

KS3 Computing Curriculum Map

		Autumn Term		Spring Term		Summer Term	
7	Unit Title	Computer Security	Computer Hardware	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 use text and image editing techniques which are fit for purpose. Accurate use of composition.	Using sequence, selection (IF, Else) and iteration. Boolean 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

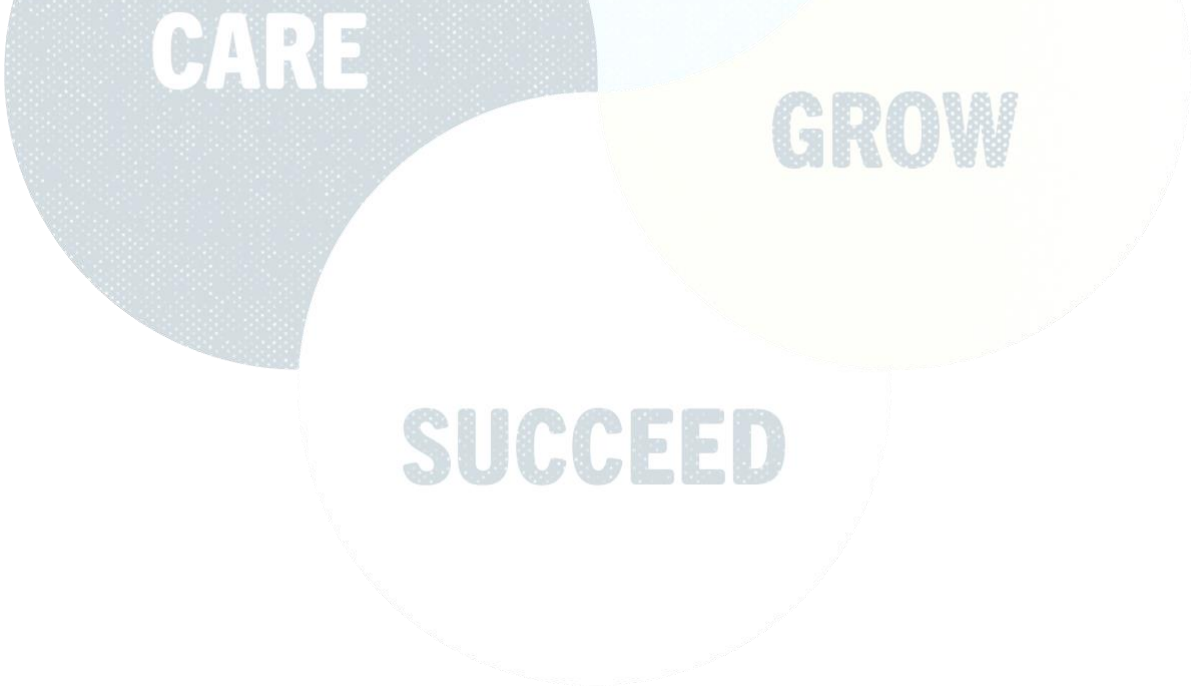
		Autumn Term		Spring Term		Summer Term	
9	Unit Title	JavaScript	Website Creation	HTML/CSS	Interactive Multimedia	Programming in Python	Computer Networks/ Cyber Security
	Key Knowledge	Understanding some key JavaScript references required for programming webpages.	Understanding how to make an effective graphical user interface (GUI).	Using 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 HTML.	-Year 8 Digital Graphics.	-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	Ethical, Legal, Cultural and Environmental Impacts of Digital Technology - Component 1	Network Security - Component 1 Systems Software - Component 1 Programming Fundamentals - Component 2	Memory and Storage - Component 1 Programming Fundamentals - Component 2	Algorithms - Component 2 Programming Fundamentals - Component 2	Algorithms - Component 2	Algorithms - Component 2
	Key Knowledge	Impacts of digital technology on wider society. Legislation relevant to Computer Science.	Understanding about the characteristics of types of networks and topologies. The hardware needed to connect computers in a local area network.	Understanding the need for primary and secondary storage and the characteristics of different storage media.	Understanding and applying standard searching and sorting algorithms.	Understanding principles of computational thinking. Designing, understanding and creating algorithms.	Creating, completing and refining algorithms. Using trace tables to follow algorithms.

