways of recording, grouping and displaying evidence</p> <p>Suggest how findings could be reported</p>	<p>Ask relevant questions and using different types of scientific enquiries to answer them</p> <p>Set up simple practical enquiries, comparative and fair tests</p> <p>Make systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including</p>	<p>With prompting, plan different types of scientific enquiries to answer questions</p> <p>With prompting, recognise and control variables where necessary</p> <p>Select, with prompting, and use appropriate equipment to take readings</p> <p>Take precise measurements using standard units</p> <p>Take and process repeat readings</p>	<p>Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary</p> <p>Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate</p> <p>recording data and results of increasing</p>

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			<p>help in answering questions</p>	<p>With prompting, suggest conclusions from enquiries</p> <p>Identify differences, similarities or changes related to simple scientific ideas and processes</p> <p>Use straightforward scientific evidence to answer questions or to support their findings.</p> <p>Suggest possible improvements or further questions to investigate</p>	<p>thermometers and data loggers</p> <p>Gather, record, classify and present data in a variety of ways to help in answering questions</p> <p>Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables</p> <p>Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions</p>	<p>Record data and results</p> <p>Record data using labelled diagrams, keys, tables and charts</p> <p>Use line graphs to record data</p> <p>Report and present findings from enquiries, including conclusions and, with prompting, suggest causal relationships</p> <p>With support, present findings from enquiries orally and in writing</p> <p>With prompting, identify that not all results may be trustworthy</p>	<p>complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs</p> <p>Use test results to make predictions to set up further comparative and fair tests</p> <p>Reporting and present findings from enquiries, including conclusions, causal relationships and explanations of and a degree of trust in results, in oral and written forms such as displays and</p>
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					<p>Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions</p> <p>Identify differences, similarities or changes related to simple scientific ideas and processes</p> <p>Use straightforward scientific evidence to answer questions or to support their findings.</p>	<p>Suggest how evidence can support conclusions</p> <p>Suggest further comparative or fair tests</p>	<p>other presentations</p> <p>Identify scientific evidence that has been used to support or refute ideas or arguments</p>
Plants	See boxes below in living things	Identify and name a variety of common wild and garden plants, including	Observe and describe how seeds and bulbs grow into mature plants	Identify and describe the functions of different parts of flowering plants: roots, stem/trunk,			

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		<p>deciduous and evergreen trees</p> <p>Identify and describe the basic structure of a variety of common flowering plants, including trees</p>	<p>Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy</p>	<p>leaves and flowers</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>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, including pollination, seed formation and seed dispersal</p>			
<p>Animals including humans.</p>	<p>Physical development-health and self-care</p>	<p>Identify and name a variety of common animals including</p>	<p>Notice that animals, including humans, have</p>	<p>Identify that animals, including humans, need</p>	<p>Describe the simple functions of the basic parts of the digestive</p>	<p>Describe the changes as</p>	<p>Identify and name the main parts of the human</p>

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	<p>40-60 Eats a healthy range of foodstuffs and understands need for variety in food. •Shows some understanding that good practices with regard to exercise, eating, sleeping and hygiene can contribute to good health. •Shows understanding of the need for safety when tackling new challenges, and considers and manages some risks.</p> <p>Early Learning Goal Children follow instructions</p>	<p>fish, amphibians, reptiles, birds and mammals</p> <p>Identify and name a variety of common animals that are carnivores, herbivores and omnivores</p> <p>Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals including pets)</p> <p>Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense</p>	<p>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>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>system in humans</p> <p>Identify the different types of teeth in humans and their simple functions</p> <p>Construct and interpret a variety of food chains, identifying producers, predators and prey</p>	<p>humans develop to old age</p>	<p>circulatory system, and describe the functions of the heart, blood vessels and blood</p> <p>Recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function</p> <p>Describe the ways in which nutrients and water are transported within animals, including humans</p>
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	<p>involving several ideas or actions. They answer 'how' and 'why' questions about their experiences</p>						
<p>Everyday Materials</p>	<p>See box below in living things</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>Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses</p> <p>Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching</p>				

