

Primary school 2022 – 2023 Science overview.

	Autumn	Spring	Summer
EYFS	<p>Autumn 1: <i>The Natural World</i> Children will understand the terms ‘same’ and ‘different’</p> <p>Autumn 2: <i>The Natural World</i> Children will explore and ask questions about the natural world around them.</p>	<p>Spring 1 : <i>The Natural World</i> Children will talk about features of the environment they are in and learn about the different environments.</p> <p>Spring 2 <i>The Natural World</i> Children will make observations about plants discussing similarities and differences.</p>	<p>Summer 1 <i>The Natural World</i> Children will make observations about animals discussing similarities and differences.</p> <p>Summer 2 <i>The Natural World</i> Children will know some important processes and changes in the natural world, including states of matter.</p>
Year 1	<p>Animals, including Humans</p> <ul style="list-style-type: none"> - Basic human body parts - Senses - Identifying, naming, describing and comparing a variety of common animals <p>Seasonal Changes Observing seasonal changes, including weather and length of the day</p>	<p>Everyday Materials</p> <ul style="list-style-type: none"> - Identifying and naming common materials - Describing their properties - Comparing and grouping materials <p>Seasonal Changes Observing seasonal changes, including weather and length of the day</p>	<p>Plants</p> <ul style="list-style-type: none"> - Identifying and naming a variety of common wild and garden plants - Identifying and describing the basic structure of common flowering plants <p>Seasonal Changes Observing seasonal changes, including weather and length of the day</p>
	<p>WORKING SCIENTIFICALLY</p> <ul style="list-style-type: none"> ● Ask simple questions and recognise that they can be answered in different ways ● Observe closely, using simple equipment ● Perform simple tests ● Identify and classify ● Use their observations and ideas to suggest answers to questions ● Gather and record data to help in answering questions. 		
Year 2	<p>Uses of Everyday Materials</p> <ul style="list-style-type: none"> - Identifying and comparing suitability of a variety of everyday materials for their particular uses. - Changing shapes by squashing, bending, twisting and stretching. - 	<p>Living Things and Their Habitats</p> <ul style="list-style-type: none"> - Identifying and naming a variety of animals in their habitats. - How animals are suited to their habitats. - Simple food chains. - Differences between things that are alive, dead and never been alive. <p>Animals, including Humans</p> <ul style="list-style-type: none"> - Knowing that animals, including humans, have offspring that grow into adults. - Basic needs for survival. - The importance of exercise, the right food and hygiene 	<p>Plants</p> <ul style="list-style-type: none"> - How seeds and bulbs grow into mature plants. - What plants need to grow and stay healthy. - How plants are suited to their habitats. - Identifying and naming a variety of plants in their habitats.

for humans.

WORKING SCIENTIFICALLY

- Ask simple questions and recognise that they can be answered in different ways
- Observe closely, using simple equipment
- Perform simple tests
- Identify and classify
- Use their observations and ideas to suggest answers to questions
- Gather and record data to help in answering questions.

- Explore the world around them and raise their own questions.
- Recognise ways in which they might answer scientific questions
- Use simple measurements and equipment (for example, hand lenses, egg timers) to gather data, carry out simple tests, record simple data, and talk about what they have found out and how they found it out.
- Record and communicate their findings in a range of ways and begin to use simple scientific language
- Compare objects, materials and living things and, with help, decide how to sort and group them, observe changes over time, and, with guidance, they should begin to notice patterns and relationships.
- Ask people questions and use simple secondary sources to find answers.

Animals, including Humans

- The right amount and type of nutrition
- Skeletons and muscles

Rocks

- Comparing and grouping different types of rocks
- The formation of fossils
- How soils are made.

Forces and Magnets

- Comparing how things move on different surfaces
- Magnetic forces

Plants

- Identifying and describing functions of parts of a flowering plant.
- What different plants need for healthy growth.
- How water is transported within plants.
- The life cycle of a flowering plant

Light

- The need for light
- Ways to protect eyes from dangerous sunlight
- How shadows are formed
- Finding patterns in the ways that shadows change size.

