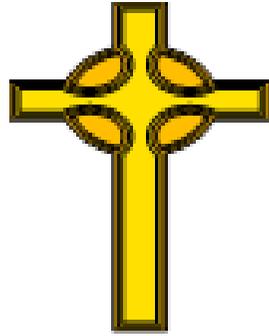


Holy Cross Catholic Primary School



Science Curriculum Map 2023-2024

We care, we share, we value.

	Autumn	Spring	Summer
Nursery	<p>Notices detailed features of objects in their environment</p> <p>Can talk about some of the things they have observed such as plants, animals, natural and found objects</p> <p>Asking Scientific Questions</p> <p>to comment and ask questions about aspects of their familiar world such as the place where they live or the natural world;</p>	<p>Comments and asks questions about aspects of their familiar world such as the place where they live or the natural world</p> <p>Talks about why things happen and how things work</p> <p>Developing an understanding of growth, decay and changes over time</p> <p>Shows care and concern for living things and the environment</p> <p>Begin to understand the effect their behaviour can have on the environment</p> <p>Observing and Measuring Changes</p> <p>Can talk about some of the things they have observed such as plants, animals, natural and found objects</p> <p>Show care and concern for living things and the environment.</p>	<p>Looks closely at similarities, differences, patterns and change in nature</p> <p>Knows about similarities and differences in relation to places, objects, materials and living things</p> <p>Talks about the features of their own immediate environment and how environments might vary from one another</p> <p>Makes observations of animals and plants</p> <p>Drawing Conclusions, Noticing Patterns and Presenting Findings</p> <p>To begin to talk about why things happen and how things work.</p>
Reception	<p>Looks closely at similarities, differences, patterns and change in nature</p> <p>Knows about similarities and differences in relation to places, objects, materials and living things</p> <p>Talks about the features of their own immediate environment and how environments might vary from one another</p> <p>Makes observations of animals and plants and explains why some things occur, and talks about changes</p>	<p>Explore the natural world around them, making observations and drawing pictures of animals and plants.</p> <p>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</p> <p>Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter.</p> <p>Carry out Fair Testing</p> <p>To say what they think will happen</p>	<p>Explore the natural world around them, making observations and drawing pictures of animals and plants.</p> <p>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</p> <p>Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter.</p>

	<p>Asking Scientific Questions</p> <p>To explore the world around them, leading them to ask some simple scientific questions about how and why;</p>	<p>Talk about what they can see and changes Play with scientific equipment.</p> <p>Observing and Measuring Changes</p> <p>To draw pictures of things they see;</p> <p>Talk about what they can see;</p> <p>Begin to make marks to collect data;</p> <p>Make observations about animals and plants</p> <p>Identifying, Classifying, Recording and Presenting Data</p> <p>Begin to make marks to collect data.</p>	<p>Drawing Conclusions, Noticing Patterns and Presenting Findings</p> <p>Talk about similarities and differences in relation to materials and living things.</p>	
<p>Year 1</p>	<p>Plants</p> <p>Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees</p> <p>Identify and describe the basic structure of a variety of common flowering plants, including trees</p> <p>Seasonal Changes throughout the whole year.</p>	<p>Animals including Humans</p> <p>Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals</p> <p>Identify and name a variety of common animals that are carnivores, herbivores and omnivores</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>Asking scientific Questions:</p> <ul style="list-style-type: none"> -to ask simple questions and recognise that they can be answered in different ways; -perform simple tests with support; -explore the world around them, leading them to ask some simple scientific questions about how and why things happen; -begin to recognise ways in which they might answer scientific questions; 	<p>Everyday Materials</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</p>	

