

# Computer Science

Year 12						
When	WHAT & WHY WILL THEY LEARN?		New Skill = NS Revisit = R Revision = RV	<u>Stretch and Challenge</u>	<u>CIEAG/Extension</u>  <u>Enrichment</u> Trips, workshops, speakers, local environment and experiences	<u>KS4 PRIOR LEARNING</u>
Term Plan	<u>KNOWLEDGE &amp; SKILLS</u>	<u>Assessment Objective</u>		<b>Band 5 = Informed</b> <b>Band 6 = Mature</b>		
	<u>Transition Task</u> Keywords Skills audit Computer components Programming concepts Ethical, social and moral issues	AO1, AO2 and AO3	RV	The most able will be able to respond in greater depth to the ethical, moral and social issues.		Checking prior knowledge
<b>Term 1</b>	Topic 1.1 – The characteristics of contemporary processors, input, output and storage devices  Topic 2.1 – Elements of computational thinking	AO1, AO2 and AO3	R	The most able will be demonstrate awareness of more specialised input, output and storage and their applications.  The most able will be able to apply the more sophisticated forms of computational		Processor architecture and input, output and storage devices are all components of KS4 IT and computing qualifications.  Computational thinking is a component of GCSE computer science.

				thinking to real-world problems.		
<b>Term 2</b>	<p>Topic 1.2 – Software and software development</p> <p>Topic 2.2 – Problem solving and programming</p>	AO1, AO2 and AO3	NS	<p>The most able will be able to choose suitable models and justify their choice.</p> <p>The most able will be able to decompose problems and code appropriate solutions with minimal support.</p>	Bletchley park trip	<p>Software and product development lifecycles are a component of KS4 IT and computing qualifications.</p> <p>Programming skills are an essential component of KS3 computing and GCSE computer science.</p>
<b>Term 3</b>	<p>Topic 1.3 – Exchanging data</p> <p>Topic – 2.3 Algorithms to solve problems and standard algorithms</p>	AO1, AO2 and AO3	NS	<p>The most able will be able to explain the advantages and disadvantages of different representations of similar data.</p> <p>The most able will be able to independently select and code standard algorithms for given problems.</p>	Science museum trip	<p>Networking and data representation are components of KS4 IT and computing qualifications.</p> <p>Standard algorithms are an essential component of GCSE computer science.</p>

Note: The course structure is currently transitioning. Y12 are starting a course where the units are being delivered concurrently.

## Year 13

When	<b>WHAT &amp; WHY WILL THEY LEARN?</b> (SOW overview linked to assessment Objectives)	<b>New Skill = NS</b> <b>Revisit = R</b> <b>Revision = RV</b>	<b><u>Stretch and Challenge</u></b> <b>(Differentiation – how will you stretch the most able to achieve top grades?)</b>	<b><u>CIEAG/Extension</u></b>  Trips, workshops, speakers, local environment and experiences	<b><u>KS4 PRIOR LEARNING</u></b>  How will GCSE knowledge support new skills & knowledge	<b><u>IDENTIFY LINKS</u></b>  How will you link learning between schools? What common threads do you have?
Term Plan	<b><u>KNOWLEDGE &amp; SKILLS</u></b>	<b>Assessment Objective</b>		<b>Band 5 = Informed</b> <b>Band 6 = Mature</b>		
	<b><u>Transition Task</u></b> Research and analysis for Programming Project	AO2 and AO3	NS			
<b>Term 1</b>	2.2 – Problem solving and programming (cont.)  Programming Project – Design and Development	AO1, AO2 and AO3	NS	The most able will be able to decompose problems and code appropriate solutions with minimal support.  The most able students will be able to design a sophisticated solution to their problem.	Visits/meetings with real-world client for the programming project.	Programming skills are an essential component of KS3 computing and GCSE computer science.  Students have completed a programming project as part of GCSE computer science.
						n/a (This cohort is taught entirely at Huxlow.)

<b>Term 2</b>	<p>2.3 – Algorithms to solve problems and standard algorithms</p> <p>Programming Project – Development (cont.) and Evaluation</p>	AO1, AO2 and AO3	NS	<p>The most able will be able to independently select and code standard algorithms for given problems.</p> <p>The most able students will be able to develop and test a maintainable solution to their problem with an insightful evaluation.</p>	Bletchley Park trip	Standard algorithms are an essential component of GCSE computer science.	n/a (This cohort is taught entirely at Huxlow.)
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Note: The course structure is currently transitioning. Y13 are finishing a course where the units are being delivered sequentially.