WORKING SCIENTIFICALLY

- Asking relevant questions and using different types of scientific enquiries to answer them
- Setting up simple practical enquiries, comparative and fair tests
- Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers
- Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions
- Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables
- Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions
- Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions
- Identifying differences, similarities or changes related to simple scientific ideas and processes
- Using straightforward scientific evidence to answer questions or to support their findings.

- Raise their own questions about the world around them.
- Make their own decisions about the most appropriate type of scientific enquiry they might use to answer questions
- Recognise when a simple fair test is necessary and help to decide how to set it up; talk about criteria for grouping, sorting and classifying; and use simple keys.
- Look for naturally occurring patterns and relationships and decide what data to collect to identify them.
- Make decisions about what observations to make, how long to make them for and the type of simple equipment that might be used.
- Learn how to use new equipment, such as data loggers, appropriately.
- Collect data from their own observations and measurements, using notes, simple tables and standard units, and help to make decisions about how to record and analyse this data.
- Look for changes, patterns, similarities and differences in their data in order to draw simple conclusions and answer questions.
- Identify new questions arising from the data, making predictions for new values within or beyond the data they have collected and finding ways of improving what they have already done.
- Recognise when and how secondary sources might help them to answer questions that cannot be answered through practical investigations.
- Use relevant scientific language to discuss their ideas and communicate their findings in

Year 3

	ways that are appropriate for different audiences		
Year 4	<p>States of Matter</p> <ul style="list-style-type: none"> - Solids and liquids - Changes heating & cooling - Evaporation & condensation - Water cycle - Gases (atmosphere) <p>Sound</p> <ul style="list-style-type: none"> - Vibrations - Pitch and volume - Distance and volume 	<p>Animals and Humans</p> <ul style="list-style-type: none"> - Teeth: -type and function - Human digestion - Food chains & food webs - Classification and food chains <p>Living things and their habitats:</p> <ul style="list-style-type: none"> - Grouping - Classification keys - Environmental changes 	<p>Electricity</p> <ul style="list-style-type: none"> - Simple series circuit - Switches - Conductors and insulators
	<p>WORKING SCIENTIFICALLY</p> <ul style="list-style-type: none"> ● Asking relevant questions and using different types of scientific enquiries to answer them ● Setting up simple practical enquiries, comparative and fair tests ● Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers ● Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions ● Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables ● Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions ● Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions ● Identifying differences, similarities or changes related to simple scientific ideas and processes ● Using straightforward scientific evidence to answer questions or to support their findings. 		
Year 5	<p>Forces</p> <ul style="list-style-type: none"> - Gravity - Air and water resistance - Friction - Mechanisms <p>Earth and Space</p> <ul style="list-style-type: none"> - Movement of the Earth, moon and other planets - Earth's rotation – day and night 	<p>Living things and Their Habitats</p> <ul style="list-style-type: none"> - Life cycles of a mammal, an amphibian, an insect and a bird - Reproduction in some plants and animals <p>Animals, including Humans</p> <ul style="list-style-type: none"> - Changes as humans develop to old age 	<p>Properties and Changes of Materials</p> <ul style="list-style-type: none"> - Comparing and grouping - Reasons for use - Dissolving - Reversible and irreversible changes (link to Cooking and Nutrition) - Separation through filtering, sieving and evaporating

	<p>WORKING SCIENTIFICALLY</p> <ul style="list-style-type: none"> ● 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. <ul style="list-style-type: none"> ● 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 		
	<p>Light</p> <ul style="list-style-type: none"> - How light travels - How we see - Shadows <p>Electricity</p> <ul style="list-style-type: none"> ● Effect of cells on sound/brightness ● Comparing variations in the function of components ● Use of symbols in a circuit diagram 	<p>Animals including Humans</p> <ul style="list-style-type: none"> - Human circulatory system - Function of the heart - Diet, exercise and healthy lifestyle - Transportation of nutrition in plants and animals <p>Evolution and Inheritance</p> <ul style="list-style-type: none"> - Change over time, including fossils as evidence - Variance of offspring from parents - Adaptation of plants and animals to suit their environment 	<ul style="list-style-type: none"> - Living Things and their Habitats - Animal and plant classification
Year 6	<ul style="list-style-type: none"> ● WORKING SCIENTIFICALLY ● 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 <ul style="list-style-type: none"> ● 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; 		

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.

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