	<p>Observe changes across the 4 seasons</p> <p>Observe and describe weather associated with the seasons and how day length varies</p> <p>Asking scientific Questions:</p> <ul style="list-style-type: none"> -to ask simple questions and recognise that they can be answered in different ways; -perform simple tests with support; -explore the world around them, leading them to ask some simple scientific questions about how and why things happen; -begin to recognise ways in which they might answer scientific questions; -ask people questions and use simple secondary sources to find answers, with support <p>Carry out fair testing:</p> <ul style="list-style-type: none"> to carry out simple practical tests, using simple equipment, with support; -experience different types of scientific enquiries, including practical activities; -with support, talk about the aim of scientific tests they are working on; 		<p>-ask people questions and use simple secondary sources to find answers, with support</p> <p>Carry out fair testing:</p> <ul style="list-style-type: none"> to carry out simple practical tests, using simple equipment, with support; -experience different types of scientific enquiries, including practical activities; -with support, talk about the aim of scientific tests they are working on; -with support, start to recognise a fair test. <p>Observing and measuring changes:</p> <ul style="list-style-type: none"> to observe closely, using simple equipment, with support; -observe the natural and humanly constructed world around them; -observe changes over time; -use simple measurements and equipment, with support; -make careful observations, sometimes using equipment to help them observe carefully, with support. <p>Identifying, Classifying, Recording and Presenting Data</p> <ul style="list-style-type: none"> to identify and classify; -gather and record data to help in answering questions; -to begin to use simple features to compare objects, materials and living things; -decide how to sort and classify objects into simple groups with some help; -record and communicate findings in a range of ways with support; -sort, group, gather and record data in a variety of ways to help in answering questions such as in simple sorting diagrams, pictograms, tally charts, block diagrams and simple tables, with support. <p>Drawing Conclusions, Noticing Patterns and Presenting Findings</p> <ul style="list-style-type: none"> to use their observations and ideas to suggest answers to questions, with some help; -notice links between cause and effect with support; 	<p>basis of their simple physical properties</p> <p>Asking scientific Questions:</p> <ul style="list-style-type: none"> -to ask simple questions and recognise that they can be answered in different ways; -perform simple tests with support; -explore the world around them, leading them to ask some simple scientific questions about how and why things happen; -begin to recognise ways in which they might answer scientific questions; -ask people questions and use simple secondary sources to find answers, with support <p>Carry out fair testing:</p> <ul style="list-style-type: none"> to carry out simple practical tests, using simple equipment, with support; -experience different types of scientific enquiries, including practical activities; -with support, talk about the aim of scientific tests they are working on; -with support, start to recognise a fair test. <p>Observing and measuring changes:</p>	
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<p>-with support, start to recognise a fair test.</p> <p>Observing and measuring changes:</p> <p>to observe closely, using simple equipment, with support;</p> <p>-observe the natural and humanly constructed world around them;</p> <p>- -observe changes over time;</p> <p>-use simple measurements and equipment, with support;</p> <p>-make careful observations, sometimes using equipment to help them observe carefully, with support.</p> <p>Identifying, Classifying, Recording and Presenting Data</p> <p>to identify and classify;</p> <p>-gather and record data to help in answering questions;</p> <p>-to begin to use simple features to compare objects, materials and living things;</p> <p>-decide how to sort and classify objects into simple groups with some help;</p> <p>-record and communicate findings in a range of ways with support;</p> <p>-sort, group, gather and record data in a variety of ways to help in answering questions such as in simple sorting diagrams, pictograms, tally charts, block</p>		<p>-begin to notice patterns and relationships with support;</p> <p>-begin to draw simple conclusions;</p> <p>-identify and discuss differences between their results, with support;</p> <p>-use simple and scientific language;</p> <p>-read and spell scientific vocabulary at a level consistent with their increasing word reading and spelling knowledge at key stage 1;</p> <p>-talk about their findings to a variety of audiences in a variety of ways.</p> <p>Using Scientific Evidence and secondary sources of information</p> <p>To use simple secondary sources to find answers with support.</p>	<p>to observe closely, using simple equipment, with support;</p> <p>-observe the natural and humanly constructed world around them;</p> <p>- -observe changes over time;</p> <p>-use simple measurements and equipment, with support;</p> <p>-make careful observations, sometimes using equipment to help them observe carefully, with support.</p> <p>Identifying, Classifying, Recording and Presenting Data</p> <p>to identify and classify;</p> <p>-gather and record data to help in answering questions;</p> <p>-to begin to use simple features to compare objects, materials and living things;</p> <p>-decide how to sort and classify objects into simple groups with some help;</p> <p>-record and communicate findings in a range of ways with support;</p> <p>-sort, group, gather and record data in a variety of ways to help in answering questions such as in simple sorting diagrams, pictograms, tally charts, block diagrams and simple tables, with support.</p>	
