



Computer Science

Year 7

Autumn Term	Spring Term	Summer Term
Half Term 1 Online Safety <ul style="list-style-type: none">• How do you write a respectful email?• How do you use office software effectively?• Filtering and monitoring• Active and Passive digital footprint.• What is inappropriate content and contact?• What is misinformation, malinformation, disinformation?	Half Term 3 Binary and Computational Thinking <ul style="list-style-type: none">• What is binary? How do you convert from binary to denary?• What is computational thinking?• What are flowcharts?• How can use flowcharts to represent algorithms?	Half Term 5 Programming <ul style="list-style-type: none">• Python introduction• Python inputs, variables and data types.• Python string handling.
Half Term 2 Computer Systems <ul style="list-style-type: none">• What is a computer system?• What is hardware and software?• What is the difference between an input and output? What are sensors?• How do you build a PC?• What is the CPU cycle?• Units of data	Half Term 4 Programming <ul style="list-style-type: none">• What is programming?• What is sequencing, iteration and selection?• What are variables?• An introduction to programming using block based Micro-Bits.	Half Term 6 Creative Project <ul style="list-style-type: none">• What is a digital graphic? Bitmap and Vector• Serif Photo Plus/Photoshop skills

Year 8

Autumn Term	Spring Term	Summer Term
<p>Half Term 1 Online Safety</p> <ul style="list-style-type: none"> • How do businesses/organisations use your data? • What is social engineering? • What is hacking? • What is malware? • How do you prevent attacks? 	<p>Half Term 3 Binary and Computational Thinking</p> <ul style="list-style-type: none"> • Binary addition • What are the different binary logic gates? • How do you solve computational problems? • What are the differences between binary and linear searches? 	<p>Half Term 5 Programming</p> <ul style="list-style-type: none"> • What is selection? • Python skills: Input, Variables, Data types and selection. • Basic iteration
<p>Half Term 2 Computer Systems and Networks</p> <ul style="list-style-type: none"> • How do we measure the performance of a CPU? • What is a network? • Which is better wired or wireless networks? • How do we improve the performance of a network 	<p>Half Term 4 Programming</p> <ul style="list-style-type: none"> • What is programming? • How do you use Python for printing to screen, calculations, user input? • What are the different data types? • What are variables? 	<p>Half Term 6 Creative Project</p> <ul style="list-style-type: none"> • Word skills • Mail merge

Year 9

Autumn Term	Spring Term	Summer Term
<p>Half Term 1 AI</p> <ul style="list-style-type: none"> • What is AI? • How does AI benefit individuals? e.g recommendations. • How does AI benefit businesses? E.g Chat Bots • What is the difference between machine learning and deep learning? • What are the limitations to AI? • What is the Turing test and how to create a chat bot system. 	<p>Half Term 3 Binary and Computational Thinking</p> <ul style="list-style-type: none"> • What is hexadecimal? • What are complex logic gates? • How is binary used to represent images? • What is a searching algorithm? • What is the difference between bubble and merge sorting? 	<p>Half Term 5 Programming</p> <ul style="list-style-type: none"> • What are loops? • What are functions and procedures?
<p>Half Term 2 Computer Systems and Networks</p> <ul style="list-style-type: none"> • What are the components of a CPU? • What is the difference between RAM and ROM? • What are the differences between client server and peer to peer networks? • What hardware is required to build a network? • How is data sent through networks? 	<p>Half Term 4 Programming</p> <ul style="list-style-type: none"> • What is programming? • How do you use Python for printing to screen, calculations, user input? • What are data types? • What are variables? • How to independently write Python code. 	<p>Half Term 6 Creative Project</p> <ul style="list-style-type: none"> • What is the purpose of a spread sheet? • What is meant by 'Big Data'? • How can a business improve its performance using 'Big Data'? • Microsoft Excel skills.

Year 10

Autumn Term	Spring Term	Summer Term
Half Term 1 Computer Systems <ul style="list-style-type: none">• Systems architecture.• Practical programming.	Half Term 3 Software and Ethics <ul style="list-style-type: none">• Representing Data• Practical programming.	Half Term 5 Defensive Design and Testing <ul style="list-style-type: none">• Network topologies.• Layers.• Network Threats.• Network Security• Practical programming.
Half Term 2 Networks <ul style="list-style-type: none">• Memory.• Storage.• Practical programming.	Half Term 4 Algorithms <ul style="list-style-type: none">• Types of networks• The different roles of computers.• Network hardware.• Factors that affect the performance of networks.• Practical programming.	Half Term 6 Languages / IDEs <ul style="list-style-type: none">• Operating systems• Utilities.• Legal Issues.• Environmental issues.• Legislation.• Practical programming.

