



# ASHTON COMMUNITY SCIENCE COLLEGE: COMPUTING CURRICULUM

Year 11 Computer Science					
	Half term 1	Half term 2	Half term 3	Half term 4	Half term 5
Knowledge	<p><u>Topic:</u></p> <ul style="list-style-type: none"> <li>Algorithms &amp; Computational Logic</li> <li>Programming Skills</li> </ul>	<p><u>Topic:</u></p> <ul style="list-style-type: none"> <li>Computer Networks, Protocols &amp; Layers</li> <li>Programming Skills</li> </ul>	<p><u>Topic:</u></p> <ul style="list-style-type: none"> <li>Network &amp; Cyber Security</li> </ul>	<p><u>Topic:</u></p> <ul style="list-style-type: none"> <li>Classification Of Programming Languages</li> <li>Programming Skills</li> </ul>	<p><u>Topic:</u></p> <ul style="list-style-type: none"> <li>Revision</li> <li>Programming Skills</li> </ul>
Skills/ application of knowledge	<ul style="list-style-type: none"> <li>Computational thinking</li> <li>Designing, creating, and refining algorithms</li> <li>Searching and sorting algorithms</li> </ul>	<ul style="list-style-type: none"> <li>Networks and topologies</li> <li>Wired and wireless networks, protocols, and layers</li> <li>Network topologies</li> <li>Network hardware</li> </ul>	<ul style="list-style-type: none"> <li>Identifying and preventing vulnerabilities</li> <li>Threats to computer systems and networks</li> </ul>	<ul style="list-style-type: none"> <li>High/low languages</li> <li>Assembly code</li> <li>The integrated development environment</li> </ul>	<ul style="list-style-type: none"> <li>Exam technique</li> </ul>
Links to prior learning	<ul style="list-style-type: none"> <li>Year 7- under the hood of a computer, Micro:bits, small basic</li> <li>Year 8- searching and sorting data, python introduction</li> <li>Year 9-, python/advanced python programming</li> </ul>	<ul style="list-style-type: none"> <li>Year 7- how the web works, Micro:bits, small basic</li> <li>Year 8- networks, python introduction</li> <li>Year 9- python programming/advanced python programming</li> </ul>	<ul style="list-style-type: none"> <li>Year 7- E-safety, Micro:bits, small basic</li> <li>Year 8- system security, python introduction</li> <li>Year 9- Ethical, legal, cultural and environmental issues in computing, python programming/advanced python programming</li> </ul>	<ul style="list-style-type: none"> <li>Year 7- Micro:bits, small basic</li> <li>Year 8- python introduction</li> <li>Year 9- python programming/advanced python programming</li> </ul>	
Assessment	<ul style="list-style-type: none"> <li>End of topic test</li> <li>Exam questions</li> </ul>	<ul style="list-style-type: none"> <li>End of topic test</li> <li>Exam questions</li> </ul>	<ul style="list-style-type: none"> <li>End of topic test</li> <li>Exam questions</li> </ul>	<ul style="list-style-type: none"> <li>End of topic test</li> <li>Exam questions</li> </ul>	