

	Topic 1	Topic 2	Topic 3	Topic 4	Topic 5	Topic 6
Year 7	Digital Literacy Using Computers -Physical operation of computers; keyboard, mouse -Troubleshooting -Web browsing - Use of the WWW -Email, safe use of -Word & Presentation software	Computer Science Understanding Computers & Data -Hardware: CPU, RAM, monitor, mouse, keyboard, computer storage, graphics card, sound card, speakers, motherboard, CPU -Software -Convergence & new technologies -Input, output devices -Storage devices -Elements of a computer system, CPU Digital systems -Binary -Understanding binary representations (bits, bytes) -Binary conversion, numbers to binary, binary to numbers	Digital Literacy Safe use of computers. E-Safety -Social impacts, understanding risks -Recognise inappropriate content -Contact and conduct -How to report concerns. -Cyberbullying, trolling, grooming -Sharing photos, sexting, recording - Exploitation	Information Technology Media Editing -Using video editing software to repurpose assets -Create new asset -Edit, split, trim, apply transitions, add effects, edit audio, export -File format	Computer Science Computer Programming Block programming Scratch -Define a sequence -Predict outcome: -Modify a sequence -Use sequential instructions -Variables within a sequence -KT: Sequencing, subroutines, instructions, execute	Information Technology Spreadsheet & Data Analysis -Use spreadsheets to organise and analyse data -Apply formulas and functions -Create charts & graphs to visualise data -Understand concept of data validation
Assessed	Skills	Knowledge	Knowledge	Skills	Skills	Skills
NC Links	3.4 3.7 3.9	3. 5 3.4 3.6 3.9	3.9	3.7 3.8	3.2 3.3 3.6	3.1 3.2
	Topic 1	Topic 2	Topic 3	Topic 4	Topic 4	Topic 5

Y8	Computer Science <u>Computer Networks</u> -Computer networks -Network hardware -Building network topologies -Purpose of mail servers -Internet & the world wide web -Connectivity -Wired & wireless -Bandwidth -Protocols, Http, Htps, domain name, url -Internet of Things	Digital Literacy <u>Cyber Security & Threats to data</u> -You and your data -Data protection act --Social Engineering -DOS attacks -Hacking & brute force attacks -The cost of cybercrime	Computer Science <u>Text based programming - Small Basic</u> -Textual programming language -Turtle graphics -For.. End loops -Text window -Using variables - Iteration	Digital Literacy <u>Impact of Technology & Future Trends:</u> -Developments in technology -Explore merging technologies (AI, machine learning, robotics, IoT) -Positive & negative impact of technology on individuals, society and the environment -Impact of AI -Digital footprint	Computer Science <u>Computational Thinking & Data Representation</u> -Logical thinking -Binary conversion, retrieval 4, 8 -Understanding how text is represented (ASCII, Unicode) -How images are represented in pixels, RGB	Computer Science <u>Computational Thinking</u> -Logical thinking -Logic gates -Loops -Compression -Decomposition -Abstraction
Assessed	Knowledge	Knowledge	Skills	Skills	Skills	Skills
NC Links	3.4 3.6	3.9	3.1 3.2 3.3 3.6	3.7	3.4	3.3 3.4

Key Stage 3 - Undertake Creative Projects						
Year 7	Vector Graphics Adobe Illustrator -Understand the difference between vector graphics and bitmap; scalability. -Learn to use Adobe Illustrator to create vector graphics. -Apply appropriate formatting techniques Image size & resolution for different media products -Skills: draw shapes, altering shapes, circles, right angled, isosceles triangles, effects, shapebuilder, alignment, zoom in-zoom out, colour palette, stroke, type tool, type on a path, text effects -Exporting & saving Comic Strip using Storyboard That -Job roles within the digital media sector -Key features of a traditional comic strip -Create storyboard pre-production document	Year 8	Bitmap / Raster Graphics Photopea -Recall differences between bitmap / raster graphics and vector -Know what a pixel is, impact of pixelation -Understand image size suitable for web and printKnowl -Understanding compression; lossy & lossless -Suitability of file formats for specific usage; jpeg, png, giff, pdf -Skills: Removing backgrounds; magic wand, quick selection tool, polygonal lasso tool. Using text tools applying text effects, fonts & colour. Advanced image editing using; clipping mask, clone stamp, spot healing brush, content aware and applying gradient effects to images. -Export and saving	Year 9	Interactive Digital Media Product -combining multiple applications, across a range of devices, -Using conventions of interactive digital media when planning user interface layouts -Creating wireframes to plan the content of interactive digital media product -Planning the navigation between pages - Demonstrate an understanding of licensing issues involving online content by applying appropriate Creative Commons licences - Locating and using libraries and stock media, when identifying and selecting pre-made digital media content - Using software tools and techniques to create and repurpose static image assets and techniques to repurpose video assets - Using vector and bitmap images appropriately	

	-Techniques for combining planning into comic panels, -Using specific comic creation software to create suitable panel layouts on single and multiple pages to support story flow				-Saving and exporting assets as suitable file sizes/ formats for use as components within interactive digital media
Assessed	Skills		Skills		Skills
NC Links	3.73.8		3.73.8		3.73.8

National Curriculum

3.1	design, use and evaluate computational abstractions that model the state and behaviour of real-world problems and physical systems Modelling data - Spreadsheets Y7 Small Basic programming Y8	3.2	understand several key algorithms that reflect computational thinking [for example, ones for sorting and searching]; use logical reasoning to compare the utility of alternative algorithms for the same problem Programming in Scratch Y7 Small Basic programming Y8 Algorithms Y8	3.3	use 2 or more programming languages, at least one of which is textual, to solve a variety of computational problems; make appropriate use of data structures [for example, lists, tables or arrays]; design and develop modular programs that use procedures or functions Programming in Scratch Y7 Small Basic programming Y8 Algorithms & computational thinking Y8
3.4	understand simple Boolean logic [for example, AND, OR and NOT] and some of its uses in circuits and programming; understand how numbers can be represented in binary, and be able to carry out simple operations on binary numbers [for example, binary addition, and conversion between binary and decimal] Programming in Scratch Y7 Binary Y7 ASCII, Unicode, Pixels Y8 Small Basic programming Y8	3.5	understand the hardware and software components that make up computer systems, and how they communicate with one another and with other systems Understanding computers & data Y7 Networks Y8 Computational thinking Y8	3.6	understand how instructions are stored and executed within a computer system; understand how data of various types (including text, sounds and pictures) can be represented and manipulated digitally, in the form of binary digits Understanding computers Y7 Programming in Scratch Y7 Binary Y8 Networks Y8 Small Basic programming Y8
3.7	undertake creative projects that involve selecting, using, and combining multiple applications, preferably across a range of devices, to achieve challenging goals, including collecting and analysing data and meeting the needs of known users Media editing, comic strip, film Y7 Creating vector graphics, illustrator Y7	3.8	create, reuse, revise and repurpose digital artefacts for a given audience, with attention to trustworthiness, design and usability Media editing Y7 Creating vector graphics, comic strip Y7 Create & repurpose digital artefacts Y8 Interactive digital media Y9	3.9	understand a range of ways to use technology safely, respectfully, responsibly and securely, including protecting their online identity and privacy; recognise inappropriate content, contact and conduct, and know how to report concerns E-Safety Y7 Using computers Y7 Cyber security & threats to data Y8

	Impact of technology Y8 Create & repurpose digital artefacts Y8 Interactive digital media Y9				
--	--	--	--	--	--