

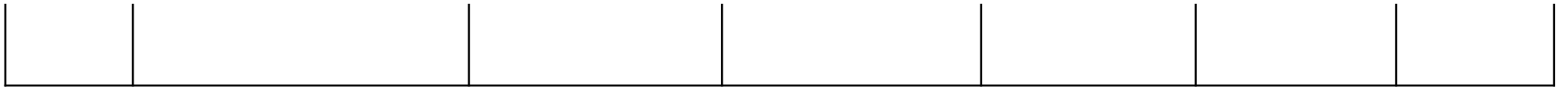
## KS3 COMPUTER SCIENCE Curriculum Narrative

A high-quality computing education equips pupils to use computational thinking and creativity to understand and change the world. Computing has deep links with mathematics, science, and design and technology, and provides insights into both natural and artificial systems. The core of computing is computer science, in which pupils are taught the principles of information and computation, how digital systems work, and how to put this knowledge to use through programming. Building on this knowledge and understanding, pupils are equipped to use information technology to create programs, systems and a range of content. Computing also ensures that pupils become digitally literate – able to use, and express themselves and develop their ideas through, information and communication technology – at a level suitable for the future workplace and as active participants in a digital world.

This curriculum of learning has been designed to build upon the experiences encountered at Key Stage 2 at and the [curriculum](#) taught at Primary school.

## KS3 COMPUTER SCIENCE Curriculum Map

	Autumn		Spring		Summer	
<b>Year 7</b>	<b>E-Safety</b>  Using technology in a safe, respectful, responsible and secure way.	<b>Computing Systems</b>  Processors & buses Performance of the CPU Network hardware.	<b>Algorithms</b>  Decomposition  Problem Solving	Decomposition  Problem Solving	<b>Programming</b>  Coding Sequencing Selection Iteration	
<b>Year 8</b>	<b>E-Safety &amp; Social Media</b>  Online safety  Legal Issues	<b>Digital Story</b>  Malware	<b>Computational Thinking</b>  Problem Solving  Instruction Order	Writing order and flow charts	<b>Text Programming</b>  Code Combat/Python  Variables, Data Types, Syntax	Sequencing Selection  Iteration
<b>Year 9</b>						



# KS4 COMPUTER SCIENCE Curriculum Narrative

We follow the AQA specification of Computer Science at GCSE level. Students are taught a high-quality computing syllabus which equips them to use computational thinking and creativity to understand and change the world. Computing has deep links with mathematics, Science and Design and Technology, and provides insights into both natural and artificial systems. The core of computing is Computer Science, in which students are taught the principles of information and computation, how digital systems work and how to put this knowledge to use through programming. Building on this knowledge and understanding, students are equipped to use information technology to create programs, systems and a range of content. Computing also ensures that students become digitally literate – able to use, and express themselves and develop their ideas through, information and communication technology – at a level suitable for the future workplace and as active participants in a digital world. This exciting GCSE gives students many excellent opportunities to investigate how computers work and how they are used, and to develop computer programming-computational thinking and problem-solving skills.

