

# LEVEL OF LEARNING THRESHOLD GRID Year 9

DEPARTMENT/SUBJECT: SCIENCE



BOURNEMOUTH SCHOOL  
FOR GIRLS

Assessment area	Developing	Secure	Excellent
	GCSE 1 - 3	GCSE 4 - 6	GCSE 7 - 9
<b>SCIENTIFIC KNOWLEDGE</b>	<ul style="list-style-type: none"> <li>Use scientific terms to describe GCSE processes</li> <li>Recall some GCSE scientific facts</li> </ul>	<ul style="list-style-type: none"> <li>Use appropriate GCSE terms to describe scientific processes</li> <li>Consistently recall GCSE scientific facts</li> </ul>	<ul style="list-style-type: none"> <li>Consistently use accurate GCSE terms</li> <li>Demonstrate a thorough knowledge of GCSE concepts</li> </ul>
<b>UNDERSTANDING AND APPLICATION OF KNOWLEDGE</b>	<ul style="list-style-type: none"> <li>Demonstrate a limited understanding of GCSE scientific processes</li> </ul>	<ul style="list-style-type: none"> <li>Demonstrate appropriate GCSE knowledge and understanding</li> <li>Apply knowledge and understanding to familiar GCSE contexts</li> </ul>	<ul style="list-style-type: none"> <li>Consistently apply GCSE knowledge and understanding to unfamiliar contexts</li> <li>Devise questions to check and develop understanding</li> <li>Integrate concepts from other disciplines</li> <li>Distinguish between key GCSE terms e.g. moles and concentration</li> </ul>
<b>PRACTICAL SKILLS</b>	<ul style="list-style-type: none"> <li>Recall some steps in required practicals</li> <li>Make basic comments about procedures in required practicals</li> </ul>	<ul style="list-style-type: none"> <li>Recall details of required practicals</li> <li>Evaluate methodologies and suggest improvements</li> <li>Write conclusions based on some scientific evidence</li> </ul>	<ul style="list-style-type: none"> <li>Apply required practicals to unfamiliar contexts</li> <li>Use evidence from experiments to write well-balanced conclusions</li> </ul>

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<b>DATA HANDLING AND MATHEMATICS (OR NUMERACY)</b>	<ul style="list-style-type: none"><li>• Solve questions by substitution into equations</li><li>• Perform basic calculations</li></ul>	<ul style="list-style-type: none"><li>• Use information from graphs to support conclusions</li><li>• Confidently rearrange equations containing up to three variables</li></ul>	<ul style="list-style-type: none"><li>• Confidently rearrange equations of more than three variables</li><li>• Use a range of mathematical skills to perform scientific calculations</li><li>• Evaluate choice of lines of best fit</li><li>• Interpret mathematical trends in graphs</li></ul>
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Assessment area	Developing	Secure	Excellent
	<ul style="list-style-type: none"> <li>Recall scientific facts.</li> <li>Limited use of key words.</li> <li>Use a given model.</li> </ul>	<ul style="list-style-type: none"> <li>Explain scientific facts.</li> <li>Use key words in familiar contexts.</li> <li>Select a valid model.</li> </ul>	<ul style="list-style-type: none"> <li>Apply facts to unfamiliar contexts.</li> <li>Use key words in unfamiliar contexts.</li> <li>Design/use a model to explain a concept.</li> </ul>
DATA HANDLING AND MATHEMATICAL SKILLS	<ul style="list-style-type: none"> <li>Use correct units.</li> <li>Label data correctly.</li> <li>Plot a graph.</li> <li>State relationship in data.</li> </ul>	<ul style="list-style-type: none"> <li>Simple processing of data e.g. mean.</li> <li>Perform calculations using data.</li> <li>Choose correct equations.</li> <li>Select suitable graph.</li> <li>Plot accurate graph.</li> <li>Make a simple conclusion.</li> </ul>	<ul style="list-style-type: none"> <li>Processing data further e.g. removing anomalies from mean.</li> <li>Rearrange equations.</li> <li>Interpolating / extrapolating data from graphs.</li> <li>Explain relationships in data.</li> </ul>
PRACTICAL SKILLS	<ul style="list-style-type: none"> <li>Use equipment correctly.</li> <li>Follow a simple method.</li> <li>Identify variables.</li> <li>Recognise poor methodology.</li> </ul>	<ul style="list-style-type: none"> <li>Select equipment and use it safely.</li> <li>Plan a valid experiment.</li> <li>Correctly identify DV and IV.</li> <li>Identifies problems with procedure.</li> </ul>	<ul style="list-style-type: none"> <li>Use appropriate equipment to collect accurate data.</li> <li>Design experiments to solve problems.</li> <li>Identify and explain need to cv's.</li> <li>Suggest improvements to procedure.</li> </ul>

