## Primary school 2022 – 2023 Science overview.

	Autumn	Spring	Summer
EYFS	Autumn 1: The Natural World Children will understand the terms 'same' and 'different' Autumn 2: The Natural World Children will explore and ask questions about the natural world around them.	Spring 1 : The Natural World         Children will talk about features of the environment they are in and learn about the different environments.         Spring 2         The Natural World         Children will make observations about plants discussing similarities and differences.	Summer 1 The Natural World Children will make observations about animals discussing similarities and differences. Summer 2 The Natural World Children will know some important processes and changes in the natural world, including states of matter.
Year 1	<ul> <li>Animals, including Humans         <ul> <li>Basic human body parts</li> <li>Senses</li> <li>Identifying, naming, describing and comparing a variety of common animals</li> </ul> </li> <li>Seasonal Changes         <ul> <li>Observing seasonal changes, including weather and length of the day</li> </ul> </li> <li>WORKING SCIENTIFICALLY         <ul> <li>Ask simple questions and recognise that they can be ways</li> <li>Observe closely, using simple equipment</li> <li>Perform simple tests</li> <li>Identify and classify</li> <li>Use their observations and ideas to suggest answer</li> <li>Gather and record data to help in answering question</li> </ul> </li> </ul>	<ul> <li>Everyday Materials         <ul> <li>Identifying and naming common materials</li> <li>Describing their properties</li> <li>Comparing and grouping materials</li> <li>Seasonal Changes</li> <li>Observing seasonal changes, including weather and length of the day</li> <li>Explore the world around them</li> <li>Recognise ways in which they m</li> <li>Use simple measurements and e data, carry out simple tests, record and how they found it out.</li> <li>Record and communicate their f language</li> <li>Compare objects, materials and them, observe changes over tim and relationships.</li> <li>Ack people questions and use sin</li> </ul> </li> </ul>	Plants         - Identifying and naming a variety of common wild and garden plants         - Identifying and describing the basic structure of common flowering plants         Seasonal Changes         Observing seasonal changes, including weather and length of the day         and raise their own questions.         ight answer scientific questions         equipment (for example, hand lenses, egg timers) to gather ord simple data, and talk about what they have found out         Findings in a range of ways and begin to use simple scientific         living things and, with help, decide how to sort and group e, and, with guidance, they should begin to notice patterns
Year 2	<ul> <li>Uses of Everyday Materials</li> <li>Identifying and comparing suitability of a variety of everyday materials for their particular uses.</li> <li>Changing shapes by squashing, bending, twisting and stretching.</li> </ul>	<ul> <li>Living Things and Their Habitats</li> <li>Identifying and naming a variety of animals in their habitats.</li> <li>How animals are suited to their habitats.</li> <li>Simple food chains.</li> <li>Differences between things that are alive, dead and never been alive.</li> <li>Animals, including Humans</li> <li>Knowing that animals, including humans, have offspring that grow into adults.</li> <li>Basic needs for survival.</li> <li>The importance of exercise, the right food and hygiene</li> </ul>	<ul> <li>Plants</li> <li>How seeds and bulbs grow into mature plants.</li> <li>What plants need to grow and stay healthy.</li> <li>How plants are suited to their habitats.</li> <li>Identifying and naming a variety of plants in their habitats.</li> </ul>

