Concept — **Explanation of concept**

Algorithms — Understands what an algorithm is and is able to express simple linear (non-branching) algorithms symbolically. Understands that computers need precise instructions. Demonstrates care and precision to avoid errors.

Programming & Development — Knows that users can develop their own programs, and can demonstrate this by creating a simple program in an environment that does not rely on text e.g. programmable robots etc. Executes, checks and changes programs. Understands that programs execute by following precise instructions.

Data & Data Representation — Recognises that digital content can be represented in many forms. Distinguishes between some of these forms and can explain the different ways that they communicate information.

Hardware & Processing — Understands that computers have no intelligence and that computers can do nothing unless a program is executed. Recognises that all software executed on digital devices is programmed.

Communication & Networks — Obtains content from the world wide web using a web browser. Understands the importance of communicating safely and respectfully online, and the need for keeping personal information private. Knows what to do when concerned about content or being contacted.

Information Technology — Uses software under the control of the teacher to create, store and edit digital content using appropriate file and folder names. Understands that people interact with computers. Shares their use of technology in school. Knows common uses of information technology beyond the classroom. Talks about their work and makes changes to improve it.

September 2023 - July 2024	Half term 1	Half term 2	Half term 3	Half term 4	Half term 5	Half term 6
Year 7						
Learning	Scratch — An introduction to programming using variables, IF statements and operators. Resulting in programming a calculator.	Computer Hardware — Learning a computer is, the internal components, the CPU and how it all works.	Introduction to HTML — An introduction to HTML creating web pages containing formatting, images and hyperlinks.	Scratch Game Maker — An introduction to design and development - programming skills, levels and a scoring system.	Microbit Madness — An introduction to the MicorBit programming a digital dice, digital compass and a handheld console.	Event Driven Scratch — Programming skills including variables, random IFs and events, the magic 8 ball and a conversion calculator.
Concepts	Algorithms, Programming & Development, Hardware & Processing, Communications & Networks	Hardware & Processing, Data & Data Representation, Information Technology	Algorithms, Programming & Development, Hardware & Processing, Communications & Networks, Information Technology	Algorithms, Programming & Development, Hardware & Processing, Communications & Networks	Algorithms, Programming & Development, Hardware & Processing, Communications & Networks, Information Technology	Algorithms, Programming & Development, Hardware & Processing, Communications & Networks
Sticking Points Common Misconceptions	Purpose of an algorithm — An algorithm is a plan for a computer program — An IF statement allows the programmer to have a number of outcomes using loops — Flowcharts shapes and purpose	Hardware is the physical - the equipment you use — Software - the programs that run on the computer — The difference between a wired and wireless connection	HTML is the most common programming language used for building websites — All lines of code have to be placed in tags <> — Purpose of a hyperlink — Use of diifferent file formats — Has to be saved as .html to run as a webpage in a browser	Variables are data vaules that change when the user asks a question and there is an input e.g. The program asks the user their age	The events/blocks have to be in the correct sequence and attached for the program to function — The program must be compiled for it to run	The program needs a start and end to be complete - the program will not initiate without these blocks
AOs	AO1 AO2 AO3	AO1 AO2	AO1 AO2 AO3	AO1 AO2 AO3	AO1 AO2 AO3	AO1 AO2 AO3
Year 8						