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		Compare and group together a variety of everyday materials on the basis of their simple physical properties					
Seasonal Changes		Observe changes across the 4 seasons Observe and describe weather associated with the seasons and how day length varies					
Living things and their habitats	<p>Understanding the world- The World 30-50 months •Comments and asks questions about aspects of their familiar world such as the place where they live or the natural world.</p>		<p>Explore and compare the differences between things that are living, dead, and things that have never been alive</p> <p>Identify that most living things live in habitats to which they are suited</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</p>	<p>Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird</p> <p>Describe the life process of reproduction in some plants and animals.</p>	<p>Describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including micro-</p>

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	<ul style="list-style-type: none"> •Can talk about some of the things they have observed such as plants, animals, natural and found objects. •Talks about why things happen and how things work. •Developing an understanding of growth, decay and changes over time. •Shows care and concern for living things and the environment <p>40-60 months</p> <ul style="list-style-type: none"> •Looks closely at similarities, differences, 		<p>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 and name a variety of plants and animals in their habitats, including microhabitats</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>local and wider environment</p> <p>Recognise that environments can change and that this can sometimes pose dangers to living things</p>		<p>organisms, plants and animals</p> <p>Give reasons for classifying plants and animals based on specific characteristics</p>
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patterns and change.

Early Learning Goal

Children know about similarities and differences in relation to places, objects, materials and living things. They talk about the features of their own immediate environment and how environments might vary from one another. They make observations of animals and plants and explain why some things occur, and talk about changes.

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KS2 only onwards

Rocks				<p>Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties</p> <p>Describe in simple terms how fossils are formed when things that have lived are trapped within rock</p> <p>Recognise that soils are made from rocks and organic matter</p>			
Light				<p>Recognise that they need light in order to see things and that dark is the absence of light</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</p>

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				<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>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</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>
Forces and Magnets				<p>Compare how things move on different surfaces</p> <p>Notice that some forces need</p>			<p>Explain that unsupported objects fall towards the Earth because of the force of</p>

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contact between 2 objects, but magnetic forces can act at a distance

Observe how magnets attract or repel each other and attract some materials and not others

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

Describe magnets as having 2 poles

Predict whether 2 magnets will attract or repel

gravity acting between the Earth and the falling object

Identify the effects of air resistance, water resistance and friction, that act between moving surfaces

Recognise that some mechanisms including levers, pulleys and gears allow a smaller force to have a greater effect

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				each other, depending on which poles are facing			
Properties and changes of materials					<p>Compare and group materials together, according to whether they are solids, liquids or gases</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 condensation in the water cycle and associate the rate of</p>	<p>Compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets</p> <p>Know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution</p> <p>Use knowledge of solids, liquids</p>	

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					evaporation with temperature	and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic Demonstrate that dissolving, mixing and changes of state are reversible changes Explain that some changes result in the formation of new materials, and that this kind of	
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						change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda	
Sound					Identify how sounds are made, associating some of them with something vibrating Recognise that vibrations from sounds travel through a medium to the ear Find patterns between the pitch of a sound and features of the object that produced it		

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					<p>Find patterns between the volume of a sound and the strength of the vibrations that produced it</p> <p>Recognise that sounds get fainter as the distance from the sound source increases</p>	
Electricity					<p>Identify common appliances that run on electricity</p> <p>Construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers</p> <p>Identify whether or not a lamp will light in a simple series</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>Compare and give reasons for variations in how components function, including the brightness of bulbs, the</p>

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					<p>circuit, based on whether or not the lamp is part of a complete loop with a battery</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>Recognise some common conductors and insulators, and associate metals with being good conductors</p>		<p>loudness of buzzers and the on/off position of switches</p> <p>Use recognised symbols when representing a simple circuit in a diagram</p>
Earth and Space						<p>Describe the movement of the Earth and other planets relative to the sun in the solar system</p> <p>Describe the movement of the</p>	

