



# Key Stage 4 Curriculum Overview

Progression from Key Stage 3 and optional progression through Post-16 :

	Autumn Term	Spring Term	Summer Term
Year 9			<p>Students at the end of Key Stage 3 will be able to:</p> <ul style="list-style-type: none"><li>• Design, use and evaluate computational abstractions that model the state and behaviour of real-world problems and physical systems</li><li>• Use 2 or more programming languages, at least 1 of which is textual, to solve a variety of computational problems; make appropriate use of data structures [for example, lists, tables or arrays]; design and develop modular programs that use procedures or functions</li><li>• Understand simple boolean logic [for example, and, or and not] and some of its uses in circuits and programming; understand how numbers can be represented in binary, and be able to carry out simple operations on binary numbers [for example, binary addition, and conversion between binary and decimal]</li><li>• Understand the hardware and software components that make up computer systems, and how they communicate with one another and with other systems</li><li>• Understand how instructions are stored and executed within a computer system; understand how data of various types (including text, sounds and pictures) can be represented and manipulated digitally, in the form of binary digits</li></ul>

		<ul style="list-style-type: none"> <li>• Undertake creative projects that involve selecting, using, and combining multiple applications, preferably across a range of devices, to achieve challenging goals, including collecting and analysing data and meeting the needs of known users</li> <li>• Create, reuse, revise and repurpose digital artefacts for a given audience, with attention to trustworthiness, design and usability</li> <li>• Understand a range of ways to use technology safely, respectfully, responsibly and securely, including protecting their online identity and privacy; recognise inappropriate content, contact and conduct, and know how to report concerns</li> <li>• Enhance students knowledge, skills and understanding of cultural capital through educational trips and guest speakers, bringing learning to life</li> </ul>	
<p><b>Year 10</b></p>	<p>February PSA Component 1</p> <p>Learning outcome A: Understand interface design for individuals and Organisations</p> <p>Learning outcome B: Be able to use project planning techniques to plan, design and develop a user interface</p> <p>Learning outcome C: Be able to review a user interface</p>	<p>Spreadsheet skills C2 preparation</p> <p>Learning outcome A: Understand how data is collected by organisations and its impact on individuals</p> <p>Learning outcome B: Be able to create a dashboard using data manipulation</p> <p>Tools</p> <p>Learning outcome C: Be able to draw conclusions and review data presentation methods</p>	<p>Spreadsheet skills C2 preparation</p> <p>Learning outcome A: Understand how data is collected by organisations and its impact on individuals</p> <p>Learning outcome B: Be able to create a dashboard using data manipulation</p> <p>Tools</p> <p>Learning outcome C: Be able to draw conclusions and review data presentation methods</p>
<p><b>Year 11</b></p>	<p>October PSA Component 2</p>	<p>Component 3 Exam</p> <p><b>AO1</b> Demonstrate knowledge of facts, terms, processes and issues in relation to digital</p>	<p>Component 3 Exam</p> <p><b>AO3</b> Apply an understanding of facts, terms, processes and issues in relation to digital</p>

<p>Learning outcome A: Understand how data is collected by organisations and its impact on individuals</p> <p>Learning outcome B: Be able to create a dashboard using data manipulation</p> <p>Tools</p> <p>Learning outcome C: Be able to draw conclusions and review data presentation methods</p>	<p>information technology</p> <p><b>AO2</b> Demonstrate an understanding of facts, terms, processes and issues in relation to digital information technology</p>	<p>information technology</p> <p><b>AO4</b> Make connections with the concepts, issues, terms and processes in digital information technology</p>
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**By the end of Key Stage 4 students should be able to:**

Understand interface design for individuals and organisations

Use project planning techniques to plan, design and develop a user interface

Review a user interface

Understand how data is collected and used by organisations and its impact on individuals

To create a dashboard using data manipulation tools

Draw conclusions and review data presentation methods

Demonstrate knowledge of facts, terms, processes and issues in relation to digital information technology

Apply an understanding of facts, terms, processes and issues in relation to digital information technology

Make connections with the concepts, issues, terms and processes in digital information technology