KS3 Computing Curriculum Map

		Autumn Term		Spring Term		Summer Term	
7	**Unit Title**	**Computer Security**	**Computer Hardware**	**Computer Networks**	**Programming in Scratch**	**Digital Animation**	**Programming in Python**
	Key Knowledge	Threats to computer systems. How to prevent vulnerabilities.	Understand about different computer components. Learn about the purpose of the Central Processing Unit (CPU). Learn about the purpose of Random Access Memory (RAM).	Understand the benefits of networking and network protocols. Understand different hardware components. Compare wired and wireless connections. Learn how data travels across the Internet.	Using sequence, selection and iteration. Using variables and mathematical operators. Testing and refining code.	Creating motion and shape tweening using objects and symbols. Animating text using motion and shape tweening.	Using sequence, variables and appropriate data types. Testing and refining code.
	Links to previous learning	- KS2 Safety and Security.	- KS2 Computer Systems.	- KS2 Computer Systems.	- KS2 Programming.	- KS2 Creative Media.	- KS2 Programming. - Programming in Scratch.

KS3 Computing Subject Curriculum Map

		Autumn Term		Spring Term		Summer Term	
8	Unit Title	**Creating Digital Graphics**	**Programming in Scratch**	**App Development**	**Data Representation**	**HTML**	**Programming in Python**
	Key Knowledge	Understanding how to how to use text and image editing techniques which are fit for purpose. Accurate use of composition.	Using sequence, selection (IF, Else) and iteration. Booloean logic and mathematical operators. Testing and refining code.	Using sequence and selection statements. Understanding about Graphical User Interfaces (GUI). Testing and refining code.	Understanding binary conversion and binary addition. How to complete logic gates. Understand about graphical formats and image resolution.	Understanding key HTML references required to create a webpage.	Using sequence and selection statements. Testing and refining code.
	Links to previous learning	- Year 7 Digital Animation	- Year 7 Programming in Scratch. - Year 7 Programming in Python.	- Year 7 Programming in Python. - Year 8 Programming in Scratch.	-KS2 Data and Information.	- Year 7 Programming in Python. - Year 8 Programming in Scratch.	- Year 7 Programming in Python. - Year 8 Programming in Scratch.

KS3 Subject Curriculum Map

		Autumn Term		Spring Term		Summer Term	
9	Unit Title	**Website Creation**	**JavaScript**	**HTML/CSS**	**Interactive Multimedia**	**Programming in Python**	**Computer Networks/ Cyber Security**
	Key Knowledge	Understanding how to make an effective graphical user interface (GUI).	Understanding some key JavaScript references required for programming webpages.	Using embedded Cascading Style Sheets (CSS). Using and applying division (DIV) tags.	Using interaction controls to create multimedia.	Using sequence and iteration. Testing and refining code.	Threats to computer systems. Understanding about types of networks (Local Area Network and Wide Area Network).
	Links to previous learning	-Year 8 Digital Graphics.	-Year 8 HTML.	-Year 8 HTML and Year 9 JavaScript.	- Year 9 Website Creation.	-Year 8 Programming in Python.	-Year 7 Computer Security and Year 7 Networks.

GCSE Computer Science Curriculum Map

		Autumn Term		Spring Term		Summer Term	
10	**Unit Title**	**1.6: Ethical, Legal, Cultural and Environmental Impacts of Digital Technology - Component 1** **1.1: Systems Architecture - Component 1** **2.2: Programming Fundamentals - Component 2**	**1.1: Systems Architecture - Component 1** **1.2 Memory and Storage - Component 1** **2.2: Programming Fundamentals - Component 2**	**1.2 Memory and Storage - Component 1** **2.2: Programming Fundamentals - Component 2**	**1.3: Computer Networks, Connections and Protocols - Component 1** **2.2: Programming Fundamentals - Component 2**	**1.4: Network Security - Component 1** **2.1: Algorithms - Component 2** **2.2: Programming Fundamentals - Component 2**	**1.5: Systems Software - Component 1** **2.1: Algorithms - Component 2** **2.2: Programming Fundamentals - Component 2**
	Key Knowledge	Impacts of digital technology on wider society. Legislation relevant to Computer Science. The architecture and performance of the central	The architecture and performance of the central processing unit (CPU). Characteristics of embedded systems.	Understanding about units, data storage and data compression.	The characteristics of Local Area Networks (LANs) and Wide Area Networks (WANs). Understanding about the characteristics of types of networks and topologies.	Understanding threats to computer systems and networks and identifying and preventing vulnerabilities. Understanding and applying standard	Understanding the purpose and functionality of operating/utility software/systems. Creating, completing and refining algorithms.

