Science Knowledge and Skills Progression 2021-2022

Our vision for Science education is that children become scientifically literate citizens who question and understand the world around them, through developing:

- **deep knowledge and experiences;**
- **their scientific enquiry skills; and**
- **an enjoyment of exploring, discovering and creating meaningful connections with the world.**

	Asking Questions 	Setting up Tests 	Observing and Measuring 	Recording Data 	Interpreting and communicating results 	Evaluating 
EYFS	Understand 'why' questions. Use talk to work out problems and organise thinking and activities. Ask questions to find out more, check what has been and ask questions to clarify. Learn new vocabulary. Use new vocabulary in different contexts. Articulate ideas and thoughts in well-formed sentences.	Use their senses in hands-on exploration of natural materials. Find ways to solve problems / find new ways to do things / test their ideas.	Explore how things work. Explore and talk about how different forces feel. Talk about the difference between materials and changes they notice. Make observations of animals and plants Explore the natural world around them and make observations.	Begin to make sense of their own life-story and family's history. Choose the resources they need for their chosen activities. Handle equipment and tools effectively.	Create simple representations of events, people and objects. Use talk to help work out problems and organise thinking and activities. Explain how things work and why they might happen. Use new vocabulary in different contexts.	Make healthy choices about food, drink, activity and toothbrushing. Begin to understand the need to respect and care for the natural environment and all living things. Talk about the different factors that support their overall health and wellbeing. Manage their own basic hygiene and personal needs.

	Describe events in some detail.		Describe what they see, hear and feel while they are outside. Understand some important processes and changes in the natural world, e.g. seasons and changing of matter.			Answer how and why questions about their experiences.
Years 1 and 2	Ask simple questions and recognise that they can be answered in different ways.	Perform simple tests.	Observing closely using simple equipment. Identifying and classifying.	Gather and record data to help in answering questions.	Use appropriate scientific language to communicate ideas.	Use observations and ideas to suggest answers to questions.
Years 3 and 4	Ask relevant questions and use different types of enquiry to answer them.	Set up simple practical enquiries, comparative and fair tests.	Make systematic and careful observations and, where appropriate, take accurate measurements using standard units and a range of equipment.	Gather, record, classify and present data in a variety of ways to help answer questions. Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables.	Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions. Identify differences, similarities or changes related to simple scientific ideas and processes.	Using results to draw simple conclusions, make predictions for new values, suggest improvements, and raise further questions. Using straight forward scientific evidence to answer questions or to support their findings.
Years 5 and 6	Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary.	Use test results to make predictions to set up further comparative and fair tests. Use simple models to describe scientific ideas.	Take measurements, using a range of scientific equipment, with increasing accuracy and precision.	Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs.	Report and present findings from enquiries, including conclusions and causal relationships in oral and written forms such as displays and other presentations.	Explain degree of trust in results. Identify and evaluate scientific evidence that has been used to support or refute ideas or arguments.