

# Science – Knowledge Progression Document

Observing						
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Discuss what they can see, touch, smell, hear or taste?  Use simple equipment to help them make observations.	Discuss and describe what they can see, touch, smell, hear or taste.  Use a range of equipment to help them make observations.	Use senses of see, touch, smell, hear or taste to help them answer questions.  Observe and compare several things whilst recognising when doing so might not be fair.	Observe changes over different periods of time.	Make systematic and careful observations of changes over different periods of time.	Continue to make systematic and careful observations of changes over different periods of time.	Continue to make systematic and careful observations of changes over different periods of time.

Performing Tests and Obtaining Evidence						
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Can perform a simple test with support from an adult.	Can use simple equipment to perform a simple test under guidance.	Can use simple equipment to perform a simple test (considering the fairness)  Observe changes over time.  Notice similarities, differences and patterns.  Grouping and classifying.  Carrying out comparative tests.  With support find things out using secondary sources.	Perform simple comparative and fair tests.  Observe changes over different periods of time.  Notice patterns.  Group and classify.  Follow and carry comparative and fair tests.  Find things out using secondary sources.	Perform simple comparative and fair tests and isolate variables.  Carry out a fair test independently and in groups.  Notice and begin to explain patterns.  Group and classify.  Choose from a range of examples and carry out comparative and fair tests.  Use a range of secondary sources to find information.	Can take measurements using range of equipment with increasing accuracy and precision.  Take repeat readings when appropriate.  Carry out accurate and fair tests.	Can make precise measurements.  Select appropriate equipment and carry out comparative and fair tests.  Recognise, control variables accurately and fairly, including changes over different periods of time.  Notice patterns, groupings and classify.  Find things out using a wide range of secondary sources.



## Questioning, Prediction and Planning

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<p>Generate questions about the world around them.</p> <p>Talk about what they think will happen.</p>	<p>Use prompts to ask relevant questions about a scientific enquiry.</p> <p>Under guidance make simple verbal predictions.</p>	<p>Ask relevant questions about scientific enquiry.</p> <p>With prompts, begin to make and record simple predictions.</p>	<p>Select relevant questions to answer different types of scientific enquiry.</p> <p>Can use different ideas and suggest how to find something out.</p> <p>Make and record a prediction.</p> <p>Explain what data is required.</p> <p>Set up simple comparative and fair tests.</p>	<p>Ask relevant questions to answer different types of scientific enquiry.</p> <p>Explain why certain variables have been isolated.</p> <p>Make and record a prediction based on prior knowledge.</p> <p>Set up simple comparative and fair tests and isolate variables.</p>	<p>Plan and carry out scientific enquiry to answer their own questions, including recognising and controlling variables.</p> <p>Make a prediction and explain why.</p> <p>Identify the key factors when planning a fair test.</p>	<p>Plan, justify (giving reasons) and carry out scientific enquiry to answer their own questions, including recognising and controlling variables.</p> <p>Use information and test results to make predictions and further comparative tests.</p> <p>Vary one factor whilst keeping the others the same and explain why.</p>

## Vocabulary

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<p>Begin to use some new words about the world around them.</p>	<p>Pupils should read and spell scientific vocabulary at a level consistent with their increasing word and spelling knowledge.</p> <p>Refer to and use specific scientific vocabulary for their year group.</p>	<p>Pupils should read and spell scientific vocabulary at a level consistent with their increasing word and spelling knowledge.</p> <p>Refer to and use specific scientific vocabulary for their year group.</p>	<p>Pupils should read and spell scientific vocabulary correctly and with confidence, using their growing word reading and knowledge skills.</p> <p>Refer to and use specific scientific vocabulary for their year group.</p>	<p>Pupils should read and spell scientific vocabulary correctly and with confidence, using their growing word reading and knowledge skills.</p> <p>Refer to and use specific scientific vocabulary for their year group.</p>	<p>Pupils should read, spell and pronounce scientific vocabulary correctly.</p> <p>Refer to and use specific scientific vocabulary for their year group.</p>	<p>Pupils should read, spell and pronounce scientific vocabulary correctly.</p> <p>Refer to and use specific scientific vocabulary for their year group.</p>

## Recording and Presenting

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<p>Show their work using pictures, labels and captions.</p> <p>Record findings using standard units.</p> <p>Record information in a chart, table or using ICT.</p>	<p>Can show their work using pictures, labels and captions.</p> <p>Record their findings using standard units.</p> <p>Can record some information in chart or table using ICT.</p>	<p>Can use text, diagrams, pictures, charts and tables to record their findings and observations.</p> <p>Measure using simple equipment Interpret and construct simple pictograms, tally charts, block diagrams and simple tables. (Maths Statistics)</p>	<p>Take accurate measurements using different equipment and units of measure.</p> <p>Can record their observations in different ways (labelled diagrams, charts etc.)</p> <p>Describe what they have found out using scientific language.</p> <p>Interpret and present data using bar charts pictograms and tables. (Maths Statistics)</p>	<p>Take measurements using different equipment and units of measure and record what they have found in a range of ways.</p> <p>Use a range of scientific equipment to take accurate measurements or readings.</p> <p>Record data using diagrams, labels, classification keys, tables, scatter graphs, bar graphs and line graphs.</p> <p>Interpret and present discrete and continuous Data using graphical methods. (Maths Statistics)</p>	<p>Can take measurements using a range of scientific equipment with increasing accuracy and precision.</p> <p>Take repeat readings when appropriate.</p> <p>Can record more complex data and results using scientific diagrams, labels, classification keys, tables, scatter graphs, bar and line graphs.</p> <p>Complete, read and interpret information in table, including timetables. (Maths Statistics)</p>	<p>Explain why they have chosen specific equipment.</p> <p>Decide which unit of measurement they need to use.</p> <p>Make accurate measurements.</p> <p>Explain why a measurement needs to be repeated.</p> <p>Record measurements systematically using a range of scientific equipment with increasing accuracy and precision.</p> <p>Present a report of their findings through writing, display and presentation.</p> <p>Interpret and construct pie charts and line graphs. (Maths Statistics)</p>

## Considering Evidence and Evaluating

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
To talk about things, they have found out.	To begin to say what happened in my investigation and whether I was surprised at the results or not.	<p>Talk about what they have found out and how they found it out.</p> <p>To say what happened in my investigation, whether I was surprised at the results or not and what I would change about my investigation.</p>	Can explain what they have found out and use measurements to say whether it answers their question.	<p>Find patterns in evidence or measurements.</p> <p>Evaluate and communicate methods and findings.</p> <p>Make a prediction based on something they have found out.</p> <p>Ask further questions based on data and observations.</p> <p>Evaluate what they have found using scientific language, drawings, labelled diagrams, tables, scatter graphs, bar graphs and line graphs.</p> <p>Identify differences similarities or changes related to simple scientific ideas or processes.</p>	<p>Use a graph to answer scientific questions.</p> <p>Present a report of their findings through writing, display and presentation.</p>	<p>Find a pattern from data and explain what it shows.</p> <p>Can use a graph to answer scientific questions.</p> <p>Link what they have found to other science.</p> <p>Suggest how to improve their work and say why they think so.</p> <p>Record more complex data and results using scientific diagrams, classification keys, tables, bar charts, pie charts and line graphs and models.</p> <p>Draw conclusions from their work.</p> <p>Report findings from investigations through written explanations and conclusions using appropriate scientific language.</p>