

Y7	Y8	Y9	Scientific knowledge and understanding	Scientific practical skills and analysis
		<b>9</b>	Demonstrate both breadth and depth of knowledge and understanding of organisms, the environment and materials, chemical reactions, energy, forces and space. Demonstrate an understanding of how scientific knowledge and understanding changes, through processes such as questioning, investigating and evidence gathering. <i>Consistently achieves 70% or above on summative assessments of cumulative GCSE content</i>	Research or preliminary practical work used to inform planning/ risk assessment Quantitative hypothesis written Hypothesis accepted or rejected in conclusion, with justification
	<b>9</b>	<b>8</b>	Demonstrate extensive knowledge and understanding related to organisms, the environment and materials, chemical reactions, energy, forces and space. Interpret and use quantitative evidence. <i>Consistently achieves 70% or above on summative assessments of cumulative KS3 content or 60% GCSE content</i>	Full risk assessment written, including referencing where appropriate Quality of data evaluated Suggestions for improving quality of data made
<b>9</b>	<b>8</b>	<b>7</b>	Describe a wide range of processes and phenomena related to organisms, the environment and materials, chemical reactions, energy, forces and space.; including being able to sequence complex processes. Explain how evidence supports accepted scientific ideas. <i>Consistently achieves at least 60% or above on summative assessments of KS3 cumulative content or 55% GCSE content</i>	Hypothesis explained using scientific knowledge Equipment choice justified Line of best fit drawn
<b>8</b>	<b>7</b>	<b>6</b>	Describe a range of processes and phenomena related to organisms, the environment and materials, chemical reactions, energy, forces and space.; using abstract ideas and appropriate terminology. <i>Often achieves more than 60% or above on summative assessments of cumulative content but is not yet consistent</i>	Graphs scaled and plotted correctly How variables will be controlled described Suggestions made for increasing accuracy
<b>7</b>	<b>6</b>	<b>5</b>	Describe processes & phenomena related to organisms, the environment and materials, chemical reactions, energy, forces and space. Draw on knowledge and understanding in communication. <i>Consistently achieves at least 55% or above on summative assessments of cumulative content</i>	Prediction explained using scientific knowledge Control variables identified Correct units included in tables, independently recalled Data used as evidence in conclusions
<b>6</b>	<b>5</b>	<b>4</b>	Describe some processes and phenomena related to organisms, the environment and materials, chemical reactions, energy, forces and space. Recognise and explain everyday technological developments <i>Consistently achieves at least 50% or above on summative assessments of cumulative content</i>	Appropriate equipment selected Hazards/ risks and precautions identified Some units included on tables and graphs Graphs independently plotted
<b>5</b>	<b>4</b>	<b>3</b>	Recognise and explain the purpose of a variety of scientific & technological developments in everyday life. Name and label elements of organisms, the environment and materials, chemical reactions, energy, forces and space. <i>Often achieves more than 50% or above on summative assessments of cumulative content but is not yet consistent</i>	Simple predictions made Scaffolded method written and most equipment listed Hazards or risks identified Table headings completed independently Conclusion described

<b>4</b>	<b>3</b>	<b>2</b>	<p>Make independent observations related to organisms, the environment and materials, chemical reactions, energy, forces and space.</p> <p><i>Often achieves more than 45% or above on summative assessments of cumulative content but is not yet consistent</i></p>	<p>Scaffolded predictions made</p> <p>Simple graphs plotted on given axes. Correct units selected.</p> <p>Simple improvements to method or equipment identified</p>
<b>3</b>	<b>2</b>	<b>1</b>	<p>Recognise observations related to organisms, the environment and materials, chemical reactions, energy, forces and space.</p> <p><i>Often achieves more than 40% or above on summative assessments of cumulative content but is not yet consistent</i></p>	<p>Data recorded accurately into given tables</p> <p>Some control variables identified</p> <p>Simple conclusions stated</p>
<b>2</b>	<b>1</b>		<p>With support, categorise observations related to organisms, the environment and materials, chemical reactions, energy, forces and space.</p> <p><i>Often achieves more than 30% or above on summative assessments of cumulative content but is not yet consistent</i></p>	<p>Lab equipment used safely</p> <p>Measurements read with accuracy</p>
<b>1</b>			<p>Recognise features or parts of fundamental scientific objects and ideas related to organisms, the environment and materials, chemical reactions, energy, forces and space.</p> <p><i>Often achieves more than 20% or above on summative assessments of cumulative content but is not yet consistent</i></p>	<p>Named lab equipment identified correctly or matched to visuals.</p>