

Computing Curriculum Map

KS3 Curriculum

	Year 7	Year 8	Year 9
Autumn 1	Induction 101	Algorithms & Program Design	HTML, CSS and JS
Autumn 2	Computer Hardware Journey	Amazon Web Services App design	Computer Networks
Spring 1	Rapid Router Python	Programming in Python with Micro: bits	Python Programming - Time2Code
Spring 2	Data handling	Data representation (Binary and Images)	Game Book- Programming Adventure Story
Summer 1	E-Safety (Strangers, Influences, Moral Dilemmas) via HTML	Algorithms (Bubble and Insertion Sort, Linear and Binary Search)	E-Safety (AI & Cybersecurity)
Summer 2	Graphic Design and Podcasting	E-Safety With IT Skills (Viruses, Bots, Worms using Sound editing, Spreadsheets, Image and video editing)	Wired Festival - IT Skills (Spreadsheets, MS Access Database, Radio and Video advertisement)

KS4 Curriculum

Type	Exam Board	Specification
GCSE	OCR	J277
Content Overview		Assessment Overview
<p>J277/01: Computer systems</p> <p>This component will assess:</p> <ul style="list-style-type: none"> • Systems architecture • 1.2 Memory and storage • 1.3 Computer networks, connections and protocols • 1.4 Network security • 1.5 Systems software • 1.6 Ethical, legal, cultural and environmental impacts of digital technology 		<p>Written paper: 1 hour and 30 minutes 50% of total GCSE 80 marks</p> <p>This is a non-calculator paper.</p> <p>All questions are mandatory.</p> <p>This paper consists of multiple-choice questions, short response questions and extended response questions.</p>
<p>J277/02: Computational thinking, algorithms and programming</p> <p>This component will assess:</p> <ul style="list-style-type: none"> • 2.1 Algorithms • 2.2 Programming fundamentals • 2.3 Producing robust programs • 2.4 Boolean logic • 2.5 Programming languages and Integrated Development Environments 		<p>Written paper: 1 hour and 30 minutes 50% of total GCSE 80 marks</p> <p>This is a non-calculator paper.</p> <p>This paper has two sections: Section A and Section B.</p> <p>Students must answer both sections. All questions are mandatory.</p> <p>In Section B, questions assessing students' ability to write or refine algorithms must be answered using either the OCR Exam Reference Language or the high-level programming language they are familiar with.</p>

KS5 Curriculum

Type	Exam Board	Specification
A Level	AQA	7517
Subject content		
<p>AS</p> <p>1 Fundamentals of programming 2 Fundamentals of data structures 3 Systematic approach to problem solving 4 Theory of computation 5 Fundamentals of data representation 6 Fundamentals of computer systems 7 Fundamentals of computer organisation and architecture 8 Consequences of uses of computing 9 Fundamentals of communication and networking</p>	<p>A-level</p> <p>10 Fundamentals of programming 11 Fundamentals of data structures 12 Fundamentals of algorithms 13 Theory of computation 14 Fundamentals of data representation 15 Fundamentals of computer systems 16 Fundamentals of computer organisation and architecture 17 Consequences of uses of computing 18 Fundamentals of communication and networking 19 Fundamentals of databases 20 Big Data 21 Fundamentals of functional programming 22 Systematic approach to problem solving 23 Non-exam assessment - the computing practical project</p>	
Assessments		
<p>Paper 1 What's assessed: this paper tests a student's ability to program, as well as their theoretical knowledge of computer science from subject content 1-4 above.</p> <p>Assessed On-screen exam: 1 hour 45 minutes 50% of AS</p> <p>Questions Students answer a series of short questions and write/adapt/extend programs in an Electronic Answer Document</p>	<p>Paper 1 What's assessed: this paper tests a student's ability to program, as well as their theoretical knowledge of Computer Science from subject content 10-13 above and the skills required from section 22 above.</p> <p>Assessed On-screen exam: 2 hours 30 minutes 40% of A-level</p> <p>Questions Students answer a series of short questions and write/adapt/extend programs in an Electronic Answer Document</p>	

<p>Paper 2 What's assessed: this paper tests a student's ability to answer questions from subject content 5-9 above.</p> <p>Assessed Written exam: 1 hour 30 minutes 50% of AS</p> <p>Questions A series of short-answer and extended-answer questions.</p>	<p>Paper 2 What's assessed: this paper tests a student's ability to answer questions from subject content 14-21 above.</p> <p>Assessed Written exam: 2 hours 30 minutes 40% of A-level</p> <p>Questions Compulsory short-answer and extended-answer questions.</p>
	<p>Non-exam assessment</p> <p>What's assessed: the non-exam assessment assesses student's ability to use the knowledge and skills gained through the course to solve or investigate a practical problem. Students will be expected to follow a systematic approach to problem solving, as shown in section 22 above.</p> <p>Assessed 75 marks 20% of A-level</p>