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	<p>diagrams and simple tables, with support.</p> <p>Drawing Conclusions, Noticing Patterns and Presenting Findings</p> <p>to use their observations and ideas to suggest answers to questions, with some help;</p> <p>-notice links between cause and effect with support;</p> <p>-begin to notice patterns and relationships with support;</p> <p>-begin to draw simple conclusions;</p> <p>-identify and discuss differences between their results, with support;</p> <p>-use simple and scientific language;</p> <p>-read and spell scientific vocabulary at a level consistent with their increasing word reading and spelling knowledge at key stage 1;</p> <p>-talk about their findings to a variety of audiences in a variety of ways.</p> <p>Using Scientific Evidence and secondary sources of information</p> <p>To use simple secondary sources to find answers with support.</p>			<p>Drawing Conclusions, Noticing Patterns and Presenting Findings</p> <p>to use their observations and ideas to suggest answers to questions, with some help;</p> <p>-notice links between cause and effect with support;</p> <p>-begin to notice patterns and relationships with support;</p> <p>-begin to draw simple conclusions;</p> <p>-identify and discuss differences between their results, with support;</p> <p>-use simple and scientific language;</p> <p>-read and spell scientific vocabulary at a level consistent with their increasing word reading and spelling knowledge at key stage 1;</p> <p>-talk about their findings to a variety of audiences in a variety of ways.</p> <p>Using Scientific Evidence and secondary sources of information</p> <p>To use simple secondary sources to find answers with support.</p>	
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<p>Year 2</p>	<p>Living Things and their Habitats</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 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>Plants</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 stay healthy.</p> <p>Asking scientific questions</p> <p>To ask simple questions and recognise that they can be answered in different ways;</p> <p>Perform simple tests</p> <p>Explore the world around them, leading them to ask some simple scientific questions about how and why things happen;</p> <p>Recognise and suggest ways in which they might answer scientific questions;</p>	<p>Animals including Humans</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>Asking scientific questions</p> <p>To ask simple questions and recognise that they can be answered in different ways;</p> <p>Perform simple tests</p> <p>Explore the world around them, leading them to ask some simple scientific questions about how and why things happen;</p> <p>Recognise and suggest ways in which they might answer scientific questions;</p> <p>Ask people questions and use simple secondary sources to find answers</p>	<p>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> <p>Asking scientific questions</p> <p>To ask simple questions and recognise that they can be answered in different ways;</p> <p>Perform simple tests</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>Asking scientific questions</p> <p>To ask simple questions and recognise that they can be answered in different ways;</p> <p>Perform simple tests</p> <p>Explore the world around them, leading them to ask some simple scientific questions about how and why things happen;</p> <p>Recognise and suggest ways in which they might answer scientific questions;</p> <p>Ask people questions and use simple secondary sources to find answers</p> <p>Carry out Fair Testing</p> <p>To carry out simple practical tests, using simple equipment;</p> <p>Experience different types of scientific enquiries, including practical activities;</p> <p>Talk about the aim of scientific tests they are working on;</p> <p>Begin to recognise a fair test.</p> <p>Observing and Measuring Changes</p>		<p>Ask people questions and use simple secondary sources to find answers</p> <p>Carry out Fair Testing</p> <p>To carry out simple practical tests, using simple equipment;</p> <p>Experience different types of scientific enquiries, including practical activities;</p> <p>Talk about the aim of scientific tests they are working on;</p> <p>Begin to recognise a fair test.</p> <p>Observing and Measuring Changes</p> <p>To observe closely, using simple equipment;</p> <p>Observe the natural and humanly constructed world around them;</p> <p>Observe changes over time;</p> <p>Use simple -measurements and equipment;</p> <p>Make careful observations, sometimes using equipment to help them observe carefully.