



Science: Progression of knowledge and skills

Science: Working Scientifically progression

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	Plan	Do	Review
	<i>Asking questions</i> <i>Enquiry planning – 5 types of scientific enquiry</i>	<i>Investigating and testing</i> <i>Using equipment</i> <i>Record reporting and findings</i> <i>Identify, group and classify</i>	<i>Drawing conclusions from reports and findings</i> <i>Asking further questions</i> <i>Evaluating</i>
Year 1	<ul style="list-style-type: none"> With help and encouragement I ask simple questions that begin with why, what if, how or when I make suggestions about how to do things when we plan a simple test 	<ul style="list-style-type: none"> With help, I use simple equipment and non-standard units to find things out I observe using my senses 	<ul style="list-style-type: none"> <i>I talk about what happened and/or what I saw</i> <i>I talk about what I did</i>
Year 2	<ul style="list-style-type: none"> I ask simple questions, and recognise these can be answered in different ways. I decide, with help, what to find out, observe or measure 	<ul style="list-style-type: none"> I can perform a simple test I use simple equipment <i>and non-standard units (where appropriate) to find things out</i> I observe closely I can identify and classify I gather data and record data to help me answer my questions. I record what I have found out using e.g. words, pictures, tables or simple prepared formats 	<ul style="list-style-type: none"> 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>

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Year 3	<ul style="list-style-type: none"> • I can ask questions and I recognise that there are different types of enquiry • I make suggestions about what observations and measurements to make and what equipment I need • I can set up a simple practical enquiry and I am beginning to understand how to make a test fair 	<ul style="list-style-type: none"> • With help, I can use information sources provided to find things out • I am beginning to make systematic and careful observations and I sometimes use standard units • I use a range of simple equipment • I record my findings using a drawing and/or words • I gather data and using a pre-prepared table I can record data • With help, I can present my data 	<ul style="list-style-type: none"> • I can use my results when I talk about what happened • I have ideas about what else I would like to find out • I can talk about what went wrong

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Year 4	<p><i>Asking questions</i></p> <p><i>Enquiry planning – 5 types of scientific enquiry</i></p>	<p><i>Investigating and testing</i></p> <p><i>Using equipment</i></p> <p><i>Record reporting and findings</i></p> <p><i>Identify, group and classify</i></p>	<p><i>Drawing conclusions from reports and findings</i></p> <p><i>Asking further questions</i></p> <p><i>Evaluating</i></p>
	<ul style="list-style-type: none"> • I ask relevant questions and use different types of scientific enquiries to answer them • I decide what observations and measurements to make and what equipment to use • I can set up simple practical enquiries, comparative or fair tests 	<ul style="list-style-type: none"> • <i>I use information sources provided to find things out</i> • I make systematic and careful observations and take accurate measurements using standard units • I use a range of equipment, (including thermometers and data loggers) • I record my findings using simple scientific language, tables, drawings and labelled diagrams • I gather, record and classify data in a variety of ways to help me answer my questions • I present my data in a variety of ways <i>using e.g. Venn diagrams, bar charts, simple scatter graphs</i> and keys 	<ul style="list-style-type: none"> • I communicate what I have found out using straightforward scientific ideas and I report my findings using oral and written explanations and displays • I use my results to draw simple conclusions and I make predictions for new values • I suggest further questions to investigate • I suggest improvements to the way I carried out the enquiry

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Year 5	<ul style="list-style-type: none"> • 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 decide what observations and measurements to make (controlling variables with help where necessary) and what equipment to use to make my measurements and observations 	<ul style="list-style-type: none"> • I identify possible risks to myself and others • I use information sources provided to find things out • The series of observations and measurements I take are adequate for the task • I use a range of equipment independently • I gather and record non-complex results (data and observations) using e.g. tables and scientific diagrams • 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 	<ul style="list-style-type: none"> • I begin to use basic scientific evidence to support or refute the ideas or arguments for my conclusion • I draw conclusions from my data and observations • I look at my results and decide if any observations or measurements are unsuitable • I can set up further questions to investigate. I use what I have found out to suggest improvements to my work giving reasons.

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Year 6	<p><i>Asking questions</i></p> <p><i>Enquiry planning – 5 types of scientific enquiry</i></p>	<p><i>Investigating and testing</i></p> <p><i>Using equipment</i></p> <p><i>Record reporting and findings</i></p> <p><i>Identify, group and classify</i></p>	<p><i>Drawing conclusions from reports and findings</i></p> <p><i>Asking further questions</i></p> <p><i>Evaluating</i></p>
	<ul style="list-style-type: none"> • I ask relevant questions (containing scientific knowledge and understanding) and I recognise which type of enquiry is best to answer a question • I decide what observations and measurements to make and what equipment to use (giving reasons) to make my observations and measurements • I can plan different types of science enquiries to answer questions. I recognise and control variables where necessary. 	<ul style="list-style-type: none"> • I identify possible risks to myself and others • I use relevant information sources to find things out • I take repeat readings when appropriate • I take measurements using a range of scientific equipment with increasing accuracy and precision • I record data and results of increasing complexity using e.g. scientific diagrams and labels and tables. I choose a method of recording to suit the results. • I present the data and results in suitable formats using e.g. line graphs, bar graphs, scatter graphs and classification keys 	<ul style="list-style-type: none"> • I identify scientific evidence to support or refute the ideas or arguments for my conclusions • From my data and observations I draw valid conclusions (i.e. consistent with the evidence) including causal relationships • 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 use my test results to make predictions to set up further enquiries e.g. comparative and fair tests and suggest how my working methods could be improved, with reasons