

## Year 10 Computer Science



**Topic 7: Programming**  
Sequencing - selection - iteration

**Topic 6: Ethical, legal, cultural & environmental impacts of digital technology**

**Topic 5: System Software**  
Operating systems - Utility software

**Topic 4: Network security**  
Threats to computer systems & networks  
- identifying & preventing vulnerabilities

**Topic 3: Computer Networks, Connections and Protocols**  
Networks & topologies - wired & wireless networks - protocols & layers

**Topic 2: Memory & Storage**  
primary storage - Secondary storage - units - data storage - compression

**Topic 1: Systems architecture**  
Binary conversion - architecture of the CPU - CPU performance - embedded systems

Knowledge	Attributes / Character	Skills	Experiences
<ul style="list-style-type: none"> <li>• 1.1 Systems architecture</li> <li>• 1.2 Memory and storage</li> <li>• 1.3 Computer networks, connections and protocols</li> <li>• 1.4 Network security</li> <li>• 1.5 Systems software</li> <li>• 1.6 Ethical, legal, cultural and environmental impacts of digital technology</li> </ul>	<ul style="list-style-type: none"> <li>• Confidence                             <ul style="list-style-type: none"> <li>○ Praise</li> <li>○ Oracy - Turn and Talk, Think, Pair, Share</li> </ul> </li> <li>• Organisation                             <ul style="list-style-type: none"> <li>○ Workbooks/folder checks</li> <li>○ Regular use of Google classroom</li> </ul> </li> <li>• Resilience                             <ul style="list-style-type: none"> <li>○ Developing problem solving skills</li> </ul> </li> <li>• Empathy                             <ul style="list-style-type: none"> <li>○ Working in collaboration with others</li> <li>○ Peer assessment</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Computational thinking</li> <li>• Problem solving</li> <li>• Mathematics relevant to computer science</li> <li>• Literacy                             <ul style="list-style-type: none"> <li>○ Use of key terminology in technical writing</li> </ul> </li> <li>• Creativity</li> <li>• Planning</li> <li>• Attention to detail</li> <li>• Organisation</li> <li>• Design for purpose</li> <li>• Communication for various audiences</li> <li>• Time management</li> </ul>	<ul style="list-style-type: none"> <li>• IT specialist</li> <li>• Cisco</li> <li>• Opportunities to develop programming skills</li> <li>• Research careers in Cyber security</li> <li>• Visit companies such as Amazon and Microsoft</li> </ul>