

Year 7	Half Term 1	Half Term 2	Half Term 3	Half Term 4	Half Term 5	Half Term 6
Knowledge	Networking <ul style="list-style-type: none"> Safe use of computers Logins / Passwords School IT Systems (Google Classroom,) File management and Saving work (folders / Drive) E-mail Google & Internet Searching Computer misuse and how to avoid common types of malware Copyright and how to search the web effectively 	Programming <ul style="list-style-type: none"> Algorithms Strings and variables Different data types and selection Iteration and selection Searching For and while loops 	Programming Essentials - Scratch <ul style="list-style-type: none"> Key concepts of computational thinking, decomposition, abstraction and writing algorithms. Basics of Python including inputs and outputs and using Turtle to draw shapes Sequencing and variables in block based programming Selections Operators Count-control and condition-control Problem solving 	Using Media – Project <ul style="list-style-type: none"> Features of a word processor How to find copyright free images Licensing appropriate images Credibility of sources Researching and planning a blog Promoting a project through the use of media 	Programming Essentials Part 2 – Scratch <ul style="list-style-type: none"> How to debug and modify code Choice of code Use of lists Game development using lists Project based programming (building a project) 	Modelling Data <ul style="list-style-type: none"> Spreadsheets Formatting IF statements Conditional Formatting Drop down lists Basic Formulae (MIN, MAX, SUM, AVG)
Skills	<ul style="list-style-type: none"> Communication Skills - using online platforms effectively and appropriately Digital Literacy Responsibility & online safety – ethical use of technology Organisation – managing files 	<ul style="list-style-type: none"> Independence – experimenting different data types Problem Solving – breaking down problems Resilience – debugging and improving code Attention to detail Logical thinking 	<ul style="list-style-type: none"> Creativity – designing interactive projects Coding Independence Computational Thinking Collaboration – Sharing projects and gaining feedback Resilience – testing and refining code Adaptability – block based to text based coding 	<ul style="list-style-type: none"> Research – finding and evaluating reliable copyright-free resources Creativity – designing a campaign Teamwork and collaboration Planning and organization – structuring a project from an idea. 	<ul style="list-style-type: none"> Problem-Solving - debugging, testing, and refining code independently. Resilience - constant challenges in programming Creativity - developing original games and interactive programs. Decision-Making- choosing the most effective code for the right fit. Project Management – planning and developing. 	<ul style="list-style-type: none"> Analytical Thinking: Using formulas and data tools to draw conclusions. Accuracy & Precision: Ensuring formulas and formatting are correct. Problem-Solving: Using IF statements and logical conditions to process data. Organisation: Structuring data for clarity and usefulness. Critical Thinking: Interpreting data to support decisions or arguments.
Independent Learning Link	https://www.cisco.com/site/us/en/learn/training-certifications/training/netacad/index.html https://www.teach-ict.com/GCSE_New/GCSE_Comp_Sci/GCSE_Comp_Sci/GCSE_CS_Networking/networking.htm https://www.bbc.co.uk/bitesize/topics/z34k7ty	https://codehs.com/hourofcode https://www.raspberrypi.org/ https://developers.google.com/edu/python https://www.netacad.com/learning-collections/python?courseLang=en-US	https://scratch.mit.edu/ https://csfirst.withgoogle.com/s/en/home https://projects.raspberrypi.org/en/codeclub/scratch	https://edu.gcfglobal.org/en/subjects/office/ https://www.teach-ict.com/GCSE_New/GCSE_Comp_Sci/GCSE_Comp_Sci/GCSE_CS_Wordprocessing/wordprocessing.htm	https://scratch.mit.edu/ https://csfirst.withgoogle.com/s/en/home https://projects.raspberrypi.org/en/codeclub/scratch	https://edu.gcfglobal.org/en/excel/ https://www.goskills.com/course/learn-excel-tutorial https://www.excel-easy.com/