Learning	My Digital World — What to trust online, how to search smart, copyrights and copywrongs, staying safe online and evidencing cyber abuse.	Binary Bits & Bobs — The binary number system, adding binary numbers, ASCII and codebreaking, bitmap images and how computers represent sound.	Introduction to Python — Outputs, inputs and variables, data types and maths and selection.	HTML & CSS — Introduc ing HTML and CSS, CSS backgrounds and images, DIV tags, page sections and CSS, CSS DIVs and layouts.	Shooter Game Maker — Skills - understanding gravity, programming shooter, baddies and scoring, remembering levels and game development.	Microbit Madness — An introduction to the MicorBit programming a digital dice, digital compass and a handheld console.
Concepts	Data & Data Representation, Hardware & Processing, Communication & Networks, Information Technology	Data & Data Representation	Algorithms, Programming & Development, Hardware & Processing, Communications & Networks, Information Technology	Algorithms, Programming & Development, Hardware & Processing, Communications & Networks, Information Technology	Algorithms, Programming & Development, Hardware & Processing, Communications & Networks	Algorithms, Programming & Development, Hardware & Processing, Communications & Networks, Information Technology
Sticking Points Common Misconceptions	That you leave a digital footprint — That when you delete some media it may not have deleted permanently — Who you can speak to about cyber abuse/bullying	That the binary system uses a base 2 system compared to the denary/decimal base 10 system used in Maths — Numbers are represented using 0's and 1's	Syntax erros are errors with langauge and/or punctuation — Part of programming is debugging	The HTML is the content of the web page whereas the CSS is the styling of the web page — The CSS must be saved as .style and be saved in the same folder as the webpage to function	The for loop is used when we know the number of iterations - the while loop is used when we don't know the number of iterations	The events/blocks have to be in the correct sequence and attached for the program to function — The program must be compiled for it to run
AOs	AO1 AO2	AO1 AO2	AO1 AO2 AO3	AO1 AO2 AO3	AO1 AO2 AO3	AO1 AO2 AO3
Year 9						
Learning	Back to the future — Alan Turing and code breaking, Sir Tim Berners Lee and the WWW, George Boole and Logic Gates and Charles Babbage and sorting algorithms.	Computer Networks — Introduction to networks and LANs, network hardware, introduction to the internet and WANs, internet connections and data packets.	Python Programming — Remembering Python, IF statements, while and for loops.	Scrolling Game Maker — Understanding scrolling backgrounds, the flying object and shooter, the baddie object and scoring, programming levels, design and build.	Cyber Security — Social media - public v private, identity theft, malware, hacking, encryption, cryptography and protection.	Adobe Photoshop — Use of image manipulation software to create a digital graphic defined by a set assignment and client requirements.
Concepts	Algorithms, Programming & Development, Data & Data Representation, Hardware & Processing, Communications & Networks, Information Technology	Data & Data Representation, Hardware & Processing, Programming & Development, Communication & Networks, Information Technology	Algorithms, Programming & Development, Hardware & Processing, Communications & Networks, Information Technology	Algorithms, Programming & Development, Hardware & Processing, Communications & Networks	Data & Data Representation, Hardware & Processing, Communication & Networks, Information Technology	Algorithms, Programming & Development, Data & Data Representation, Hardware & Processing, Communications & Networks, Information Technology
Sticking Points Common Misconceptions	That encryption was used in the WW11 — Encrypted messages were sent between armies and any intercepted would need to be decrypted using a key — The internet was given away for free - we pay a proivder	The difference between a wired and wireless connection — That you have to be connected to a network to use the internet, communicate, share software and access peripherals	Python is an open source software used by companies such as Twitter, Facebook and the BBC. — The program has to be perfect in syntax and spacing - if not the program will run with errors and therefore need debugging.	Scrolling backgrounds can use different canvass - need to be coded in a loop	Hacking is not always for financial gain or unauthorised access - it can be used to test organisations' defence systems - it can be a highly skilled job.	The use of layers when creating a digital image and the importance of file formats and their different purposes when saving digital graphics.
AOs	AO1 AO2	AO1 AO2	AO1 AO2 AO3	AO1 AO2 AO3	AO1 AO2	AO1 AO2 AO3

