



New GCSE



Literacy	Numeracy	Enquiry	Science in Society
<p>a) Explain abstract ideas and use models b) Write concise explanations c) Critique claims and justify opinions</p>	<p>a) Present data b) Analyse data and make conclusions. c) Appreciate data critically</p>	<p>a) Make testable questions and hypotheses b) Identify and control variables c) Use practical skills and risk assess</p>	<p>a) Consider consequences of scientific advances b) Explain the development of scientific thinking c) Evaluate and interrogate sources</p>
<p>Use abstract ideas or models or multiple factors when explaining processes or phenomena.</p> <p>Identify the strengths and weaknesses of particular models.</p>	<p>Choose forms to communicate qualitative or quantitative data appropriate to the data and the purpose of the communication.</p> <p>Construct and interpret frequency tables and diagrams and histograms.</p> <p>Select and manipulate data and information and use them to contribute to conclusions.</p>	<p>Justify their choices of data collection method and proposed number of observations and measurements.</p> <p>Collect data choosing appropriate ranges, numbers and values for measurements and</p>	<p>Explain whether you think personal or group consequences should take priority.</p> <p>Outline a simple ethical argument about the rights and wrongs of a new technology.</p> <p>Explain why argumentation is essential for the development of robust theories.</p>
<p>Explain how information or evidence from various sources may be manipulated in order to influence interpretation.</p> <p>Identify lack of balance in the presentation of information or evidence.</p> <p>Comment on the validity of sources or opinions.</p>	<p>Draw conclusions that are consistent with the evidence they have collected and explain them using scientific knowledge and understanding</p> <p>Make valid comments on the quality of data.</p> <p>Suggest reasons for any limitations or inconsistencies.</p>	<p>Explain why particular pieces of equipment are appropriate for the questions or ideas under investigation.</p> <p>Independently recognise a range of familiar risks and take action to control them.</p>	<p>Decide whether or not given data supports a particular theory.</p> <p>Recognise the importance of peer review of results and of communicating results to a range of audiences</p> <p>Explain how information or evidence from various sources may be manipulated in order to influence interpretation.</p>
<p>Use abstract ideas or models or more than one step when describing processes or phenomena.</p> <p>Explain processes or phenomena, suggest solutions to problems or answer questions by drawing on abstract ideas or models.</p>	<p>Decide on the most appropriate formats to present sets of scientific data, such as using line graphs for continuous variables.</p> <p>Accurately plot a graph of continuous data.</p> <p>Calculate arithmetic mean</p>	<p>Apply scientific knowledge and understanding in the planning of investigations, identifying significant variables and recognising which are independent and which are dependent.</p> <p>Repeat sets of observations or measurements where appropriate, selecting suitable ranges and intervals</p>	<p>Select the choice which maximises the benefits and minimises the harm.</p> <p>Explain the processes by which ideas and evidence are accepted or rejected by the scientific community and how this can change theories.</p>
<p>Distinguish between opinion and scientific evidence in contexts related to science, and use evidence rather than opinion to support or challenge scientific arguments.</p> <p>Identify scientific evidence that is being used to support or refute ideas or arguments.</p>	<p>Draw valid conclusions that utilise more than one piece of supporting evidence, including numerical data and line graphs.</p> <p>Provide straightforward explanations for differences in repeated observations or measurements.</p>	<p>Evaluate the effectiveness of their working methods, making practical suggestions for improving them</p>	<p>Describe some scientific evidence that supports or refutes particular ideas or arguments.</p> <p>Explain why particular information sources are appropriate for the questions or ideas under investigation.</p> <p>Recognize limitations of the reporting of scientific developments in the popular media.</p>
<p>Use simple models to describe scientific ideas</p> <p>Use scientific ideas when describing simple processes or phenomena</p>	<p>Select appropriate ways of presenting scientific data.</p> <p>Accurately plot a bar chart</p> <p>Identify patterns in data presented in various formats, including line graphs.</p>	<p>Recognise significant variables in investigations, selecting the most suitable to investigate.</p> <p>Select appropriate equipment or information sources to address specific questions or ideas under investigation</p> <p>Make sets of observations or measurements, identifying the ranges and intervals used.</p>	<p>List relevant 'we should, or should not' rules that everyone should follow.</p> <p>Describe different viewpoints a range of people may have about scientific or technological developments</p>
<p>Use appropriate scientific forms of language to communicate scientific ideas, processes or</p>	<p>Make reference to data to make a simple conclusion.</p>	<p>Suggest improvements to their working methods, giving reasons</p> <p>Make, and act on, suggestions to control obvious risks to themselves and others.</p>	<p>Understand the role of a theory in science.</p> <p>Recognise scientific questions that do not yet have definitive answers.</p> <p>Describe the role of evidence in supporting theories.</p>
<p>Represent things in the real world using simple physical models</p> <p>Use scientific forms of language when communicating simple scientific ideas, processes or phenomena</p> <p>Identify differences, similarities or changes related to simple scientific ideas, processes or phenomena</p> <p>Respond to ideas given to them to answer questions or suggest solutions to problems.</p>	<p>Present simple scientific data in more than one way, including tables and bar charts</p> <p>Identify straightforward patterns in observations or in data presented in various formats, including tables, pie and bar charts.</p> <p>Describe what they have found out in experiments or investigations, linking cause and effect</p> <p>Use straightforward scientific evidence to answer questions, or to support their findings.</p>	<p>Identify one or more control variables in investigations from those provided.</p> <p>Select equipment or information sources from those provided to address a question or idea under investigation</p> <p>Make some accurate observations or whole number measurements relevant to questions or ideas under investigation.</p> <p>Suggest improvements to their working methods.</p> <p>Recognise obvious risks when prompted.</p>	<p>Describe some simple positive and negative consequences of scientific and technological developments</p> <p>Explain what is meant by a theory.</p> <p>State examples of theories in science.</p>