</p> <p>Identifying, Classifying, Recording and Presenting Data</p> <p>To identify and classify;</p> <p>Gather and record data to help in answering questions;</p> <p>Use simple features to compare objects, materials and living things;</p> <p>Decide how to sort and classify objects into simple groups with some help;</p>	<p>Carry out Fair Testing</p> <p>To carry out simple practical tests, using simple equipment;</p> <p>Experience different types of scientific enquiries, including practical activities;</p> <p>Talk about the aim of scientific tests they are working on;</p> <p>Begin to recognise a fair test.</p> <p>Observing and Measuring Changes</p> <p>To observe closely, using simple equipment;</p> <p>Observe the natural and humanly constructed world around them;</p> <p>Observe changes over time;</p> <p>Use simple -measurements and equipment;</p> <p>Make careful observations, sometimes using equipment to help them observe carefully.</p> <p>Identifying, Classifying, Recording and Presenting Data</p> <p>To identify and classify;</p> <p>Gather and record data to help in answering questions;</p> <p>Use simple features to compare objects, materials and living things;</p> <p>Decide how to sort and classify objects into simple groups with some help;</p> <p>Record and communicate findings in a range of ways with support;</p> <p>Sort, group, gather and record data in a variety of ways to help in answering questions such as in simple sorting diagrams, pictograms, tally charts, block diagrams and simple tables</p> <p>Drawing Conclusions, Noticing Patterns and Presenting Findings</p> <p>To use their observations and ideas to suggest answers to questions;</p> <p>Notice links between cause and effect with support;</p> <p>Begin to notice patterns and relationships with support;</p> <p>Begin to draw simple conclusions;</p>	<p>Explore the world around them, leading them to ask some simple scientific questions about how and why things happen;</p> <p>Recognise and suggest ways in which they might answer scientific questions;</p> <p>Ask people questions and use simple secondary sources to find answers</p> <p>Carry out Fair Testing</p> <p>To carry out simple practical tests, using simple equipment;</p> <p>Experience different types of scientific enquiries, including practical activities;</p> <p>Talk about the aim of scientific tests they are working on;</p> <p>Begin to recognise a fair test.</p> <p>Observing and Measuring Changes</p> <p>To observe closely, using simple equipment;</p> <p>Observe the natural and humanly constructed world around them;</p> <p>Observe changes over time;</p> <p>Use simple -measurements and equipment;</p> <p>Make careful observations, sometimes using equipment to help them observe carefully.</p> <p>Identifying, Classifying, Recording and Presenting Data</p> <p>To identify and classify;</p>
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	<p>To observe closely, using simple equipment;</p> <p>Observe the natural and humanly constructed world around them;</p> <p>Observe changes over time;</p> <p>Use simple -measurements and equipment;</p> <p>Make careful observations, sometimes using equipment to help them observe carefully.</p> <p>Identifying, Classifying, Recording and Presenting Data</p> <p>To identify and classify;</p> <p>Gather and record data to help in answering questions;</p> <p>Use simple features to compare objects, materials and living things;</p> <p>Decide how to sort and classify objects into simple groups with some help;</p> <p>Record and communicate findings in a range of ways with support;</p> <p>Sort, group, gather and record data in a variety of ways to help in answering questions such as in simple sorting diagrams, pictograms, tally charts, block diagrams and simple tables</p> <p>Drawing Conclusions, Noticing Patterns and Presenting Findings</p> <p>To use their observations and ideas to suggest answers to questions;</p> <p>Notice links between cause and effect with support;</p> <p>Begin to notice patterns and relationships with support;</p> <p>Begin to draw simple conclusions;</p>		<p>Record and communicate findings in a range of ways with support;</p> <p>Sort, group, gather and record data in a variety of ways to help in answering questions such as in simple sorting diagrams, pictograms, tally charts, block diagrams and simple tables</p> <p>Drawing Conclusions, Noticing Patterns and Presenting Findings</p> <p>To use their observations and ideas to suggest answers to questions;</p> <p>Notice links between cause and effect with support;</p> <p>Begin to notice patterns and relationships with support;</p> <p>Begin to draw simple conclusions;</p> <p>Using Scientific Evidence and Secondary Sources of Information</p> <p>Identify and discuss differences between their results;</p> <p>Use