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## LEVEL OF LEARNING THRESHOLD GRID Year 9

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SCIENTIFIC KNOWLEDGE			
<b>Assessment area</b>	<b>Developing</b>	<b>Secure</b>	<b>Excellent</b>
SCIENTIFIC KNOWLEDGE	<ul style="list-style-type: none"> <li>Limited recall of key terminology.</li> </ul>	<ul style="list-style-type: none"> <li>Moderately recall scientific terminology.</li> </ul>	<ul style="list-style-type: none"> <li>Consistently high level of recall of key scientific terms.</li> </ul>
UNDERSTANDING AND APPLICATION	<ul style="list-style-type: none"> <li>Limited understanding and application of key ideas, models or concepts.</li> </ul>	<ul style="list-style-type: none"> <li>Able to understand and apply some key ideas, models and concepts.</li> </ul>	<ul style="list-style-type: none"> <li>Consistently high standard of understanding and application of key ideas, models or concepts.</li> </ul>
PRACTICAL SKILLS	<ul style="list-style-type: none"> <li>Requires frequent instruction and guidance on carrying out and safety.</li> </ul>	<ul style="list-style-type: none"> <li>Can carry out experiments after initial instruction to safely obtain results.</li> </ul>	<ul style="list-style-type: none"> <li>Plan simple investigation, identify hazards and taking appropriate action.</li> </ul>

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DATA PROCESSING AND MATHEMATICS	<ul style="list-style-type: none"><li>• Can record results and plot a graph.</li></ul>	<ul style="list-style-type: none"><li>• Can record data in a table and plot a meaningful graph. Able to use an equation not.</li></ul>	<ul style="list-style-type: none"><li>• Record data in a conventional table correctly, plot the most appropriate graph and interpret relationship between variables. Able to transform equation and use.</li></ul>
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Assessment area			
SCIENTIFIC KNOWLEDGE	<ul style="list-style-type: none"><li>Limited recall of key terminology.</li></ul>	<ul style="list-style-type: none"><li>Moderately recall scientific terminology.</li></ul>	<ul style="list-style-type: none"><li>Consistently high level of recall of key scientific terms.</li></ul>
UNDERSTANDING AND APPLICATION	<ul style="list-style-type: none"><li>Limited understanding and application of key ideas, models or concepts.</li></ul>	<ul style="list-style-type: none"><li>Able to understand and apply some key ideas, models and concepts.</li></ul>	<ul style="list-style-type: none"><li>Consistently high standard of understanding and application of key ideas, models or concepts.</li></ul>
PRACTICAL SKILLS	<ul style="list-style-type: none"><li>Requires frequent instruction and guidance on carrying out and safety.</li></ul>	<ul style="list-style-type: none"><li>Can carry out experiments after initial instruction to safely obtain results.</li></ul>	<ul style="list-style-type: none"><li>Plan simple investigation, identify hazards and taking appropriate action.</li></ul>
DATA PROCESSING AND MATHEMATICS	<ul style="list-style-type: none"><li>Can record results and plot a graph.</li></ul>	<ul style="list-style-type: none"><li>Can record data in a table and plot a meaningful graph. Able to use an equation not.</li></ul>	<ul style="list-style-type: none"><li>Record data in a conventional table correctly, plot the most appropriate graph and interpret relationship between variables. Able to transform equation and use.</li></ul>