	for humans.		
<ul> <li>WORKING SCIENTIFICALLY</li> <li>Ask simple questions and recognise that they c different ways</li> <li>Observe closely, using simple equipment</li> <li>Perform simple tests</li> <li>Identify and classify</li> <li>Use their observations and ideas to suggest ans</li> <li>Gather and record data to help in answering questions</li> </ul>	an be answered in swers to questions uestions.	<ul> <li>Explore the world aroun</li> <li>Recognise ways in which</li> <li>Use simple measurement gather data, carry out sin found out and how they</li> <li>Record and communicat scientific language</li> <li>Compare objects, matering group them, observe chan notice patterns and relat</li> <li>Ask people questions an</li> </ul>	d them and raise their own questions. In they might answer scientific questions Ints and equipment (for example, hand lenses, egg timers) to imple tests, record simple data, and talk about what they have found it out. It their findings in a range of ways and begin to use simple ials and living things and, with help, decide how to sort and anges over time, and, with guidance, they should begin to tionships. Id use simple secondary sources to find answers.
<ul> <li>Animals, including Humans <ul> <li>The right amount and type of nutrition</li> <li>Skeletons and muscles</li> </ul> </li> <li>Rocks <ul> <li>Comparing and grouping different types of rocks</li> <li>The formation of fossils</li> <li>How soils are made.</li> </ul> </li> </ul>	<ul> <li>Forces and Magnets</li> <li>Comparing how thing</li> <li>Magnetic forces</li> <li>Plants</li> <li>Identifying and descriflowering plant.</li> <li>What different plants</li> <li>How water is transported</li> <li>The life cycle of a flow</li> </ul>	gs move on different surfaces ibing functions of parts of a s need for healthy growth. orted within plants. wering plant	<ul> <li>Light</li> <li>The need for light</li> <li>Ways to protect eyes from dangerous sunlight</li> <li>How shadows are formed</li> <li>Finding patterns in the ways that shadows change size.</li> </ul>
<ul> <li>WORKING SCIENTIFICALLY</li> <li>Asking relevant questions and using different types of scientific enquiries to answer them</li> <li>Setting up simple practical enquiries, comparative and fair tests</li> <li>Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers</li> <li>Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions</li> <li>Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables</li> <li>Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions</li> <li>Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions</li> <li>Identifying differences, similarities or changes related to simple scientific ideas and processes</li> <li>Using straightforward scientific evidence to answer questions or to support their findings.</li> </ul>		<ul> <li>Raise their own question</li> <li>Make their own decision might use to answer que</li> <li>Recognise when a simple about criteria for groupin</li> <li>Look for naturally occurr to identify them.</li> <li>Make decisions about witype of simple equipmer</li> <li>Learn how to use new ed</li> <li>Collect data from their of and standard units, and data.</li> <li>Look for changes, patter simple conclusions and at Identify new questions and or beyond the data they already done.</li> <li>Recognise when and how cannot be answered thro</li> <li>Use relevant scientific la</li> </ul>	hs about the world around them. Is about the most appropriate type of scientific enquiry they estions e fair test is necessary and help to decide how to set it up; talk ng, sorting and classifying; and use simple keys. ring patterns and relationships and decide what data to collect hat observations to make, how long to make them for and the nt that might be used. quipment, such as data loggers, appropriately. own observations and measurements, using notes, simple tables help to make decisions about how to record and analyse this rns, similarities and differences in their data in order to draw answer questions. arising from the data, making predictions for new values within thave collected and finding ways of improving what they have w secondary sources might help them to answer questions that ough practical investigations. inguage to discuss their ideas and communicate their findings in
	<ul> <li>WORKING SCIENTIFICALLY</li> <li>Ask simple questions and recognise that they c different ways</li> <li>Observe closely, using simple equipment</li> <li>Perform simple tests</li> <li>Identify and classify</li> <li>Use their observations and ideas to suggest and</li> <li>Gather and record data to help in answering questions</li> <li>Gather and record data to help in answering questions</li> <li>Skeletons and muscles</li> </ul> <b>Rocks</b> <ul> <li>Comparing and grouping different types of rocks</li> <li>The formation of fossils</li> <li>How soils are made.</li> </ul> <b>WORKING SCIENTIFICALLY</b> <ul> <li>Asking relevant questions and using different the enquiries to answer them</li> <li>Setting up simple practical enquiries, comparate the enquiries to answer them</li> <li>Gathering, recording, classifying and presenting ways to help in answering questions</li> <li>Recording findings using simple scientific langu diagrams, keys, bar charts, and tables</li> <li>Reporting on findings from enquiries, including explanations, displays or presentations of result</li> <li>Using results to draw simple conclusions, make values, suggest improvements and raise furthere</li> <li>Using straightforward scientific evidence to answer the support their findings.</li> </ul>	for humans.         WORKING SCIENTIFICALLY <ul> <li>Ask simple questions and recognise that they can be answered in different ways</li> <li>Observe closely, using simple equipment</li> <li>Perform simple tests</li> <li>Identify and classify</li> <li>Use their observations and ideas to suggest answers to questions</li> <li>Gather and record data to help in answering questions.</li> </ul> Animals, including Humans         Forces and Magnets <ul> <li>The right amount and type of nutrition</li> <li>Skeletons and muscles</li> </ul> Rocks <ul> <li>Comparing and grouping different types of rocks</li> <li>The formation of fossils</li> <li>How soils are made.</li> </ul> WORKING SCIENTIFICALLY <ul> <li>Asking relevant questions and using different types of scientific enquiries to answer them</li> <li>Setting up simple practical enquiries, comparative and fair tests</li> </ul> <ul> <li>Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers</li> </ul> <ul> <li>Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions</li> <li>Recording findings using simple scientific language, drawings, labelled diagrams, keys,</li></ul>	MORKING SCIENTIFICALLY <ul> <li>Ask simple questions and recognise that they can be answered in different ways</li> <li>Observe closely, using simple equipment</li> <li>Observe closely, using simple equipment</li> <li>Description and ideas to suggest answers to questions</li> <li>Gather and record data to help in answering questions.</li> </ul> <li>Animals, including Humans         <ul> <li>The right amount and type of nutrition</li> <li>Skeletons and muscles</li> </ul> </li> <li>Animals, including Humans         <ul> <li>Comparing and grouping different types of rocks</li> <li>The formation of fossils</li> <li>Comparing and grouping different types of rocks</li> <li>The formation of fossils</li> <li>How soils are made.</li> </ul> </li> <li>WORKING SCIENTIFICALLY         <ul> <li>Asking relevant questions and using different types of scientific enquiries to answer them</li> <li>Setting up simple practical enquiries, comparative and fair tests</li> <li>Making systematic and careful observations and, where appropriate, taking relevant questions and using different types of scientific enguires to answering questions</li> <li>Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables</li> <li>Recording findings using simple conclusions, make predictions for new values, suggest improvements and raise further questions</li> <li>Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise related to simple conclusions and is the ast on the consult on the data three simple conclusions and is endered or heads the simple conclusions and is unot the findings.</li> <li>Using straightforward scient</li></ul></li>