Year 8	Half Term 1	Half Term 2	Half Term 3	Half Term 4	Half Term 5	Half Term 6
Knowledge	Networking <ul style="list-style-type: none"> Different types of networks The internet and World Wide Web (WWW) Domains and IP addresses Network Protocols Network Security 	Programming (text based) <ul style="list-style-type: none"> Python Programming Variables Sequence Iteration Selection Functions Calculations Programming projects and challenges 	App Development <ul style="list-style-type: none"> How to use app creation software Input and output App development Selection and iteration Formatting an app 	Data Representation <ul style="list-style-type: none"> Binary and denary Bits and bytes Simple Boolean logic [for example, AND, OR and NOT] Logic gates Truth tables 	Computer Systems <ul style="list-style-type: none"> History of computers Different components of a computer systems Storage types Input and output devices RAM and ROM 	Developing for the web <ul style="list-style-type: none"> HTML and tags Formatting Images and HTML CSS Hyperlinks How websites and algorithms link Website project
Skills	<ul style="list-style-type: none"> Analytical Thinking - understanding how networks, domains, and IP addresses connect systems Problem-Solving- identifying issues with connections Critical Thinking - evaluating the reliability and security of online networks. Communication - explaining technical ideas e.g. protocols and WWW Responsibility- understanding ethical use of networks. 	<ul style="list-style-type: none"> Problem-Solving - breaking down coding challenges into logical steps. Resilience - debugging, testing, and improving code through persistence. Logical & Computational Thinking - understanding variables, iteration, selection, and functions. Creativity - designing unique solutions to programming challenges. Independence - working through projects with minimal guidance. Attention to Detail - ensuring syntax and structure are correct 	<ul style="list-style-type: none"> Creativity & Innovation - designing and building user-friendly apps. Communication - considering user needs Problem-Solving - using iteration, selection and formatting to improve app design. Collaboration - sharing ideas and testing apps with others. Resilience – refining and debugging apps to ensure they work Digital Awareness – understanding the impact and responsibility of creating digital tools. 	<ul style="list-style-type: none"> Analytical Thinking- translating between binary and denary and understanding data storage. Logic and Reasoning - applying Boolean logic and truth tables to solve problems. Attention to Detail - working accurately with binary data and logic gates. Critical Thinking - understanding how data is represented Problem-Solving - using logic to interpret and design algorithms. 	<ul style="list-style-type: none"> Critical Thinking - understanding how hardware and software interact in a system. Reflection - learning from the history of computing Analytical Thinking - comparing different storage types, components and devices. Communication- explaining technical processes clearly to others Digital Literacy- understanding how computer systems function in real-world applications. 	<ul style="list-style-type: none"> Creativity - designing visually appealing and functional web pages using HTML and CSS. Attention to Detail - writing accurate code and using correct tags. Communication - designing websites that communicate information effectively. Problem-Solving - debugging code and improving web design layouts. Resilience – consistently rectifying errors and challenges in development. Collaboration - working with others on website projects and sharing feedback. Critical Thinking - understanding how algorithms and web interlink
