

Computing Unit 1: Introduction to Python Programming							Computing Unit 2: Understanding Computers							Computing Unit 3 : Spreadsheet Quiz (Code & Macro's)						
Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7
1.1 Strings and variables	1.2 Numbers and arithmetic	1.3 Selection	1.4 Writing algorithms	1.5 While loops	ASSESSMENT	DIRT	2.1 Elements of a Computer	2.2 The CPU	2.3 Understanding Binary	2.4 Storage Devices	2.5 New Technologies	ASSESSMENT	DIRT	3.1 Creating a Basic SS Quiz	3.2 Adding Advanced Features	3.3 Analysing Pre-Made Quizzes	3.4 Developing Your Won Quiz 1	3.5 Developing Your Won Quiz 2	Peer ASSESSMENT & Submission	.
<p>At the end of the unit students will be able to:</p> <ol style="list-style-type: none"> <li>Understand the use of strings and variables.</li> <li>Understanding python code, including indentation and key words.</li> <li>Be able to produce a calculator program.</li> <li>Understand loops, selection and Boolean operators.</li> </ol>							<p>At the end of this Unit all pupils should be able to:</p> <ol style="list-style-type: none"> <li>Distinguish between hardware and software</li> <li>Give examples of computer hardware and software</li> <li>Draw a block diagram showing CPU, IO and storage devices</li> <li>Name different types of permanent storage device</li> <li>Suggest appropriate input and output devices for a scenario</li> <li>Explain what RAM and ROM are used for</li> <li>Show how numbers and text can be represented in binary</li> <li>Explain the impact of future technologies</li> </ol>							<p>At the end of unit students will be able to:</p> <ol style="list-style-type: none"> <li>Use simple functions to create a self-marking spreadsheet quiz</li> <li>Use conditional formatting in a spreadsheet</li> <li>Locking worksheets and hiding the contents of cells areas in worksheets</li> <li>Setting prints validation/drop-down lists in a spreadsheet</li> <li>Creating hyperlinks to link worksheets</li> </ol>						
Homework:							Homework:							Homework:						
Week2: To annotate the code provided. Can you identify comments, variable, inputs or other elements? What does the program do?							Week1: Parts of the PC worksheet OR Parts of PC Quizizz													
Week 4: Write Pseudocode for a 3 question quiz							Week 3: Binary worksheet OR Binary Quizizz													
Week 5: Revision for end of topic assesment							Week 5: Revision for end of topic assesment							Week 4: Spreadsheet formulae and Functions Quizizz						
Key Vocab: Strings, variables, casting (integer, float), IF, ELSE and ELIF, input, output							Key Vocab: Input, process, output, device, hardware, software, fetch, decode, execute, binary, conversion, memory, RAM, ROM, denary, ASCII							Key Vocab: Spreadsheet modelling, Function, Formula, Calculations, Conditional Formatting, Cells, Columns, Rows, Macro						
Connected Knowledge: Scratch unit at the end of year 7. Python next steps unit later this year. OCR GCSE C.S Paper 2 exam content – Algorithms and problem solving. A Level CS core principle							Connected Knowledge: Binary & Hex Unit (Y7) Topics 1.1 – Systems architecture, 1.2 – Memory and storage, Systems software A level (H446) Topics 1.1 & 1.2							GCSE 1.5 – Connected Knowledge: Year 7 Spreadsheets unit, Links to Science/PE/Maths in data analysis To Maths and numeracy. BTEC IT use statistical data and data presentation in social media unit, NCFE iMedia students use excel to produce a Gantt Chart						

**Cultural Capital:** developing problem solving skills that are applicable cross-curricular and in the workplace

**Social, Moral, Spiritual and Cultural Development:**

**Cultural Capital:** developing a digital literacy that will support them in the modern 21st century

**Fundamental British Values: Employment Law and Discrimination:**

Computing Unit 4 : Computer Crime						
Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7
4.1 Email scams	4.2 Hacking	4.3 Protecting Personal Data	4.4 Copyright	4.5 Health & Safety	ASSESSMENT	DIRT
<p>At the end of unit students will be able to:</p> <ol style="list-style-type: none"> <li>Investigate the different crimes associated with technology</li> <li>Distinguish the differences between different types of hackers</li> <li>How to stay safe online</li> </ol>						
Homework:						
Week 4: produce a poster to highlight computer crimes and prevention methods						
Week 5: A poster to explain copyright and plagiarism and health and safety						
Key Vocab: Malware, Virus, Hacking, Trojan horse, Plagiarism, Copyright, DPA – Data protection laws.						
<p>Connected Knowledge: OCR GCSE C.S Paper 1 exam content – Ethics + Systems security A Level CS core principle Ethics + Systems security</p> <p>Cultural respect: Celebrating what we have in common and promoting respect for the different protected characteristics as defined in law</p>						

Computing Unit 5: Python Next Steps						
Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7
5.1 The basics	5.2 Loops	5.3 Lists	5.4 Procedures	5.5 Functions	ASSESSMENT	DIRT
<p>Students are assessed on a range coding principles:</p> <p>At the end of the unit students will be able to:</p> <ol style="list-style-type: none"> <li>Understand the use of strings and variables.</li> <li>Understanding python code, including indentation and key words.</li> <li>Be able to produce a calculator program.</li> <li>Understand loops, selection and Boolean operators.</li> </ol>						
Homework:						
Week 2: To annotate the code provided. Can you identify comments, variable, inputs or other elements? What does the program do?						
Key Vocab: Strings, variables, casting (integer, float), IF, ELSE and ELIF, input, output						
<p>Connected Knowledge: 1st Python unit, scratch unit principles, OCR GCSE C.S Paper 2 exam content – Algorithms and problem solving A Level CS core principle</p>						

Computing Unit 6: Video Production				
Week 1	Week 2	Week 3	Week 4	Week 5
6.1 Using the timeline and Transitions	6.2 Scrolling text	6.3 Storyboards	6.4 Adding Audio	End of Year ASSESSMENT
<p>At the end of unit students will be able to:</p> <ol style="list-style-type: none"> <li>consider audience and purpose</li> <li>choose/select appropriate content for the purpose.</li> <li>produce a video for a target audience</li> </ol>				
Homework:				
Week 3: Create a storyboard design for a video of their choice (must include: Timings, Transitions, Fonts styles, sizes and colours)				
Key Vocab: Timelines, scroll and scrolling, html colour codes, font styles, font sizes, transitions, export				
<p>Connected Knowledge: links with Photoshop and Dreamweaver units in KS3. Links to NCFE iMedia units 2 and 3, links to Website Production unit in BTEC IT. Binary &amp; HEX unit in year 7 (html colour codes)</p>				

**Cultural Capital:** developing an understanding of the online risks in the modern 21st century.

**Social, Moral, Spiritual and Cultural Development:** Developing E-Safety knowledge

**Cultural Capital:** developing a digital literacy that will support them in the modern 21st century, develop coding skills

**Fundamental British Values: Employment Law and Discrimination:** Develop an understanding of online crime, hacking, copyright and Health & Safety