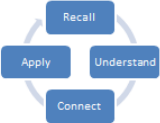
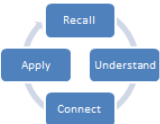
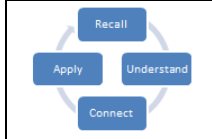


Progression of Scientific Enquiry Skills WHOLE SCHOOL

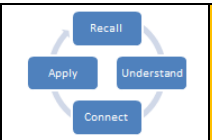
	<h2 style="margin: 0;"><u>EYFS</u></h2>
Rationale	<p>In F1 and F2 children are exploring the world around them through guided group activities and in independent provision. They start to explore the who, what, when of the world around them in F1 and this extends to basis Why questions as they move in to F2. Learning is practical and based on their direct environments and experiences. Teaching is limited to locality, familiar plants and animals and links within familiar stories.</p>
Scientific Investigation	<ul style="list-style-type: none"> • Ask simple questions (who, what, when- move on to why in F2) • Observe changes • Compare familiar animals and habitats • Explore using the 5 senses.
Key Vocab	<p>Observe, compare, group</p>

	<h2 style="margin: 0;"><u>Key Stage 1</u></h2>
Rationale	<p>In Year 1 and 2, children will start to build on their questioning skills from EYFS. It focuses on asking more specific questions about the world around them and discovering how we might answer them. Children will begin to use a range of observation skills and methods of recording. This gives a basic understanding that will be developed in LKS2, when children will use their mathematical understanding to record and present findings. The basic concepts learnt in KS1 will provide a foundation for children to carry out more relevant and scientific based enquiries in Lower Key Stage 2 and they will begin to ask more relevant questions. They will also use their recording knowledge to present findings and use more mathematical methods of recording such as charts. In Upper Key Stage 2, children will have to ask, plan and carry out a variety of scientific enquiries. They will have to use their prior knowledge to determine which method of enquiry, equipment, recording and presenting skills will be most appropriate. They will also take this knowledge further by using it to give a reasoned conclusion to findings and provide supporting evidence.</p>
Scientific Investigation	<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 observations and ideas to suggest answers to questions • Gather and record data to help in answering questions.
Key Vocab	<p>Recognise, observe, identify, classify, record.</p>



Lower Key Stage 2

Rationale	In Lower Key Stage 2, children will begin to ask more relevant questions linking to their science, or wider curriculum topic. They will begin to explore different methods of enquiry, as well as recording their findings more scientifically with the support of tables, charts and diagrams. This will build on their prior knowledge of collecting findings and making comparative enquiries. They will also now start to report what they have found out and make predictions based on their scientific and real-life experiences. This will extend their knowledge of simply gathering information and making observations from Key Stage 1. In Upper Key Stage 2, children will have to ask, plan and carry out a variety of scientific enquiries. They will have to use their prior knowledge to determine which method of enquiry, equipment, recording and presenting skills will be most appropriate. They will also take this knowledge further by using it to give a reasoned conclusion to findings and provide supporting evidence.
Scientific Investigation	<ul style="list-style-type: none"> • Ask relevant questions • Set up simple practical enquiries, comparative and fair tests • Make accurate measurements using standard units, using a range of equipment. • Gather, record, classify and present data in a variety of ways to help in answering questions • Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables • Report on findings from enquiries. • Use results to draw simple conclusions, make predictions for setting up further tests. • Use straightforward scientific evidence to answer questions or to support their findings.
Key Vocab	Recognise, observe, identify, classify, record, enquire, results, conclusion, similarities, differences, fair test.



Upper Key Stage 2

Rationale	In Upper Key Stage 2, children will have to use all their prior knowledge it to making reasoned and relevant questions and make decisions about which planning, enquiry and recording method is most appropriate for each enquiry. They will have to provide detailed and concise recording of data to allow them to make a clear and reasoned summary. Enquiries will be presented using clear and appropriate evidence and predictions will be more reasoned and considered as they will have a greater scientific and real-life experience and understanding. At this stage, children will use the knowledge built on from Key Stage 1 and Lower Key Stage 2 to provide clear, thoughtful and reasoned enquiries that are summarised and consider further enquiry pathways.
Scientific Investigation	<ul style="list-style-type: none"> • Plan enquiries to answer questions, including recognising and controlling variables where necessary. • Use appropriate techniques and apparatus taking measurements, using a range of scientific equipment, with increasing accuracy and precision. • Recording data and results of increasing complexity in a scientific way. • Use test results to make predictions to set up further comparative and fair tests • Report and present findings from enquiries, including conclusions, causal relationships and explanations o in oral and written forms such as displays and other presentations • Use scientific evidence to describe scientific ideas identifying evidence that has been used to support or refute ideas or arguments.

Key Vocab	Recognise, observe, identify, classify, record, enquire, results, conclusion, similarities, differences, fair test, controlling variables, classification keys, causal relationships, scientific evidence, hypothesis.
------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------