simple and scientific language;</p> <p>Read and spell scientific vocabulary at a level consistent with their increasing word reading and spelling knowledge at key stage 1;</p> <p>Talk about their findings to a variety of audiences in a variety of ways</p>	<p>Using Scientific Evidence and Secondary Sources of Information</p> <p>Identify and discuss differences between their results;</p> <p>Use simple and scientific language;</p> <p>Read and spell scientific vocabulary at a level consistent with their increasing word reading and spelling knowledge at key stage 1;</p> <p>Talk about their findings to a variety of audiences in a variety of ways</p>	<p>Gather and record data to help in answering questions;</p> <p>Use simple features to compare objects, materials and living things;</p> <p>Decide how to sort and classify objects into simple groups with some help;</p> <p>Record and communicate findings in a range of ways with support;</p> <p>Sort, group, gather and record data in a variety of ways to help in answering questions such as in simple sorting diagrams, pictograms, tally charts, block diagrams and simple tables</p> <p>Drawing Conclusions, Noticing Patterns and Presenting Findings</p> <p>To use their observations and ideas to suggest answers to questions;</p> <p>Notice links between cause and effect with support;</p> <p>Begin to notice patterns and relationships with support;</p> <p>Begin to draw simple conclusions;</p> <p>Using Scientific Evidence and Secondary Sources of Information</p> <p>Identify and discuss differences between their results;</p> <p>Use simple and scientific language;</p> <p>Read and spell scientific vocabulary at a level consistent with their increasing word reading and spelling knowledge at key stage 1;</p>
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	<p>Using Scientific Evidence and Secondary Sources of Information</p> <p>Identify and discuss differences between their results;</p> <p>Use simple and scientific language;</p> <p>Read and spell scientific vocabulary at a level consistent with their increasing word reading and spelling knowledge at key stage 1;</p> <p>Talk about their findings to a variety of audiences in a variety of ways.</p>				<p>Talk about their findings to a variety of audiences in a variety of ways</p>
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<p>Year 3</p>	<p>Plants</p> <p>Identify and describe the functions of different parts of flowering plants: roots, stem/trunk, 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>Asking Scientific Questions</p> <p>To begin to ask relevant questions and use different types of scientific enquiries to answer them;</p> <p>Begin to set up simple practical enquiries, comparative and fair tests;</p> <p>Start to raise their own relevant questions about the world around them in response to a range of scientific experiences;</p> <p>Start to make their own decisions about the most appropriate type of scientific enquiry they might use to answer questions</p> <p>Carry out Fair Testing</p> <p>To begin to recognise when a fair test is necessary;</p> <p>Help decide how to set up a fair test, making decisions about what observations to make, how long to make them for and the type of simple equipment that might be used;</p> <p>With some support, set up and carry out simple comparative and fair tests</p> <p>Observing and Measuring Changes</p> <p>To begin to make systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers;</p> <p>Make systematic and careful observations;</p> <p>Observe changes over time;</p>	<p>Animals including Humans</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>Asking Scientific Questions</p> <p>To begin to ask relevant questions and use different types of scientific enquiries to answer them;</p> <p>Begin to set up simple practical enquiries, comparative and fair tests;</p> <p>Start to raise their own relevant questions about the world around them in response to a range of scientific experiences;</p> <p>Start to make their own decisions about the most appropriate type of scientific enquiry they might use to answer questions</p> <p>Carry out Fair Testing</p> <p>To begin to recognise when a fair test is necessary;</p> <p>Help decide how to set up a fair test, making decisions about what observations to make, how long to make them for and the type of simple equipment that might be used;</p> <p>With some support, set up and carry out simple comparative and fair tests</p> <p>Observing and Measuring Changes</p> <p>To begin to make systematic and careful observations and, where appropriate, taking accurate measurements using</p>	<p>Rocks</p> <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> <p>Asking Scientific Questions</p> <p>To begin to ask relevant questions and use different types of scientific enquiries to answer them;</p> <p>Begin to set up simple practical enquiries, comparative and fair tests;</p> <p>Start to raise their