



# CHORLTON HIGH SCHOOL: CURRICULUM

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## CHS Curriculum Intent

**SUCCESSFUL:** Learners who gain deep and powerful knowledge in preparation for life; combining academic rigour, curiosity and creative flair.

**CREATIVE:** Learners who are imaginative, optimistic and inventive; finding their voice to become effective communicators prepared for lifelong adaptability

**HAPPY:** Learners who are confident, resilient, well-rounded citizens; they understand the world's communities and are ready to discover their place in it.

## CHS Curriculum Area Framework for Learning – Years 7-11

<b>SUBJECT</b>	Computer Science
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<b>Year Group</b>	<b>9</b>					
<b>Rationale/ Narrative</b>	<p>Following on from their Key Stage 3 study, students will be taught topics that overlap between the Computer Science and current ICT qualifications. Students following the Computer Science route will then move on to build on their programming skills and will cover the key elements of the following units:</p> <p><b>2.1 Algorithms:</b> here students will learn how to read and write pseudocode and flowcharts. This will tie in heavily to their programming skills. They will complete a mini programming project.</p> <p><b>2.6 Data Representation:</b> students will learn about the basics of how computers represent different information; including numbers, characters, images, sound</p> <p><b>1.8 Ethical, cultural, legal and environmental concerns:</b> students will have the opportunity to learn about and discuss different issues in computing. This will give them the initial understanding needed to approach long mark questions in Y11, but it will not focus on exam technique.</p>					
	<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>	<ul style="list-style-type: none"> <li>• Cyber security</li> <li>• Legislation</li> <li>• User Interfaces</li> </ul>	<ul style="list-style-type: none"> <li>• Cloud storage</li> <li>• Hardware</li> <li>• Cultural Implications of modern technologies</li> </ul>	Algorithms Programming <ul style="list-style-type: none"> <li>• Writing algorithms (flowcharts and pseudocode)</li> <li>• Practical programming</li> </ul>	Algorithms Programming <ul style="list-style-type: none"> <li>• Writing algorithms (flowcharts and pseudocode)</li> <li>• Practical programming</li> </ul>	Data Representation <ul style="list-style-type: none"> <li>• Image representation</li> <li>• Sound representation</li> <li>• Compression</li> <li>• Number conversions</li> </ul>	Living in a Digital Society <ul style="list-style-type: none"> <li>• How our data is used</li> <li>• Password security</li> <li>• Legislation</li> <li>• Government involvement</li> <li>• Companies involvement</li> <li>• AI and automation</li> <li>• Net neutrality</li> <li>• Environmental impacts</li> </ul>
<b>SKILLS</b>	<ul style="list-style-type: none"> <li>• Evaluation skills</li> <li>• Metacognitive practice</li> <li>• Identifying and selecting information</li> <li>• Breaking down key information</li> </ul>	<ul style="list-style-type: none"> <li>• Evaluation skills</li> <li>• Metacognitive practice</li> <li>• Exam technique</li> <li>• Identifying and selecting information</li> <li>• Breaking down key information</li> </ul>	Computational thinking  <b>Programming skills:</b> <ul style="list-style-type: none"> <li>• Identifying and using variables</li> <li>• Using operators</li> <li>• Using inputs</li> <li>• Using outputs</li> <li>• Using sequence</li> <li>• Using selection</li> </ul>	Computational thinking  <b>Programming skills:</b> <ul style="list-style-type: none"> <li>• Using iteration (for loops)</li> <li>• Using iteration (while loops)</li> <li>• Using different types of data appropriately</li> <li>• Using basic string manipulation</li> </ul>	<ul style="list-style-type: none"> <li>• Converting binary to denary</li> <li>• Converting denary to binary</li> <li>• Converting hex to denary</li> <li>• Converting denary to hex</li> <li>• Converting hex to binary</li> <li>• Converting binary to hex</li> <li>• Logical reasoning.</li> <li>• Metacognitive practice</li> </ul>	<ul style="list-style-type: none"> <li>• Evaluation skills</li> <li>• Metacognitive practice</li> <li>• Exam technique</li> <li>• Debating</li> </ul>



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<b>ASSESSMENTS</b>	<ul style="list-style-type: none"><li>• Classwork piece – cyber security</li><li>• Classwork piece – user interface design</li><li>• Home learning task</li></ul>	<ul style="list-style-type: none"><li>• Classwork piece – cloud technologies</li><li>• Classwork piece – hardware components</li><li>• Progress Test</li></ul>	<ul style="list-style-type: none"><li>• Classwork piece – data types</li><li>• Classwork piece – Python task</li><li>• Home learning task</li></ul>	<ul style="list-style-type: none"><li>• Classwork piece – algorithm exam question</li><li>• Classwork piece – Python task</li><li>• Progress Test</li></ul>	<ul style="list-style-type: none"><li>• Classwork piece – image representation</li><li>• Classwork piece – sound representation</li><li>• Home learning task</li></ul>	<ul style="list-style-type: none"><li>• Classwork piece – legislation surrounding computing</li><li>• Classwork piece – presentation</li><li>• Progress Test</li></ul>
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