Concept	Explanation of concept	Year 11
Develop	To be able to develop interface, content and user interaction planning for interactive digital media highlighting purpose, elements and design.	
Plan	To be able to plan interactive digital media using graphic design, conventions and target audience requirements.	
Create	To be able to create interactive digital media using tools and techniques of approriate software.	
Review	To be able to review the merits, drawbacks and potential improvements of interactive digital media.	

Concept	Explanation of concept	Year 10
Develop	To be able to develop a visual identity for a digital graphic highlighting purpose, elements and design.	
Plan	To be able to plan digital graphics for products using graphic design and conventions.	
Create	To be able to create visual identity and digital graphics using tools and techniques of imaging editing software.	
Review	To be able to review the merits, drawbacks and potential improvements of a product.	

September 2023 - July 2024	Half term 1	Half term 2	Half term 3	Half term 4	Half term 5	Half term 6
Year 10						
Learning	R094: Visual identity and digital graphics - Develop visual identity - 1.1 Purpose, elements and design of visual identity. Purpose - recognition/familiarity, establish a brand, develop abrand loyalty and visual communication with audiences/consumers. Components features - name, logo and slogan/strapline. Elements - graphics, typography, colour palette and layout. Visual identity - business type, values and positioning.	Plan digital graphics for products - 2.1 Graphic design and conventions. Concepts of graphic design - application of visual identity, alignment, typography, use of colours/systems and use of white space, Layout conventions for different graphics products and purposes - additional information, headlines and copy, image, content, titles and mastheads. 2.2 Properties of digital graphics and use of assets. Technical properties of images and graphics - bitmap and raster properties and vector graphic propertes. Licenses and permissions to use assets sourced from client images, internte, logos, photographs and stock library.	2.3 Techniques to plan visual identity and digital graphics. Pre-production and planning documentation used to generate ideas and concepts for visual idenity and digital graphics - mood board, mind map, concept sketch and visualisation diagram.	3.1 Tools and techniques used to create digital graphics. Software tools and techniques used to create digital graphics - image/canvas size, layout tools, drawing tools, adjustments to brightness/contrast and colour, use of selections, use of layers and layer styles, retouching, typography andf filters and effects. 3.2 Technical skills to source, create and prepare assets for use within digital graphics - source/create assets for use in digital graphics, modify images and other assets to ensure technical compatibility for use within pront graphics. 3.3 Techniques to save and export visual identity and digital graphics - save and export.	R093: Creative iMedia in the media industry - Topic Area 1: The media industry. 1.1 Media industry sectors and products. Traditional Vs New Media. 1.2 Job roles in the media industry. Jobs in the industry can be categorised under sector, medium/platform, production phase and skill type.	R093 Creative iMedia in the media industry - Topic Area 2: Factors influencing product design. 2.1 How style, content and layout are linked to purpose. There will always be a purpose to a product and this will have significant impact on all aspects of the design. 2.2 Client requirements and how they are defined. Understanding client briefs and key terms such as ethos, genre and constraints. 2.3 Audience demographics and segmentation. Knowing the different categories such as age, gender etc and how these impact design.2.4 Research methods, sources and types of data. Understanding qualitative and quantitative information. 2.5 Media codes used to convey meaning, create impact and/or engage audiences. Technical, symbolic and written codes.
Concepts	Develop	Plan	Plan	Create	Develop	Develop
Sticking Points Common Misconceptions	Typography is the style of text used, similar to when we use fonts previously. When we use the term graphics it includes photos, images, illustrations, shapes and symbols.	Layout conventions are about the composition of a digital graphic and the placement of the different elements . We can use assets in our work as long as we log information in an asset table - licenses and permissions are needed for any assets.	Concept sketches may be used to develop ideas before creating a final visualisation diagram. These will have less detail, and be faster to produce, than the visualisation diagram itself.	When creating a new document to meet a client brief, it is important to set up the size and resolution at the start. If you create a document that is the wrong size it will not fully meet the client requirements.	That there are 3 stages to produciton - pre, production and post. Different jobs require different skills and are categorised under the different phases.	That digital graphics are not designed by accident - each graphic has a purpose and target audiece. The significantly impact all stages of design and creation.
AOs	AO1	AO2	AO2	AO3	AO1	AO1
Year 11						
Learning	R097: Interactive digital media - Topic Area 1: Plan interactive digital media. 1.1 Types of interactive digital media, content and associated hardware. Identifying format, content, form, structure and hardware. 1.2 Features and conventions. Use of layout, house style, colour scheme, typography and white space. 1.3 Resources required to create. Choosing hardware and software. 1.4 Pre-production and planning documentation and techniques. Planning all aspects of the product including screen designs and GUIs.	R097: Interactive digital media - Topic Area 2: Create interactive digital media. 2.1 Technical skills to create and/or edit and manage assets for use within products. Sourcing/Creating suitable assets. 2.2 Technical skills to create. Use of product folder management. 2.3 Techniques to save and export/publish media. Use of version control and file formats.	R097 Interactive digital media - Topic Area 3: Review interactive digital media. 3.1 Techniques to test/check and review. Methods of/Elements to test/check. Use of a checklist/success criteria. Suitability for client and target audience. 3.2 Improvements and further developments. Assessing constraints, results of testing and scope of further work.	R093: Creative iMedia in the media industry - Topic Area 3: Pre-production planning. 3.1 Work planning. Different phases and format/components/resources. 3.2 Documents used to support ideas generation. Use of mind maps and mood boards. 3.3 Documents used to design and plan media products. Use of asset logs, flowcharts and scripts. 3.4 The legal issues that affect media - to protect individuals, intellectual property rights, regulation, certification and classification and health and safety.	R093: Creative iMedia in the media industry - Topic Area 4: Distribtion considerations. 4.1 Distribtion platforms and media to reach audiences. Use of online and physical platfomrs/media. 4.2 Properties and formats of media files - image, audio, moving images and file compression.	R093 Creative iMedia in the media industry - Exam
Concepts	Develop, plan	Create	Review	Develop	Develop	Develop, plan, create, review
Sticking Points Common Misconceptions	White space is not the literal colour white space. It refers to any empty space of negative space that exist around all content in a design layout.	Use of structure and file naming conventions in folder management. When creating a media product these are vital and for when using version control. It is very easy to get confused and disorganised and this will impact your success in the unit. Be consistent when saving/naming.	To say your media product could be improved or further developed isn't failing or losing you marks! Going through the process of testing/checking and suggesting improvements/developments will improve your mark for this topic area. This is the idea of the whole unit process - to develop, plan, create and review.	That different types of media are protected in differnet ways. If you wish to use the media you must seek permission checking that you can legally use it depending in which domain - public, private or education.	That correct file formats must be used for different types of media to ensure compatibility - if a gif is saved as a static image it will not animate in the product.	
AOs	AO1 AO2	AO3	AO4	AO1	AO1	