own relevant questions about the world around them in response to a range of scientific experiences;</p> <p>Start to make their own decisions about the most appropriate type of scientific enquiry they might use to answer questions</p> <p>Carry out Fair Testing</p> <p>To begin to recognise when a fair test is necessary;</p> <p>Help decide how to set up a fair test, making decisions about what observations to make, how long to make them for and the type of simple equipment that might be used;</p> <p>With some support, set up and carry out simple comparative and fair tests</p>	<p>Light</p> <p>Recognise that they 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>Asking Scientific Questions</p> <p>To begin to ask relevant questions and use different types of scientific enquiries to answer them;</p> <p>Begin to set up simple practical enquiries, comparative and fair tests;</p> <p>Start to raise their own relevant questions about the world around them in response to a range of scientific experiences;</p> <p>Start to make their own decisions about the most appropriate type of scientific enquiry they might use to answer questions</p> <p>Carry out Fair Testing</p> <p>To begin to recognise when a fair test is necessary;</p> <p>Help decide how to set up a fair test, making decisions about what observations to make, how long to make them for and the type of simple equipment that might be used;</p>	<p>Forces and Magnets</p> <p>Compare how things move on different surfaces</p> <p>Notice that some forces need contact between 2 objects, but magnetic forces can act at a distance</p> <p>Observe how magnets attract or repel each other and attract some materials and not others</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>Describe magnets as having 2 poles</p> <p>Predict whether 2 magnets will attract or repel each other, depending on which poles are facing</p> <p>Asking Scientific Questions</p> <p>To begin to ask relevant questions and use different types of scientific enquiries to answer them;</p> <p>Begin to set up simple practical enquiries, comparative and fair tests;</p> <p>Start to raise their own relevant questions about the world around them in response to a range of scientific experiences;</p> <p>Start to make their own decisions about the most appropriate type of scientific enquiry they might use to answer questions</p>
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<p>Use a range of equipment, including thermometers and data loggers;</p> <p>Begin to ask their own questions about what they observe;</p> <p>Where appropriate, take accurate measurements using standard units using a range of equipment</p> <p>Identifying, Classifying, Recording and Presenting Data</p> <p>To 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, with some support;</p> <p>Talk about criteria for grouping, sorting and classifying;</p> <p>Group and classify things;</p> <p>Collect data from their own observations and measurements;</p> <p>Present data in a variety of ways to help in answering questions;</p> <p>Use, read and spell scientific vocabulary correctly and with confidence, using their growing word reading and spelling knowledge;</p> <p>Record findings using scientific language, drawings, labelled diagrams, keys, bar charts and tables</p> <p>Drawing Conclusions, Noticing Patterns and Presenting Findings</p> <p>To begin to use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions;</p> <p>To report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions;</p> <p>Draw simple conclusions from their results;</p> <p>Make predictions;</p> <p>Suggest improvements to investigations;</p> <p>Raise further questions which could be investigated;</p> <p>First talk about, and then go on to write about, what they have found out;</p> <p>Report and present their results and conclusions to others in written and oral forms with increasing confidence.</p> <p>Using Scientific Evidence and Secondary Sources of Information</p> <p>To begin to identify differences, similarities or changes related to simple scientific ideas and processes</p>	<p>standard units, using a range of equipment, including thermometers and data loggers;</p> <p>Make systematic and careful observations;</p> <p>Observe changes over time;</p> <p>Use a range of equipment, including thermometers and data loggers;</p> <p>Begin to ask their own questions about what they observe;</p> <p>Where appropriate, take accurate measurements using standard units using a range of equipment</p> <p>Identifying, Classifying, Recording and Presenting Data</p> <p>To 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, with some support;</p> <p>Talk about criteria for grouping, sorting and classifying;</p> <p>Group and classify things;</p> <p>Collect data from their own observations and measurements;</p> <p>Present data in a variety of ways to help in answering questions;</p> <p>Use, read and spell scientific vocabulary correctly and