

**Year 10 – Computer Science GCSE**

<b>Curriculum intent</b>	The aim of the curriculum is that learners are provided with the opportunity to foster a love for learning by building upon the knowledge, understanding and skills established through the computer science elements of the programme of study at key stage 3, satisfying the computer science elements of key stage 4 and enabling learners to progress into further learning and/or employment.					
<b>Term</b>	<b>Autumn 1</b>	<b>Autumn 2</b>	<b>Spring 1</b>	<b>Spring 2</b>	<b>Summer 1</b>	<b>Summer 2</b>
<b>Knowledge</b>	<b>Computer Systems</b> - Hardware and software, Boolean logic, Software classification, classification of programming languages and translators, Systems architecture.	<b>Computer Networks</b> – Defining a computer network and network protocols, describing types of networks and topologies, network security, describing the 4 layer TCP/IP model.	<b>Algorithms</b> – Understanding what algorithms are, determining the purpose of algorithms in the format of both flowcharts and pseudocode and explaining algorithms in terms of their input, process and outputs, Efficiency of algorithms, Searching algorithms and Sorting algorithms.	<b>Representation of Data</b> – Number bases, converting between number bases, units of information, binary arithmetic, character encoding, representing images, representing sound, data compression	<b>Cyber Security</b> – Understand the main purpose of cyber security, cyber security threats, social engineering, malicious code, methods to detect and prevent cyber threats	<b>Ethical, Legal, Environmental</b> – Understanding the current ethical, legal and environmental impacts and risks of digital technology on society and the associated data privacy issues
<b>Skills</b>	Problem solving, Description, Explanation, Creating, modifying and interpreting logic circuits	Problem solving, Description, Explanation, Creating and interpreting topologies, Evaluation	Problem solving, Comparison, Explanation, Testing Abstraction Evaluation,	Problem solving, Description, Explanation, Evaluation Application of computing-related mathematics	Description Explanation, Evaluation,	Explanation, Evaluation

	Constructing truth tables, Evaluation Application of computing-related mathematics		Application of computing-related mathematics			
<b>Assessments</b>	Formative: Retrieval activities, including literacy focus on key vocabulary  Summative: Computer Systems assessment	Formative: Retrieval activities, including literacy focus on key vocabulary  Summative: Computer Networks assessment	Formative: Retrieval activities, including literacy focus on key vocabulary  Summative: Algorithms assessment	Formative: Retrieval activities, including literacy focus on key vocabulary  Summative: RoD assessment	Formative: Retrieval activities, including literacy focus on key vocabulary  Summative: Cyber Security assessment	Formative: Retrieval activities, including literacy focus on key vocabulary  Summative: End of Year assessment
<b>Enrichment</b>	Key topics support: <a href="https://teach-ict.com/2016/GCSE_Computing/AQA_8525/aqa_8525_home.html">https://teach-ict.com/2016/GCSE_Computing/AQA_8525/aqa_8525_home.html</a>  <a href="https://www.bbc.co.uk/bitesize/examspecs/zkwsjhv">https://www.bbc.co.uk/bitesize/examspecs/zkwsjhv</a>  AQA Computer Science Revision Guide CGP	Key topics support: <a href="https://teach-ict.com/2016/GCSE_Computing/AQA_8525/aqa_8525_home.html">https://teach-ict.com/2016/GCSE_Computing/AQA_8525/aqa_8525_home.html</a>  <a href="https://www.bbc.co.uk/bitesize/examspecs/zkwsjhv">https://www.bbc.co.uk/bitesize/examspecs/zkwsjhv</a>  AQA Computer Science Revision Guide CGP	Key topics support: <a href="https://teach-ict.com/2016/GCSE_Computing/AQA_8525/aqa_8525_home.html">https://teach-ict.com/2016/GCSE_Computing/AQA_8525/aqa_8525_home.html</a>  <a href="https://www.bbc.co.uk/bitesize/examspecs/zkwsjhv">https://www.bbc.co.uk/bitesize/examspecs/zkwsjhv</a>  AQA Computer Science Revision Guide CGP	Key topics support: <a href="https://teach-ict.com/2016/GCSE_Computing/AQA_8525/aqa_8525_home.html">https://teach-ict.com/2016/GCSE_Computing/AQA_8525/aqa_8525_home.html</a>  <a href="https://www.bbc.co.uk/bitesize/examspecs/zkwsjhv">https://www.bbc.co.uk/bitesize/examspecs/zkwsjhv</a>  AQA Computer Science Revision Guide CGP	Key topics support: <a href="https://teach-ict.com/2016/GCSE_Computing/AQA_8525/aqa_8525_home.html">https://teach-ict.com/2016/GCSE_Computing/AQA_8525/aqa_8525_home.html</a>  <a href="https://www.bbc.co.uk/bitesize/examspecs/zkwsjhv">https://www.bbc.co.uk/bitesize/examspecs/zkwsjhv</a>  AQA Computer Science Revision Guide CGP	Key topics support: <a href="https://teach-ict.com/2016/GCSE_Computing/AQA_8525/aqa_8525_home.html">https://teach-ict.com/2016/GCSE_Computing/AQA_8525/aqa_8525_home.html</a>  <a href="https://www.bbc.co.uk/bitesize/examspecs/zkwsjhv">https://www.bbc.co.uk/bitesize/examspecs/zkwsjhv</a>  AQA Computer Science Revision Guide CGP



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