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						<p>moon relative to the Earth</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>	
Evolution and Inheritance							<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>Recognise that living things produce offspring</p>

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of the same kind,
but normally
offspring vary
and are not
identical to their
parents

Identify how
animals and
plants are
adapted to suit
their
environment in
different ways
and that
adaptation may
lead to evolution

Foundation Stage – Nursery and Reception - some of the wonderful things we do in Science (UtW) at St Meriadoc CE Infant Academy

- Investigate the colours of nature around our environment
- Visit the park termly and record the changes in the environment through creating a Seasons snapshot photograph – child photographed in the place and observe the changes.
- Explore change of state using The Gingerbread Man story – test effects of liquids
- Explore the story of Jack and the Beanstalk to support planting and understanding how/why around growth.
- Explore the story of the Hungry Caterpillar to understand healthy eating, build on from previous topic around colours.
- Use Julia Donaldson stories through continuous provision to explore our natural world (environment and living things) (Stickman, Monkey Puzzle, Snail and the Whale).
- Chinese New Year story (Zodiac) and change of state focus through Chinese cooking and experiments with food.
- Sort materials for recycling.
- Learn how the invention and evolution of vehicles have helped and improved our way of life.
- Explore light and dark through the story we're going on a bear hunt
- Introduce creatures that live in a familiar environment – minibeasts and look after our stick insects.
- Healthy eating and caring for ourselves – how have we changed since being a baby?



Reception - Yearly Overview –Skills and knowledge components: Progression document coverage

	<u>Autumn – Colours of Me</u>	<u>Spring – Once Upon a Time</u>	<u>Summer – Marvellous Mystery Tour</u>
Science Understanding the World	<p>Skills Components:</p> <p>Follow instructions involving several ideas or actions.</p> <p>Answer ‘how’ and ‘why’ questions about their experiences and in response to events.</p> <p>Understand about a range of healthy food and the need for variety in food.</p> <p>Asks questions about aspects of their familiar world such as the place where they live or the natural world.</p> <p>Can talk about some of the things they have observed such as plants, animals, natural and found objects.</p> <p>Develop an understanding of growth, decay and changes over time.</p> <p>Shows care and concern for living things and the environment.</p> <p>Looks closely at similarities, differences, patterns and change.</p> <p>Know about similarities and differences in relation to places, objects, materials and living things.</p> <p>Talk about the features of their own immediate environment and how environments might vary from one another.</p> <p>Make observations of animals and plants and explain why some things occur, and talk about changes.</p>	<p>Skills Components:</p> <p>Follow instructions involving several ideas or actions.</p> <p>Answer ‘how’ and ‘why’ questions about their experiences and in response to events.</p> <p>Understand about a range of healthy food and the need for variety in food.</p> <p>Asks questions about aspects of their familiar world such as the place where they live or the natural world.</p> <p>Can talk about some of the things they have observed such as plants, animals, natural and found objects.</p> <p>Develop an understanding of growth, decay and changes over time.</p> <p>Shows care and concern for living things and the environment.</p> <p>Looks closely at similarities, differences, patterns and change.</p> <p>Know about similarities and differences in relation to places, objects, materials and living things.</p> <p>Talk about the features of their own immediate environment and how environments might vary from one another.</p> <p>Make observations of animals and plants and explain why some things occur, and talk about changes.</p>	<p>Skills Components:</p> <p>Asks questions about aspects of their familiar world such as the place where they live or the natural world.</p> <p>Can talk about some of the things they have observed such as plants, animals, natural and found objects.</p> <p>Can talk about why things happen and how things work.</p> <p>Develop an understanding of growth, decay and changes over time</p> <p>Shows care and concern for living things and the environment.</p> <p>Looks closely at similarities, differences, patterns and change.</p> <p>Know about similarities and differences in relation to places, objects, materials and living things.</p> <p>Talk about the features of their own immediate environment and how environments might vary from one another. Make observations of animals and plants and explain why some things occur, and talk about changes.</p>

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Year 1 – some of the wonderful things we do in Science at St Meriadoc CE Infant Academy

