

Name: _____

Stages	Plan		Do			Review			Date		
	Recognise the best type of enquiry to answer a question	Choose equipment, select tests, use secondary sources to decide how to obtain accurate observations and measurements	Obtain observations and measurements using equipment and/or secondary sources	Record observations and measurements	Present observations and measurements	Draw conclusions and make explanations	Evaluate the data collected	Evaluate the process used (including next steps)	Emerging	Expected	Beyond
End of Year 1	<i>With help and encouragement I ask simple questions that begin with why, what if, how or when.</i>	<i>I make suggestions about how to do things when we plan a simple test.</i>	<i>With help, I use simple equipment and non-standard units to find things out. I observe using my senses.</i>	<i>With help, I can gather and record data to help me answer my questions.</i>		<i>I talk about what happened and/or what I saw.</i>	<i>I talk about what I did.</i>				
Expected end of KS1 (approx. level 2b)	I ask simple questions and recognise these questions can be answered in different ways.	<i>I decide with help, what to find out, observe or measure.</i>	I observe closely, using simple equipment <i>and non-standard units.</i> I can identify and classify. I can perform a simple test.	I gather data and record data to help me answer my questions. <i>I record what I have found out using e.g. words or pictures, tables or simple prepared formats.</i>		I use my observations and ideas to suggest answers to my questions.	<i>I talk about how I found out what I found out.</i>				
End of Year 3	<i>I can ask questions and I recognise that there are different types of enquiry.</i>	<i>I can set up a simple practical enquiry and I am beginning to understand how to make a test fair. I make suggestions about what observations and measurements to make and what equipment I need.</i>	<i>I am beginning to make systematic and careful observations. I sometimes use standard units. With help I can use information sources provided to find things out.</i>	<i>I gather data and using a pre-prepared table I can record data. I record my findings using a drawing and/or words.</i>	<i>With help, I can present my data.</i>	<i>I can use my results when I talk about what happened.</i>	<i>I can talk about what went wrong! I have ideas about what else I would like to find out.</i>				
Expected end of Lower KS2 (approx. level 3a)	I ask relevant questions and use different types of scientific enquiries to answer them.	I can set up simple practical enquiries, comparative or fair tests. <i>I decide what observations and measurements to make and what equipment to use.</i>	I use a range of equipment (including thermometers and dataloggers). I make systematic and careful observations and take accurate measurements using standard units. <i>I use information sources provided to find things out.</i>	I gather, record and classify data in a variety of ways to help me answer my questions. I record my findings using simple scientific language, tables, drawings and labelled diagrams.	I present my data in a variety of ways <i>using e.g. Venn diagrams, bar charts, simple scatter graphs and keys.</i>	I use my results to draw simple conclusions and I make predictions for new values. I communicate what I have found out using straightforward scientific ideas and I report my findings using oral and written explanations and displays.	I suggest improvements to the way I carried out the enquiry. I suggest further questions to investigate.				
End of Year 5	<i>I ask relevant questions (containing scientific knowledge and understanding) and with help I recognise which type of enquiry is best to answer a question.</i>	<i>I decide what observations and measurements to make (controlling variables with help where necessary) and what equipment to use to make my measurements and observations.</i>	<i>I use a range of equipment independently. The series of observations and measurements I take are adequate for the task. I use information sources provided to find things out. I identify possible risks to myself and others.</i>	<i>I gather and record non-complex results (data and observations) using e.g. tables and scientific diagrams.</i>	<i>I present the results (data and observations) in a range of formats e.g. bar and line graphs, simple scatter graphs, keys and frequency charts.</i>	<i>I draw conclusions from my data and observations. I begin to use basic scientific evidence to support or refute the ideas or arguments for my conclusion.</i>	<i>I look at my results and decide if any observations or measurements are unsuitable. I use what I have found out to suggest improvements to my work giving reasons. I can set up further questions to investigate.</i>				
Expected end of KS2 (approx. Level 5c)	<i>I ask relevant questions (containing scientific knowledge and understanding). I recognise which type of enquiry is best to answer a question.</i>	I can plan different types of science enquiries to answer questions. I recognise and control variables where necessary. <i>I decide what observations and measurements to make and what equipment to use (giving reasons) to make my measurements and observations.</i>	I take measurements, using a range of scientific equipment with increasing accuracy and precision. I take repeat readings when appropriate. <i>I use relevant information sources to find things out I identify possible risks to myself and others.</i>	I record data and results of increasing complexity using e.g. scientific diagrams and labels and tables. <i>I choose a method to suit the results, e.g. a two column table.</i>	I present the data and results in suitable formats using e.g. line graphs, bar graphs, scatter graphs and classification keys.	From my data and observations I draw valid conclusions (i.e. consistent with the evidence) including causal relationships. I identify scientific evidence to support or refute the ideas or arguments for my conclusion.	<i>I look at my results and decide if any observations or measurements are unsuitable and need to be carried out again. I offer simple explanations for differences in results.</i>	I use my test results to make predictions to set up further enquiries e.g. comparative and fair tests <i>and suggest how my working methods could be improved, with reasons.</i>			