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. Use of Boolean logic.
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 2024 - July 2025	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 consisting 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 Micror:Bit 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 - links to National Curriculum	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 different 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 and to be complete - the program will not initiate without these blocks
What is needed to master the learning	Can sequence instructions with independence. Shows understanding of the concepts of inputs, outputs, variables and some more advanced functions and can implement them independently. Shows understanding of the control structures of selection and iteration and can implement them independently even when applying them in order to solve harder problems. Can break down harder problems with independence in order to design suitable solutions.	To explain what a computer is, what an 'input' device is and give examples and explain what an 'Output' device is and give examples. Identify a range of components of a PC (e.g. motherboard, RAM, hard drive etc) and explain the purpose of a range of computer components. To explain what a CPU is, how the CPU works and what clock speed is and explain the clock speed of a modern-day CPU. To explain how Input devices, CPU, Hard Drive, RAM and Output devices all work together and explain what happens during the process of opening a program.	To explain what a web browser is, what HTML is and what HTML Tags are. Identify what tags are needed to turn text into a 'heading', what tags are needed to change the font style (face) of some text, what tags are needed to change the font size of some text, what tags are needed to change the font colour of some text and what tags are needed to add an image into a webpage. To be able to add background colour, link pages and create hyperlinks.	To ensure all game elements work effectively, graphics are high quality, gameplay is excellent with increasing player challenge and coding is highly efficient.	To be able to code, compile and flash a simple digital dice program onto the Micro:Bit. To develop the code so that the dice outputs dots/pattern instead of the numerical value of the dice face and further develop the code so that it generates a new random number each time the device is shaken. To be able to code, compile and flash a simple digital compass program onto the Micro:Bit. To be able to develop a simple ping game turning the device into a handheld console. To be able to develop some simple Micro:bit programs using the python programming language – link to NC – 2 programming languages – one textual.	Can sequence instructions with independence. Shows understanding of the concepts of inputs, outputs, variables and some more advanced functions and can implement them independently. Shows understanding of the control structures of selection and iteration and can implement them independently even when applying them in order to solve harder problems. Can break down harder problems with independence in order to design suitable solutions.
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 Introducing 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.	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.
Concepts - links to National Curriculum	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 Data & Data Representation 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 language 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	That encryption was used in the WW1I 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 provider
What is needed to master the learning	To be able to correctly identify trustworthy/untrustworthy websites using set criteria and explain why certain websites are more reliable than others. To explain how a search engine works and use advanced tools and see how they improve our search results - use of Boolean operators. To produce an information leaflet for our GCSE and A-Level students outlining what copyright law is and how students can keep within this law when doing their coursework. To produce an E-Safety poster outlining online dangers and ways to avoid these dangers. To produce an innovative digital information file to advise people about 7 ways to combat cyber abuse.	To be able to read a binary number, work out its value, understand why computers use the binary number system and be able to write a denary number in binary. To be able to add two binary numbers together by converting to denary and then adding, to add two binary numbers without converting first and to convert denary to binary and then add them together. To understand that a character is represented in a computer as a binary number, be able to find characters represented by binary numbers to crack codes and be able to create their own coded messages. To be able to create a simple image in binary and decode a binary image. describe how images are represented in binary on computer systems and explain why images are represented in binary on computer systems. To be able to carry out some digital processing on a digital sound file, create a 'Dalek Joke Sound Board'; to describe that sound on a computer is represented in binary numbers and explain what digital processing is.	Carry out a number of programming tasks for inputs, outputs and to store inputs (+in variables). To understand the difference between strings and variables and how to concatenate strings and variables. To understand which data type a variable is, why a computer needs to know what the data type is for a given input/variable and how to change/code the data type of a variables. To understand how programs make decisions in Python.	To be able to create code that improves the appearance of their own webpage's text and background. To be be able to create a webpage which has been formatted using CSS and alter backgrounds and images. To be able to create a webpage which contains Divisions and where CSS code/structures to apply different styles to the different divisions and create a page layout.	To be able to create a basic game with gravity, movement, jumping and to explain how each script works in detail. To be be able develop the platform game so that the character can fire a bullet left and right and code baddies which can be shot that send the main character back to the start if they are touched. To produce a half-completed game so that the player can progress onto another level. To decide on the objectives and theme of your game, design each level, the characters and any scoring items. To evaluate your game and to reflect on what you have learnt from the experience of carrying out this project.	To be able to explain who Alan Turing was, what he is famous for, how PigPen Cyphers work and can be decrypted, how Caesar Cyphers work and can be decrypted and what the word encryption means. To be able to explain who Sir Tim Berners-Lee is, what he is famous for, what HTML is, how HTML works and how to write some basic HTML. To be able to explain who George Boole was, what he is famous for, what the three different logic gates are, what the three logic gates do and be able to solve Logic Circuit problems. To be able to explain who Charles Babbage was, what he is famous for, what logical thought is, how logical though is important for problem solving and the importance of being clear when describing how a problem can be solved.
AOs	AO1 AO2	AO1 AO2	AO1 AO2 AO3	AO1 AO2 AO3	AO1 AO2 AO3	AO1 AO2
Year 9						
Learning	Visual identity and digital graphics Use of image manipulation software to create a digital graphic defined by a set assignment and client requirements.	Cyber Security Social media - public v private, identity theft, malware, hacking, encryption, cryptography and protection.	Computer Networks Introduction to networks and LANs, network hardware, introduction to the internet and WANs, internet connections and data packets.	Scrolling Game Maker Understanding scrolling backgrounds, the flying object and shooter, the baddie object and scoring, programming levels, design and build.	Python Programming Remembering Python, IF statements, while and for loops.	To provide students with an introduction to the world of artificial intelligence (AI) and machine learning (ML). Students will experience a variety of real-world AI applications and be made aware of the ever-increasing range of AI-related careers. As well as considering the social and ethical implications of AI developments students will have the opportunity to delve deeper and explore machine learning models and the engines that make them work.
