



# Long Term Plan

IGCSE ICT

IGCSE Computer Science

2021-2022	Autumn 1 7 weeks	Autumn 2 7 weeks	Spring 1 7 weeks	Spring 2 7 weeks	Summer 7 weeks
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<p><b>Year 10 IGCSE</b></p> <p><b>Computer Science</b></p>	<p><b>Problem Solving</b></p> <p>How computer systems work</p> <p>Design, implementation and analysis of algorithms for solving problems.</p> <p>Computational problems including:</p> <ul style="list-style-type: none"> <li>- problem-solving tasks</li> <li>- pseudocode</li> <li>- command set</li> <li>- flowchart symbols</li> <li>- Algorithms</li> <li>- Decomposition &amp; abstraction</li> </ul>	<p><b>Programming</b></p> <p>Develop and practise programming skills, developing knowledge and skills in at least one of the following programming languages:</p> <ol style="list-style-type: none"> <li>1. Python</li> <li>2. C#</li> <li>3. Java</li> </ol>	<p><b>Programming</b></p> <p>Develop and practise programming skills, developing knowledge and skills in at least one of the following programming languages:</p> <ol style="list-style-type: none"> <li>1. Python</li> <li>2. C#</li> <li>3. Java</li> </ol>	<p><b>Data</b></p> <p>Develop ability to store and manipulate large quantities of data using binary to represent different types of data.</p> <ul style="list-style-type: none"> <li>- learn how different types of data are represented in a computer.</li> <li>- Binary</li> <li>- Data Representation</li> <li>- Data storage &amp; compression</li> <li>- Encryption</li> </ul>	<p><b>Computers</b></p> <p>Familiarisation of hardware and software components that make up a computer system and recognise that computers take many forms, from embedded microprocessors to distributed clouds.</p> <ul style="list-style-type: none"> <li>- Machines and computational modelling</li> <li>- Hardware</li> <li>- Logic</li> <li>- Software</li> <li>- Programming languages</li> </ul>
<p><b>Year 11 IGCSE</b></p> <p><b>ICT</b></p>	<p><b>Digital Devices &amp; Connectivity</b></p> <p>Digital Devices - know about the range of digital devices available.</p> <p>Connectivity - know how digital devices exchange data &amp; communicate.</p>	<p><b>Operating Online &amp; Online Goods and Services</b></p> <p>Operating Online - understand the risks to individuals and organisations of operating online.</p> <p>Online Goods and Services - know about networks and online systems.</p>	<p><b>Applying Information &amp; Communication</b></p> <p><b>Technology &amp; Software Skills</b></p> <p>Applying Information and Communication Technology using a range of software applications effectively and appropriately.</p> <p>Software Skills demonstrate skills in using the software applications.</p>	<p><b>Revision &amp; Exam Practice</b></p>	<p><b>Study Leave &amp; Exams</b></p>