with confidence, using their 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scientific language, drawings, labelled diagrams, keys, bar charts and tables</p>	<p>Carry out Fair Testing</p> <p>To begin to recognise when a fair test is necessary</p> <p>Help decide how to set up a fair test, making decisions about what observations to make, how long to make them for and the type of simple equipment that might be used;</p> <p>With some support, set up and carry out simple comparative and fair tests</p> <p>Observing and Measuring Changes</p> <p>To begin to make systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers;</p> <p>Make systematic and careful observations;</p> <p>Observe changes over time;</p> <p>Use a range of equipment, including thermometer and data loggers;</p> <p>Begin to ask their own questions about what they observe;</p> <p>Where appropriate, take accurate measurements using standard units using a range of equipment</p> 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Year 4	<p>Living things and their Habitats</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>Recognise that environments can change and that this can sometimes pose dangers to living things</p> <p>Asking Scientific Questions</p> <p>To ask relevant questions and use different types of scientific enquiries to answer them;</p> <p>Set up simple practical enquiries, comparative and fair tests;</p>	<p>Electricity</p> <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 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>Animals including humans</p> <p>Describe the simple functions of the basic parts of the digestive 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>Asking Scientific Questions</p> <p>To ask relevant questions and use different types of scientific enquiries to answer them;</p> <p>Set up simple practical enquiries, comparative and fair tests;</p> <p>Raise their own relevant questions about the world around them in response to a range of scientific experiences;</p>	<p>Sound</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>Recognise that sounds get fainter as the distance from the sound source increases</p> <p>Asking Scientific Questions</p>	<p>States of Matter</p> <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 evaporation with temperature</p> <p>Asking Scientific Questions</p> <p>To ask relevant questions and use different types of scientific enquiries to answer them;</p> <p>Set up simple practical enquiries, comparative and fair tests;</p>

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Year 5	<p>Properties & Changes of Materials</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 and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating</p> <p>Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic</p> <p>Demonstrate that dissolving, mixing and changes of state are reversible changes</p>	<p>Earth & Space</p> <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 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> <p>Asking Scientific Questions</p>	<p>Animals, including Humans</p> <p>Describe the changes as humans develop to old age</p> <p>Asking Scientific Questions</p> <p>To plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary;</p> <p>Begin to use test results to make predictions to set up further comparative and fair tests;</p> <p>With growing independence, raise their own relevant questions about the world around them in response to a range of scientific experiences;</p> <p>With increasing independence, make their own decisions about the most appropriate type of scientific enquiry they might use to answer questions;</p> <p>Explore and talk about their ideas, raising different kinds of scientific questions;</p>	<p>Forces</p> <p>Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object</p> <p>Identify the effects of air resistance, water resistance and friction, that act between moving surfaces</p> <p>Recognise that some mechanisms including levers, pulleys and gears allow a smaller force to have a greater effect</p> <p>Asking Scientific Questions</p> <p>To plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary;</p>	<p>Living Things and their Habitats</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 animal</p> <p>Asking Scientific Questions</p> <p>To plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary;</p> <p>Begin to use test results to make predictions to set up further comparative and fair tests;</p> <p>With growing independence, raise their own relevant questions about the world around them in response to a range of scientific experiences;</p> <p>With increasing independence, make their own decisions about the most appropriate type of scientific enquiry they might use to answer questions;</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>Asking Scientific Questions</p> <p>To plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary;</p> <p>Begin to use test results to make