- Learn about animals from different regions of the globe during our Heroes and Explorers topic. Explore our local woodland and compare seasonal changes during the term.
- Investigate animals living in the woodland by classifying animals by type - herbivore, omnivore and carnivore.
- Watch the process of caterpillar to butterfly in our classrooms and release them.
- Meet the owls from the Screech Owl Sanctuary.
- Visit the woodland and become a plant explorer.
- Learn about mini-beasts and their habitats -look after our school Bug Hotel.
- Learn how the natural world supports life through scavenging, planting and growing.
- Document our understanding of healthy food through creating our own Eatwell plate.
- Investigate what others are already doing to look after our planet and how we can help – David Attenborough. Everyone has their own skill even animals
- Investigate the properties of materials during our Castles and Coasts topic – building our own trebuchet!

Year 1 - Yearly Overview – National Curriculum and Skills and knowledge components: Progression document coverage

Autumn – Heroes and Explorers	Spring – Into the Woods	Summer – Castles and Coasts
<p>NC objectives: Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense Conducting Experiments 1.2.b.1 Conduct simple tests, with support Conducting Experiments 1.2.a.1 Make relevant observations (+)</p>	<p>NC objectives: Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals Identify and name a variety of common animals that are carnivores, herbivores and omnivores Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets) Day, night, month, seasonal change & year are caused by the position and movement of the Earth 1.2.1 Observe changes across the four seasons</p>	<p>NC objectives: Materials have physical properties which can be investigated and compared 1.2.1 Distinguish between an object and the material from which it is made Materials have physical properties which can be investigated and compared 1.2.2 Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water and rock Materials have physical properties which can be investigated and compared 1.2.3 Describe the</p>

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<p>Recording Evidence 1.3.a.1 With prompting, suggest how findings could be recorded (+) Reporting Findings 1.4.a.1 Recognise findings (+)</p>	<p>Conducting Experiments 1.2.b.1 Conduct simple tests, with support Conducting Experiments 1.2.a.1 Make relevant observations (+) Recording Evidence 1.3.a.1 With prompting, suggest how findings could be recorded (+) Reporting Findings 1.4.a.1 Recognise findings (+) Life exists in a variety of forms and goes through cycles- Plants 1.4a.1 Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees Life exists in a variety of forms and goes through cycles- Plants 1.4a.2 Identify and describe the basic structure of a variety of common flowering plants, including trees Planning Investigations 1.1.a.1 Ask simple questions when prompted (+) Planning Investigations 1.1.b.1 Suggest ways of answering a question (+) Conclusions and Predictions 1.5.a.1 Gather and record data (+) Conclusions and Predictions 1.5.b.1 Use observations to suggest answers to questions (+)</p>	<p>simple physical properties of a variety of everyday materials Materials have physical properties which can be investigated and compared 1.2.4 Compare and group together a variety of everyday materials on the basis of their simple physical properties Conducting Experiments 1.2.b.1 Conduct simple tests, with support Conducting Experiments 1.2.a.1 Make relevant observations (+) Recording Evidence 1.3.a.1 With prompting, suggest how findings could be recorded (+) Reporting Findings 1.4.a.1 Recognise findings (+)</p>
<p>Skills Components: Ask simple questions when prompted Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense</p>	<p>Skills Components: Ask simple questions when prompted Make relevant observations Perform simple tests, with support Identify and classify Use observations and ideas to suggest answers to questions With prompting, suggest how findings could be recorded</p>	<p>Skills Components: Ask simple questions when prompted Make relevant observations Perform simple tests, with support Use observations and ideas to suggest answers to questions With prompting, suggest how findings could be recorded</p>

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Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees

Identify and describe the basic structure of a variety of common flowering plants, including trees

Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals

Identify and name a variety of common animals that are carnivores, herbivores and omnivores

Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals including pets)

Observe changes across the 4 seasons

Observe and describe weather associated with the seasons and how day length varies

Distinguish between an object and the material from which it is made

Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock

Describe the simple physical properties of a variety of everyday materials

Compare and group together a variety of everyday materials on the basis of their simple physical properties