## KS4 COMPUTER SCIENCE Curriculum Map

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
<b>Year 9</b>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Why choose CS Course awareness</li> <li><input type="checkbox"/> Base line Yacapaca tests</li> <li>History of Computing</li> <li>History of Software</li> <li>History of Computer Games</li> <li>Peer Assessment</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Fundamentals of Algorithms                             <ul style="list-style-type: none"> <li><a href="#">1 Introduction</a></li> <li><a href="#">2 Representing Algorithms</a></li> <li><a href="#">3 Efficiency of Algorithms</a></li> <li><a href="#">4 Searching Algorithms</a></li> <li><a href="#">5 Sorting Algorithms</a></li> </ul> </li> <li>Yacapaca exam assessment</li> <li><input type="checkbox"/> Hour of code                             <ul style="list-style-type: none"> <li><a href="#">Coding introduction</a></li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Computer Systems                             <ul style="list-style-type: none"> <li><a href="#">1 Hardware and software</a></li> <li><a href="#">2 Boolean logic</a></li> <li><a href="#">3 Software classification</a></li> <li><a href="#">4 Systems architecture</a></li> </ul> </li> <li><input type="checkbox"/> Portfolio of work</li> <li><input type="checkbox"/> Coding 1                             <ul style="list-style-type: none"> <li><a href="#">Programming</a></li> </ul> </li> <li><input type="checkbox"/> Coding challenges</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Data Representation 1                             <ul style="list-style-type: none"> <li><a href="#">1 Data Representation</a></li> <li><a href="#">2 Number Bases</a></li> <li><a href="#">3 Conversions</a></li> <li><a href="#">4 Units of information</a></li> <li><a href="#">5 Binary arithmetic</a></li> </ul> </li> <li><input type="checkbox"/> Test</li> <li><input type="checkbox"/> Coding 2                             <ul style="list-style-type: none"> <li><a href="#">Programming</a></li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Mock revision</li> <li><input type="checkbox"/> Cyber Security                             <ul style="list-style-type: none"> <li><a href="#">1 Cyber security</a></li> <li><a href="#">2 Cyber security threats</a></li> <li><a href="#">3 Detect &amp; prevent threats</a></li> </ul> </li> <li><input type="checkbox"/> Advice Website</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Coding                             <ul style="list-style-type: none"> <li><a href="#">Programming</a></li> </ul> </li> <li><input type="checkbox"/> Ethical, Legal, Environmental Impact                             <ul style="list-style-type: none"> <li><a href="#">1 Impact of digital technologies</a></li> <li><a href="#">2 Ethical</a></li> <li><a href="#">3 Legal</a></li> <li><a href="#">4 Environmental</a></li> </ul> </li> <li><input type="checkbox"/> Portfolio of work</li> </ul>

## KS4 COMPUTER SCIENCE Curriculum Map

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 11	<input type="checkbox"/> Networks <a href="#">1 Types of Network</a> <a href="#">2 Network Topology</a> <a href="#">3 The Client/Server Relationship</a> <a href="#">4 Client/Server Handshake</a> <a href="#">5 Network Protocols</a> <a href="#">6 Network Security</a> <input type="checkbox"/> Research Document	<input type="checkbox"/> Data Representation 2 <a href="#">6 Character encoding</a> <a href="#">7 Representing images</a> <a href="#">8 Representing sound</a> <a href="#">9 Data compression</a> <input type="checkbox"/> Test	<input type="checkbox"/> Coding <a href="#">Programming</a> <input type="checkbox"/> Mock revision <input type="checkbox"/> Mock exam	<input type="checkbox"/> Algorithms <a href="#">2 Representing Algorithms</a> <input type="checkbox"/> Data Representation <a href="#">9 Data compression</a> <input type="checkbox"/> Computer Systems <a href="#">4 Systems architecture</a> Portfolio of work	<input type="checkbox"/> NEA Practice <a href="#">1 The task</a> <a href="#">2 Designing the Solution</a> <a href="#">3 Creating the Solution</a> <a href="#">4 Testing the Solution</a> <a href="#">5 Potential enhancements and refinements</a> <input type="checkbox"/> Completed NEA document	<input type="checkbox"/> Coding <a href="#">Programming</a> Game design <input type="checkbox"/> Code challenge
TO BE INTEGRATED EARLIER	<input type="checkbox"/> NEA (20hrs) <input type="checkbox"/> <a href="#">1 The task</a> <input type="checkbox"/> <a href="#">2 Designing the Solution</a> <input type="checkbox"/> <a href="#">3 Creating the Solution</a> <input type="checkbox"/> <a href="#">4 Testing the Solution</a> <input type="checkbox"/> <a href="#">5 Potential enhancements and refinements</a>	<input type="checkbox"/> Revision <input type="checkbox"/> NEA <input type="checkbox"/> Finished NEA	<input type="checkbox"/> Revision Algorithms Pseudocode Data Representation	<input type="checkbox"/> Revision Cyber Security Ethical, Legal, Environmental Pseudocode	<input type="checkbox"/> Revision Computer Systems Networks	

Year 7 PoS - <https://drive.google.com/file/d/13K6Esv5EGKjnZzPoteFNKzhNL7y8eGtb/view?usp=sharing>

Year 8 PoS - <https://drive.google.com/file/d/1nnLGbBXEe2NTD7MQzHRpXOBb3FC3cYcn/view?usp=sharing>

Year 9-10 PoS - <https://drive.google.com/file/d/1CQ-0Qn7zOM431Z2bK-bOhCpMlumhXxoT/view?usp=sharing>

Year 10-11 PoS - <https://drive.google.com/file/d/1iC90mxB8FYw1D1DUWq8rJSfd-wrfdWwH/view?usp=sharing>