Concepts - links to National Curriculum	Algorithms Programming & Development Data & Data Representation Hardware & Processing Communications & Networks Information Technology	Data & Data Representation Hardware & Processing Communication & Networks Information Technology	Data & Data Representation Hardware & Processing Communication & Networks Information Technology	Algorithms Programming & Development Hardware & Processing Communications & Networks	Algorithms Programming & Development Hardware & Processing Communications & Networks Information Technology	Algorithms Programming & Development Data & Data Representation Hardware & Processing Communications & Networks Information Technology
Sticking Points Common Misconceptions	The use of layers when creating a digital image and the importance of file formats and their different purposes when saving digital graphics.	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 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	Scrolling backgrounds can use different canvases - need to be coded in a loop	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.	AI, machine learning, and deep learning are all the same thing. AI will take everyone's jobs. AI is only for people who work in tech. AI is one thing. AI is inherently biased and should be avoided.
What is needed to master the learning	To produce a design concept for a visual identity that is fully suitable for the client, a justification showing comprehensive understanding of the extent to which the visual identity is fit for purpose and produce detailed planning documentation for the digital graphic product. To be able to use technical skills to create an effective visual identity with appropriate properties and file format. All assets to be used will be prepared with technical skills. Design concepts and layout conventions will be applied effectively and the final digital graphic product will fully meet the client's requirements.	To 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. To be able to explain how contributors to social media may be 'social bots', what malware is and give some examples of how it operates and what its impact could be on a device or user (e.g. viruses, trojans, ransomware). To explain how to manage security software (e.g. anti-virus, security patches, adware blockers) on devices and understand why regular updates are important and explain how and assess when more secure use may require more advanced password management (e.g. dual-factor authentication, regular rolling security questions, CAPTCHA, biometrics).	To successfully demonstrate an understanding of what a network is, be able to explain the advantages and disadvantages of networking and will state some devices needed for networking. To be able to explain the devices needed to create a local area network. To successfully demonstrate an understanding of what the internet is and what data packets are, explain how data travels around the internet and be able to explain the various parts of a data packet To successfully demonstrate an understanding of the various threats to a network, be able to describe how all these threats work and demonstrate an understanding of how all prevention methods work.	To code a scrolling background with support. To describe how the scrolling background code works and how the gravity and bullet code works. To code a baddy flying object and scoring system with support. To describe how the scoring system and baddy object code works. To code a new level which has a new background and 'ground sprites' with support. To decribe how the 'new level scripts' work. To decide on the objectives and theme of your game To design each level, the characters and any scoring items. To build / code each level, the characters and any scoring items.	To carry out a number of programming tasks to program inputs, outputs, store inputs as variables and change data types when working with numbers. To code multiple IF statements, While and For loops.	To describe the difference between 'data-driven' and 'rule-based' approaches to application development. To name examples of AI applications and outline some benefits and issues of using AI applications. To define ML's relationship to AI and name the three common approaches to ML. To describe how classification can be solved using supervised learning. To explain how bias can influence the predictions generated by an ML model. To explain the need for both training and test data.
AOs	AO1 AO2 AO3	AO1 AO2	AO1 AO2	AO1 AO2 AO3	AO1 AO2 AO3	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 2024 - July 2025	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 deisgn 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, haedlines 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 permissionsto 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 informarion. 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.
What is needed to master the learning	To be be able to produce a justification showing comprehensive understanding of the extent to which the visual identity is fit for purpose considering both the client and target audience/consumer.	To produce a design concept for a visual identity that is fully suitable for the client.	To produce detailed planning documentation for the digital graphic product identifying the details of assets to be used including permissions.	To be able to use technical skills to create an effective visual identity/digital graphic with appropriate properties and file format. All assets to be used will be prepared with technical skills.	To explain the term media and know the difference between sectors - Taditional Vs New. To understand the phases of production and the rob roles that fall under each.	To understand and explain the factors influencing product design - how style, layout and content are linked to purpose, client requirements, audience demographics and segmentation.
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 lsoing you marks! Going through the process of testing/checking and suggesting improvements/developments will imrpove your mark for this topic are. Thisis 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.	R093 Creative iMedia in the media industry - Exam
What is needed to master the learning	To produce an effective interpretation of the client brief and explanation of how the intended product meets the client brief and why it appeals to the target audience. To produces detailed pre-production and planning documentation to support the creation of all elements of the final product. To demonstrates a comprehensive understanding of how assets will contribute to the effectiveness of the final product.	To use technical skills to create a range of components that fully support the creation of the final product and that are fully fit for purpose. To use formats to save/export components that are clearly appropriate. To use properties and format(s) for the final product are that clearly appropriate.	To complete testing/checking of technical properties demonstrating a critical understanding of the effectiveness of the final product for the client and target audience. To present recommendations that demonstrate a comprehensive understanding of areas for improvement and further development.	To understand and explain Pre-production planning - documents, legislation, regulation, certification, classification, health and safety.	To understand and explain Distribution considerations - platforms and media, properties and file formats - image, audio and moving files and file compression.	R093 Creative iMedia in the media industry - Exam
AOs	AO1 AO2	AO3	AO4	AO1	AO1	