

APP Primary Science Assessment Guidelines: Levels 5 and 6

	AF1 – Thinking scientifically	AF2 – Understanding the applications and implications of science	AF3 – Communicating and collaborating in science	AF4 – Using investigative approaches	AF5 – Working critically with evidence
L 6	<p><b>Across a range of contexts and practical situations pupils:</b></p> <ul style="list-style-type: none"> <li>Use abstract ideas or models or multiple factors when explaining processes or phenomena</li> <li>Identify the strengths and weaknesses of particular models</li> <li>Describe some scientific evidence that supports or refutes particular ideas or arguments, including those in development</li> <li>Explain how new scientific evidence is discussed and interpreted by the scientific community and how this may lead to changes in scientific ideas</li> </ul>	<p><b>Across a range of contexts and practical situations pupils:</b></p> <ul style="list-style-type: none"> <li>Describe how different decisions on the uses of scientific and technological developments may be made in different economic, social or cultural contexts</li> <li>Explain how societies are affected by particular scientific applications or ideas</li> <li>Describe how particular scientific or technological developments have provided evidence to help scientists pose and answer further questions</li> <li>Describe how aspects of science are applied in particular jobs or roles</li> </ul>	<p><b>Across a range of contexts and practical situations pupils:</b></p> <ul style="list-style-type: none"> <li>Identify lack of balance in the presentation of information or evidence</li> <li>Choose forms to communicate qualitative or quantitative data appropriate to the data and the purpose of the communication</li> <li>Distinguish between data and information from primary sources, secondary sources and simulations, and present them in the most appropriate form</li> </ul>	<p><b>Across a range of contexts and practical situations pupils:</b></p> <ul style="list-style-type: none"> <li>Apply scientific knowledge and understanding in the planning of investigations, identifying significant variables and recognising which are independent and which are dependent</li> <li>Justify their choices of data collection method and proposed number of observations and measurements</li> <li>Collect data choosing appropriate ranges, numbers and values for measurements and observations</li> <li>Independently recognise a range of familiar risks and take action to control them</li> </ul>	<p><b>Across a range of contexts and practical situations pupils:</b></p> <ul style="list-style-type: none"> <li>Suggest reasons based on scientific knowledge and understanding for any limitations or inconsistencies in evidence collected</li> <li>Select and manipulate data and information and use them to contribute to conclusions</li> <li>Draw conclusions that are consistent with the evidence they have collected and explain them using scientific knowledge and understanding</li> <li>Make valid comments on the quality of their data</li> </ul>
L 5	<p><b>Across a range of contexts and practical situations pupils:</b></p> <ul style="list-style-type: none"> <li>Use abstract ideas or models or more than one step when describing processes or phenomena</li> <li>Explain processes or phenomena, suggest solutions to problems or answer questions by drawing on abstract ideas or models</li> <li>Recognise scientific questions that do not yet have definitive answers</li> <li>Identify the use of evidence and creative thinking by scientists in the development of scientific ideas</li> </ul>	<p><b>Across a range of contexts and practical situations pupils:</b></p> <ul style="list-style-type: none"> <li>Describe different viewpoints a range of people may have about scientific or technological developments</li> <li>Indicate how scientific or technological developments may affect different groups of people in different ways</li> <li>Identify ethical or moral issues linked to scientific or technological developments</li> <li>Link applications of science or technology to their underpinning scientific ideas</li> </ul>	<p><b>Across a range of contexts and practical situations pupils:</b></p> <ul style="list-style-type: none"> <li>Distinguish between opinion and scientific evidence in contexts related to science, and use evidence rather than opinion to support or challenge scientific arguments</li> <li>Decide on the most appropriate formats to present sets of scientific data, such as using line graphs for continuous variables</li> <li>Use appropriate scientific and mathematical conventions and terminology to communicate abstract ideas</li> <li>Suggest how collaborative approaches to specific experiments or investigations may improve the evidence collected</li> </ul>	<p><b>Across a range of contexts and practical situations pupils:</b></p> <ul style="list-style-type: none"> <li>Recognise significant variables in investigations, selecting the most suitable to investigate</li> <li>Explain why particular pieces of equipment or information sources are appropriate for the questions or ideas under investigation</li> <li>Repeat sets of observations or measurements where appropriate, selecting suitable ranges and intervals</li> <li>Make, and act on, suggestions to control obvious risks to themselves and others</li> </ul>	<p><b>Across a range of contexts and practical situations pupils:</b></p> <ul style="list-style-type: none"> <li>Interpret data in a variety of formats, recognising obvious inconsistencies</li> <li>Provide straightforward explanations for differences in repeated observations or measurements</li> <li>Draw valid conclusions that utilise more than one piece of supporting evidence, including numerical data and line graphs</li> <li>Evaluate the effectiveness of their working methods, making practical suggestions for improving them</li> </ul>
BL					
IE					

Overall assessment (tick one box only)

Low 5

Secure 5

High 5

Low 6

Secure 6

High 6