		processing unit (CPU). Characteristic of embedded systems.			The hardware needed to connect computers in a local area network.	searching and sorting algorithms.	
		Using and applying sequence, selection and iteration. Applying string manipulation and file handling. Use of arrays. Use of SQL to search for data. Using sub programs					
	Links to previous learning	- Year 9 Cyber Security - Year 7 Computer Hardware - Year 9 Programming in Python	- Year 7 Computer Hardware - Year 9 Programming in Python - 2.2 Programming Fundamentals	- Year 8 Data Representation - 2.2 Programming Fundamentals	- Year 9 Computer Networks - 2.2 Programming Fundamentals	- Year 9 Computer Networks - 2.2 Programming Fundamentals	- 2.2 Programming Fundamentals

GCSE Computer Science Curriculum Map

		Autumn Term		Spring Term		Summer Term	
11	**Unit Title**	**2.1 Algorithms**	**2.1 Algorithms** **2.3: Producing Robust Programs**	**2. 4: Boolean Logic** **2.5: Programming languages and Integrated Development Environments**	**Revision of component 1 and 2.**	**Revision of component 1 and 2.**	**End of course**
	Key Knowledge	Understanding principles of computational thinking. Designing, understanding and creating algorithms	Understanding principles of computational thinking. Designing, understanding and creating algorithms Understand the tools of an IDE. Defensive design considerations. The purpose and types of testing.	Understand how to create and complete logic diagrams and truth tables. The differences between high and low level languages. The characteristics of a compiler/translator.	Practise exam technique, including short, medium and extended responses.	Final consolidation on components 1 and 2, practise exam technique - short, medium and extended responses.	End of course

	Links to previous learning	- 2.1 Algorithms - 2.2 Programming Fundamentals	- 2.1 Algorithms - 2.2 Programming Fundamentals	- Year 8 Data Representation - Year 9 Computer Networks	- Component 1 and 2	- Component 1 and 2	

Creative iMedia Curriculum Map (J837)

		Autumn Term		Spring Term		Summer Term	
10	**Unit Title**	**Preparation for R094: Visual Identity and Digital Graphics**	**R094: Visual Identity and Digital Graphics**	**R094: Visual Identity and Digital Graphics**	**R094: Visual Identity and Digital Graphics**	**Preparation for R097: Interactive Digital Media**	**R097: Interactive Digital Media**
	Key Knowledge	**R094**: Techniques to plan visual identity and digital graphics **R094**: Tools and techniques to create visual identity and digital graphics **R094**: Technical skills to source, create and prepare assets for use within digital graphics **R094**: Techniques to save and export	**R094**: NEA Assessment (working on)	**R094**: NEA Assessment (working on)	**R094**: NEA Assessment (working on)	**R097**: Techniques to plan interactive digital media **R097**: Tools and techniques to create interactive digital media **R097**: Technical skills to source, create and prepare assets **R097**: Techniques to save and export/publish interactive digital media	**R097**: NEA Assessment (working on)

		visual identity and digital graphics					
	Links to previous learning	-Year 8 Digital Graphics. -Year 9 Website Creation -Year 9 Interactive Multimedia	-Year 8 Digital Graphics. -Year 9 Website Creation -Year 9 Interactive Multimedia	-Year 8 Digital Graphics. -Year 9 Website Creation -Year 9 Interactive Multimedia -Year 9 HTML/CSS	-Year 8 Digital Graphics -Year 9 Website Creation -Year 9 Interactive Multimedia -Year 9 HTML/CSS	-Year 8 Digital Graphics -Year 9 Website Creation -Year 9 Interactive Multimedia -Year 9 HTML/CSS	-Year 8 Digital Graphics -Year 9 Website Creation -Year 9 Interactive Multimedia -Year 9 HTML/CSS

Creative iMedia Curriculum Map (J837)

		Autumn Term		Spring Term		Summer Term	
11	**Unit Title**	**R097: Interactive Digital Media**	**R097: Interactive Digital Media**	**R097: Interactive Digital Media**	**R093: Creative iMedia in the Media Industry**	**R093: Creative iMedia in the Media Industry**	**R093: Creative iMedia in the Media Industry**
	Key Knowledge	**R097**: NEA Assessment (working on)	**R097**: NEA Assessment (working on)	**R097**: NEA Assessment (Working on) **R093**: The media industry (TA1) **R093**: Factors influencing product design (TA2)	**R097**: (submit for moderation) **R093**: Pre-production planning (TA3) **R093**: Distribution considerations (TA4)	**R093:** Revision and mock papers/tests **R093**: Examination (Terminal unit)	End of course
	Links to previous learning	R094: Visual Identity and Digital Graphics	R094: Visual Identity and Digital Graphics	R094: Visual Identity and Digital Graphics R097: Interactive Digital Media	R094: Visual Identity and Digital Graphics R097: Interactive Digital Media	R094: Visual Identity and Digital Graphics R097: Interactive Digital Media	