predictions to set up further comparative and fair tests;</p> <p>With growing independence, raise their own relevant questions about the world around them in response to a range of scientific experiences;</p> <p>With increasing independence, make their own decisions about the most appropriate type of scientific enquiry they might use to answer questions;</p> <p>Explore and talk about their ideas, raising different kinds of scientific questions;</p> <p>Ask their own questions about scientific phenomena</p> <p>Carry out Fair Testing</p> <p>To select and plan the most appropriate type of scientific enquiry to use to answer scientific questions;</p> <p>Make their own decisions about what observations to make, what measurements to use and how long to make them for, and whether to repeat them;</p> <p>Plan, set up and carry out comparative and fair tests to answer questions, including recognising and controlling variables where necessary;</p> <p>Use their test results to identify when further tests and observations may be needed;</p> <p>Use test results to make predictions for further tests.</p> <p>Observing and Measuring Changes</p> <p>To take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate;</p> <p>Choose the most appropriate equipment to make measurements and explain how to use it accurately;</p>	<p>To plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary;</p> <p>Begin to use test results 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<p>Living Things and their Habitats</p> <p>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</p> <p>Give reasons for classifying plants and animals based on specific characteristics</p> <p>Asking Scientific Questions:</p> <p>To plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary with increasing confidence;</p> <p>Use test results to make predictions to set up further comparative and fair tests.</p> <p>With growing independence, raise their own relevant questions about the world around them in response to a range of scientific experiences;</p> <p>Carry out Fair Testing</p> <p>To select and plan the most appropriate type of scientific enquiry to use to answer scientific questions;</p> <p>Make their own decisions about what observations to make, what measurements to use and how long to</p>	<p>Animals including Humans</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>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> <p>Asking Scientific Questions:</p> <p>To plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary with increasing confidence;</p> <p>Use test results to make predictions to set up further comparative and fair tests.</p> <p>With growing independence, raise their own relevant questions about the world around them in response to a range of scientific experiences;</p> <p>Carry out Fair Testing</p> <p>To select and plan the most appropriate type of scientific enquiry to use to answer scientific questions;</p>	<p>Evolution and Inheritance</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>Recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents</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>Asking Scientific Questions:</p> <p>To plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary with increasing confidence;</p> <p>Use test results to make predictions to set up further comparative and fair tests.</p> <p>With growing independence, raise their own relevant questions about the world around them in response to a range of scientific experiences;</p> <p>Carry out Fair Testing</p> <p>To select and plan the most appropriate type of scientific enquiry to use to answer scientific questions;</p>		<p>Electricity</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 loudness of buzzers and the on/off position of switches</p> <p>Use recognised symbols when representing a simple circuit in a diagram</p> <p>Asking Scientific Questions:</p> <p>To plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary with increasing confidence;</p> <p>Use test results to make predictions to set up further comparative and fair tests.</p> <p>With growing independence, raise their own relevant questions about the world around them in response to a range of scientific experiences;</p> <p>Carry out Fair Testing</p> <p>To select and plan the most appropriate type of scientific enquiry to use to answer scientific questions;</p> <p>Make their own decisions about what observations to make, what measurements to use and how long to make them for, and whether to repeat them;</p>	<p>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 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> <p>Asking Scientific Questions:</p> <p>To plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary with increasing confidence;</p> <p>Use test results to make predictions to set up further comparative and fair tests.</p> <p>With growing independence, raise their 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