	ways that are appropriate for different audiences		
	States of Matter         Solids and liquids         Changes heating & cooling         Evaporation & condensation         Water cycle         Gases (atmosphere)         Sound         Vibrations         Pitch and volume         Distance and volume	<ul> <li>Animals and Humans <ul> <li>Teeth: -type and function</li> <li>Human digestion</li> <li>Food chains &amp; food webs</li> <li>Classification and food chains</li> </ul> </li> <li>Living things and their habitats: <ul> <li>Grouping</li> <li>Classification keys</li> <li>Environmental changes</li> </ul> </li> </ul>	Electricity - Simple series circuit - Switches - Conductors and insulators
Year 4	<ul> <li>WORKING SCIENTIFICALLY</li> <li>Asking relevant questions and using different types to answer them</li> <li>Setting up simple practical enquiries, comparative at Making systematic and careful observations and, we taking accurate measurements using standard units equipment, including thermometers and data logge</li> <li>Gathering, recording, classifying and presenting date to help in answering questions</li> <li>Recording findings using simple scientific language, diagrams, keys, bar charts, and tables</li> <li>Reporting on findings from enquiries, including oral explanations, displays or presentations of results are Using results to draw simple conclusions, make prevalues, suggest improvements and raise further questions and processes</li> <li>Using straightforward scientific evidence to answer support their findings.</li> </ul>	<ul> <li>Raise their own questions about</li> <li>Make their own decisions about</li> <li>use to answer questions</li> <li>Recognise when a simple fair test</li> <li>about criteria for grouping, sorti</li> <li>Look for naturally occurring patt</li> <li>identify them.</li> <li>Make decisions about what obse</li> <li>of simple equipment that might</li> <li>Learn how to use new equipmer</li> <li>Collect data from their own obse</li> <li>standard units, and help to make</li> <li>Look for changes, patterns, simil</li> <li>conclusions and answer question</li> <li>Identify new questions arising fr</li> <li>beyond the data they have colle</li> <li>done.</li> <li>Recognise when and how second</li> <li>cannot be answered through pra</li> <li>Use relevant scientific language</li> </ul>	the world around them. the most appropriate type of scientific enquiry they might at is necessary and help to decide how to set it up; talk ng and classifying; and use simple keys. erns and relationships and decide what data to collect to ervations to make, how long to make them for and the type be used. ht, such as data loggers, appropriately. ervations and measurements, using notes, simple tables and e decisions about how to record and analyse this data. larities and differences in their data in order to draw simple ns. om the data, making predictions for new values within or cted and finding ways of improving what they have already dary sources might help them to answer questions that actical investigations. to discuss their ideas and communicate their findings in fferent audiences
Year 5	<ul> <li>Forces</li> <li>Gravity</li> <li>Air and water resistance</li> <li>Friction</li> <li>Mechanisms</li> </ul> Earth and Space <ul> <li>Movement of the Earth, moon and other planets</li> <li>Earth's rotation – day and night</li> </ul>	<ul> <li>Living things and Their Habitats</li> <li>Life cycles of a mammal, an amphibian, an insect and a bird</li> <li>Reproduction in some plants and animals</li> <li>Animals, including Humans</li> <li>Changes as humans develop to old age</li> </ul>	<ul> <li>Properties and Changes of Materials</li> <li>Comparing and grouping</li> <li>Reasons for use</li> <li>Dissolving</li> <li>Reversible and irreversible changes (link to Cooking and Nutrition</li> <li>Separation through filtering, sieving and evaporating</li> </ul>