Year 11

Autumn Term	Spring Term	Summer Term
<p>Half Term 1 Revision</p> <ul style="list-style-type: none"> • Designing algorithms. • Pseudocode. • Flowcharts. • Searching algorithms. • Sorting algorithms. • Practical Python programming. 	<p>Half Term 3 Revision</p> <ul style="list-style-type: none"> • Algorithms and programming techniques. • Boolean Logic 	<p>Half Term 5</p> <p>Revision</p>
<p>Half Term 2</p> <ul style="list-style-type: none"> • Considerations. • Validation. • Maintainability. • Algorithms and programming techniques. 	<p>Half Term 4 Revision</p> <ul style="list-style-type: none"> • Translators and facilities of languages. • Data representation. • Algorithms and programming techniques. 	<p>Half Term 6</p> <p>Exam</p>

Business Studies

Year 10

Autumn Term	Spring Term	Summer Term
Half Term 1 <ul style="list-style-type: none"> 1.1 The dynamic nature of business. 1.2 Customer needs. 1.2 Market research. 	Half Term 1 <ul style="list-style-type: none"> 1.4 Ownership 1.3 Business Aims and Objectives. 1.3 Sources of Finance. 1.3 Business Costs. 	Half Term 1 <ul style="list-style-type: none"> 1.5 Stakeholders. 1.5 Inflation and Interest. 1.5 Tax and the Economy. 1.5 Exchange rates and international trade.
Half Term 2 <ul style="list-style-type: none"> 1.2 Market Segmentation. 1.4 Marketing Mix Introduction. 2.2 Product, Price, Promotion strategies. 	Half Term 2 <ul style="list-style-type: none"> 1.3 Revenue, Costs and Profit. 1.3 Break even and Margin of Safety. 	Half Term 2 <ul style="list-style-type: none"> Recruitment Project: CV building and Interview skills. 1.5 Recruitment laws and workplace laws.

Year 11

Autumn Term	Spring Term	Summer Term
Half Term 1 <ul style="list-style-type: none"> 2.1 Business Growth Inorganic v Inorganic. 2.1 Globalisation. 2.1 Business Ethics and the Environment. 	Half Term 1 <ul style="list-style-type: none"> 2.5 Motivation. 2.5 Communication. 2.5 Organisation Structures. 	Half Term 1 <ul style="list-style-type: none"> Finance Revision. All revision.
Half Term 2 <ul style="list-style-type: none"> 2.3 Methods of Production. 2.3 Stock Control. 2.3 Suppliers and Quality. 2.3 Sales process. 	Half Term 2 <ul style="list-style-type: none"> 2.2 Marketing revision exploring the four P's in more detail. 2.4 Business Calculations. 	Half Term 2 <ul style="list-style-type: none"> Exams.

Vocational Award in ICT

Year 10

Autumn Term	Spring Term	Summer Term
Half Term 1 <ul style="list-style-type: none"> 1.1.1 Functionality of different hardware devices 1.1.2 Functionality of different software 1.1.3 Services provided by IT 	Half Term 1 <ul style="list-style-type: none"> 1.2.3 How data transfers over different types of networks 1.2.4 Different types of connectivity 	Half Term 1 <ul style="list-style-type: none"> 1.3.4 How moral and ethical issues affect computer users 1.3.5 How legal issues protect computer users 1.3.6 The cultural, personal and environmental impact of ICT
Half Term 2 <ul style="list-style-type: none"> 1.2.1 Why data must be fit for purpose 1.2.2 How input data is checked for errors 	Half Term 2 <ul style="list-style-type: none"> 1.3.1 Risks to information held on computers 1.3.2 The impact of data loss, theft or manipulation on individuals and businesses 1.3.3 Methods used to protect information 	Half Term 2 <ul style="list-style-type: none"> Controlled Assessment Logo design

Year 11

Autumn Term	Spring Term	Summer Term
Half Term 1 <ul style="list-style-type: none"> Controlled Assessment Spreadsheet 	Half Term 1 <ul style="list-style-type: none"> Controlled Assessment Database 	Half Term 1 <ul style="list-style-type: none"> Unit 1 Revision
Half Term 2 <ul style="list-style-type: none"> Controlled Assessment Automated Word Document 	Half Term 2 <ul style="list-style-type: none"> Unit 1 Revision 	Half Term 2 <ul style="list-style-type: none"> Exams.