Year 2 – some of the wonderful things we do in Science at St Meriadoc CE Infant Academy

- Draw on the learning of the lifecycle taught in Y1 and be able to link to creatures found in the rainforest.
- Develop an understanding of food chains and revisit life cycles.
- Compare climate and plants and animals found in the jungle with our local environment.
- Explore how we can make a positive contribution to our local environment and how we can help save the rainforests.
- Continue to develop gardening skills and harvest own plants and vegetables; compare with traditional food grown in South America and investigate the growing of crops sensitivity to climate.
- Learn about the solar system and space travel – Neil Armstrong, Buzz Aldrin, Katherine Johnson.
- Make rockets focussing on materials, shape, thrust, wind resistance and forces
- Research how we get night and day; build on from prior learning about the seasons and how the change in the Earth's position impacts on the seasons
- Research what is happening in space now and what might happen in the future.
- Compare the experiences of Aldrin and Armstrong with that of Tim Peake.
- How to survive in space and the extraordinary feat of growing plant life in space in comparison to growing crops on Earth.
- Build on from prior learning about how to stay healthy and the importance of being physically, mentally and emotional well in order to go to space.
- Learn about the effects that space life can have on the body
- Learn about the wide variety of dinosaurs and where and when they lived.
- The lifecycle of a dinosaur, their diet, their features and how they were adapted to their environment.
- Compare different ways of defence and attack, how dinosaurs moved and how they used their senses to survive.
- Learn that animals, including humans, have offspring and need to have their basic needs met.
- Compare the similarities and differences of animals that are alive today and understand the difference between the living, dead and never been alive.

Science

Year 2 - Yearly Overview – National Curriculum and Skills and knowledge components: Progression document coverage

<p>NC objectives: Identify and classify Habitats Identify and name a variety of plants and animals in their habitats, including micro-habitats Identify that most living things live in habitats to which they are suited. 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. Plants- observe and describe how grow, their growth needs.</p> <p>(beak experiment)</p>	<p>NC objectives: Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene -Identify and classify Materials: -Find out how the shapes of solid objects made from some materials can be changed. Identify and compare the suitability of a variety of everyday materials for particular uses. Ask simple questions -Recognise that questions can be answered in different ways. -Observe closely, using simple equipment. -Perform simple tests -Gather and record data to help answer questions. -Use their observations and ideas to suggest answers to questions. Plants- observe and describe how grow, their growth needs.</p>	<p>NC objectives: Life exists in a variety of forms and goes through cycle - Notice that animals, including humans, have offspring which grow into adults - Find out about and describe the basic needs of animals, including humans, for survival Life exists in a variety of forms and goes through cycles - Explore and compare the differences between things that are living, dead, and things that have never been alive 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. Plants- observe and describe how grow, their growth needs.</p>
<p>Components: Ask simple questions and recognise that they can be answered in different ways Observe closely, using simple equipment Perform simple tests Identify and Clasify</p>	<p>Components: Ask simple questions and recognise that they can be answered in different ways Observe closely, using simple equipment Perform simple tests</p>	<p>Components: Ask simple questions and recognise that they can be answered in different ways Observe closely, using simple equipment Perform simple tests Identify and Clasify</p>

Science

Use their observations and ideas to suggest answers to questions
Gather and record data to help in answering questions
Notice that animals, including humans, have offspring which grow into adults
Find out about and describe the basic needs of animals, including humans, for survival (water, food and air)

Use their observations and ideas to suggest answers to questions
Gather and record data to help in answering questions
Observe and describe how seeds and bulbs grow into mature plants
Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy
Find out about and describe the basic needs of animals, including humans, for survival (water, food and air)
Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene
Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses
Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching

Use their observations and ideas to suggest answers to questions
Gather and record data to help in answering questions
Notice that animals, including humans, have offspring which grow into adults
Find out about and describe the basic needs of animals, including humans, for survival (water, food and air)
Explore and compare the differences between things that are living, dead, and things that have never been alive
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