## WORKING SCIENTIFICALLY

and fair tests

Yea

- Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary
- Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate
- Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs
- Using test results to make predictions to set up further comparative and fair tests
- Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations
- Identifying scientific evidence that has been used to support or refute ideas or arguments.

Reporting and presenting findings from enquiries, including

conclusions, causal relationships and explanations of and degree of

- Select and plan the most appropriate type of scientific enquiry to use to answer scientific questions; recognise when and how to set up comparative and fair tests and explain which variables need to be controlled and why.
- 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; choose the most
  appropriate equipment to make measurements and explain how to use it accurately.
- Use and develop keys and other information records to identify, classify and describe living things and materials, and identify patterns that might be found in the natural environment
- Decide how to record data from a choice of familiar approaches; look for different causal relationships in their data and identify evidence that refutes or supports their ideas.
- Use their results to identify when further tests and observations might be needed; recognise which secondary sources will be most useful to research their ideas and begin to separate opinion from fact.
- Use relevant scientific language and illustrations to discuss, communicate and justify their scientific ideas and should talk about how scientific ideas have developed over time

	<ul> <li>Light <ul> <li>How light travels</li> <li>How we see</li> <li>Shadows</li> </ul> </li> <li>Electricity <ul> <li>Effect of cells on sound/brightness</li> <li>Comparing variations in the function of components</li> <li>Use of symbols in a circuit diagram</li> </ul> </li> </ul>	<ul> <li>Animals including Humans</li> <li>Human circulatory system</li> <li>Function of the heart</li> <li>Diet, exercise and healthy lifestyle</li> <li>Transportation of nutrition in plants and animals</li> <li>Evolution and Inheritance</li> <li>Change over time, including fossils as evidence</li> <li>Variance of offspring from parents</li> <li>Adaptation of plants and animals to suit their environment</li> </ul>	<ul> <li>Living Things and their Habitats</li> <li>Animal and plant classification</li> </ul>
r 6	<ul> <li>WORKING SCIENTIFICALLY</li> <li>Planning different types of scientific enquiries transformed including recognising and controlling variables</li> <li>Taking measurements, using a range of scientific increasing accuracy and precision, taking repearappropriate</li> <li>Recording data and results of increasing complicating and labels, classification keys, tables, line graphs</li> <li>Using test results to make predictions to set up</li> </ul>	<ul> <li>Select and plan the most ap scientific questions; recogni explain which variables need ic equipment, with</li> <li>Make their own decisions al use and how long to make t appropriate equipment to n exity using scientific scatter graphs, bar and</li> <li>Use and develop keys and o living things and materials, a environment</li> <li>Decide how to record data f</li> </ul>	propriate type of scientific enquiry to use to answer ise when and how to set up comparative and fair tests and d to be controlled and why. bout what observations to make, what measurements to them for, and whether to repeat them; choose the most nake measurements and explain how to use it accurately. other information records to identify, classify and describe and identify patterns that might be found in the natural from a choice of familiar approaches; look for different

- Decide now to record data from a choice of familiar approaches; look for different causal relationships in their data and identify evidence that refutes or supports their ideas.
- Use their results to identify when further tests and observations might be needed;

trust in results, in oral and written forms such as displays and other		recognise which secondary sources will be most useful to research their ideas and begin
presentations		to separate opinion from fact.
<ul> <li>Identifying scientific evidence that has been used to support or refute</li> </ul>	٠	Use relevant scientific language and illustrations to discuss, communicate and justify
ideas or arguments.		their scientific ideas and should talk about how scientific ideas have developed over
		time