Independent Learning Link	https://www.teach-ict.com/GCSE_New/GCSE_Comp_Sci/GCSE_Comp_Sci/GCSE_CS_Networking/networking.html https://www.bbc.co.uk/bitesize/topics/z34k7ty	https://developers.google.com/edu/python https://www.codecademy.com/learn/learn-python-3 https://www.w3schools.com/python/	https://www.learnpython.org/Quizlet https://www.w3schools.com/html/ https://www.mygreatlearning.com/css/tutorials	https://www.teach-ict.com/GCSE_New/GCSE_Comp_Sci/GCSE_Comp_Sci/GCSE_CS_Binary/binary.htm https://www.bbc.co.uk/bitesize/topics/z34k7ty https://csunplugged.org/en/topics/binary-numbers/ https://www.khanacademy.org/computing/computer-science	https://www.bbc.co.uk/bitesize/topics/z34k7ty https://computer.howstuffworks.com/ https://isaacomputerscience.org/	https://www.learnpython.org/ https://www.w3schools.com/learn/learn-html https://www.khanacademy.org/computing/computer-programming/html-css

Year 9 Rotation	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9
Knowledge	<p>Logical Thinking</p> <ul style="list-style-type: none"> Different Boolean Operators including AND, OR, NOT. How to create statements using logical thinking Application of computational thinking. 	<p>Python</p> <ul style="list-style-type: none"> Data Types Programming Syntax Input and output Calculating using python programming How Python is used to create applications (back-end programming – link to GCSE) 	<p>Data Representation - Binary</p> <ul style="list-style-type: none"> Difference between denary and binary How computers use binary to process information Converting between binary and denary (vice versa) Intro to hexadecimal (GCSE addition link) 	<p>Binary Addition</p> <ul style="list-style-type: none"> Understanding of how to calculate using only 0s and 1s. Link to when this is used within computer systems 	<p>Operating Systems</p> <ul style="list-style-type: none"> Different types of operating systems Software examples Command line and graphical user interface CPU and memory management Utilities on operating systems Application software on operating systems 	<p>Computer Networks</p> <ul style="list-style-type: none"> Data transfer using data packets (GCSE link) Types of networks including LAN, WAN, PAN and VPN. Types of connection – wired and wireless Hardware in both types of connection 	<p>Social engineering</p> <ul style="list-style-type: none"> How to distinguish between personal data and ordinary data. Types of social engineering including name generator attacks, shouldering phishing and blagging How to avoid social engineering 	<p>Consolidation</p> <ul style="list-style-type: none"> Reflection on all topics learnt Exam style questions to test knowledge How each of the topics learnt interlink in different ways 	Assessment
Skills	<ul style="list-style-type: none"> Analytical Thinking Logic and Reasoning . Attention to Detail Critical Thinking Problem-Solving 	<ul style="list-style-type: none"> Problem-Solving. Resilience Logical & Computational Thinking Creativity Independence Attention to Detail 	<ul style="list-style-type: none"> Understanding Data Analytical skills Pattern Recognition 	<ul style="list-style-type: none"> Analytical skills Computational thinking Attention to detail Problem solving 	<ul style="list-style-type: none"> Analytical Thinking. Communication Digital Literacy 	<ul style="list-style-type: none"> Problem solving Responsibility Collaboration 	<ul style="list-style-type: none"> Ethical awareness Awareness Decision making Resilience Communication 	All previous listed	
Learning Link	https://quizlet.com/355798968/programming-z1-keywords-flash-cards/	https://codehs.com/hourofcode https://www.learnpython.org/	https://www.teach-ict.com/GCSE_New/GCSE_Comp_Sci/GCSE_Comp_Sci/GCSE_CS_Binary/binary.htm https://www.bbc.co.uk/bitesize/topics/z34k7ty https://csunplugged.org/en/topics/binary-numbers/ https://www.khanacademy.org/computing/computer-science	https://www.teach-ict.com/GCSE_New/GCSE_Comp_Sci/GCSE_CS_Binary/binary.htm https://www.bbc.co.uk/bitesize/topics/z34k7ty https://csunplugged.org/en/topics/binary-numbers/ https://www.khanacademy.org/computing/computer-science	https://edu.gcfglobal.org/en/computerbasics/understanding-operating-systems/1 https://www.bbc.co.uk/bitesize/guides/zmqw7p3/revision/2	https://www.teach-ict.com/GCSE_New/GCSE_Comp_Sci/GCSE_CS_Networking/networking.html https://www.bbc.co.uk/bitesize/topics/z34k7ty	https://www.bbc.co.uk/bitesize/guides/z6226yc/revision/4 https://www.proofpoint.com/uk/threat-reference/social-engineering	All previous listed	