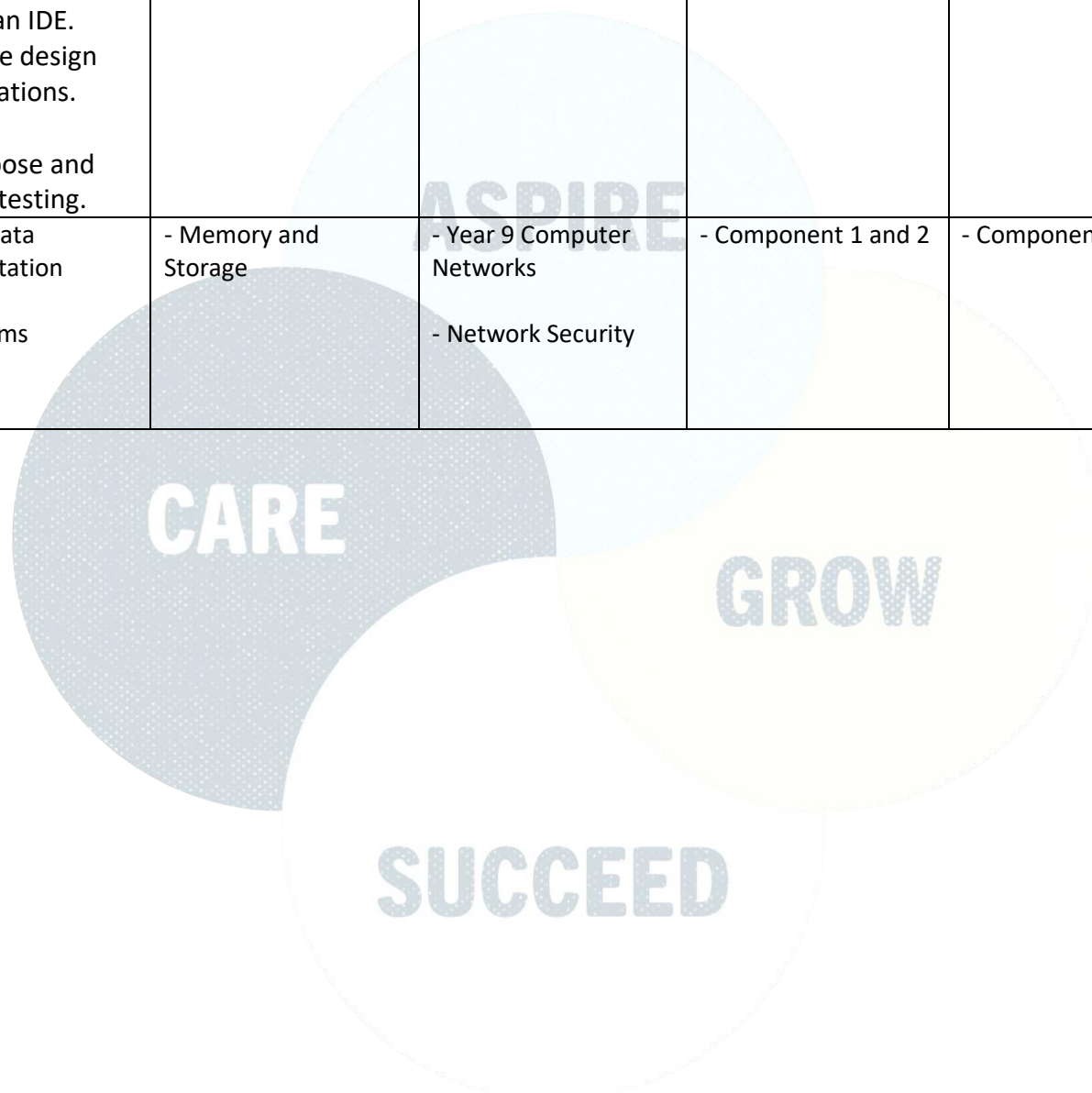
			Using and applying sequence, selection and iteration. Applying string manipulation and file handling. Use of arrays. Use of SQL to search for data. Using sub programs				
Links to previous learning	- Year 9 Cyber Security	- Year 9 Cyber Security - Year 9 Programming in Python	- Year 7 Computer Hardware	- Programming Fundamentals	- Programming Fundamentals	- Programming Fundamentals	- Programming Fundamentals



GCSE Computer Science Curriculum Map

		Autumn Term		Spring Term		Summer Term	
11	Unit Title	Boolean Logic. Programming Languages and Integrated Development Environments (IDE) Producing Robust Programs. Component 2	Systems Architecture - Component 1	Computer Networks, Connections and Protocols - Component 1	Revision of component 1 and 2.	Revision of component 1 and 2.	End of course
	Key Knowledge	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.	The architecture and performance of the central processing unit (CPU). Characteristic of embedded systems.	The characteristics of Local Area Networks (LANs) and Wide Area Networks (WANs).	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

		Understand the tools of an IDE. Defensive design considerations.					
		The purpose and types of testing.		ASPIRE			
Links to previous learning	- Year 8 Data Representation - Algorithms	- Memory and Storage	- Year 9 Computer Networks - Network Security	- Component 1 and 2	- Component 1 and 2		





Creative iMedia Curriculum Map

		Autumn Term		Spring Term		Summer Term	
10	Unit Title	R085: Creating a Multipage Website	R085: Creating a Multipage Website	R085: Creating a Multipage Website	R082: Creating Digital Graphics	R082: Creating Digital Graphics	R082: Creating Digital Graphics
	Key Knowledge	Understand the properties and features of websites. Plan a website.	Create a website using multimedia components.	Create a website using multimedia components. Review a website.	Understand the purpose and properties of digital graphics. Plan a digital graphic.	Create a digital graphic.	Create a digital graphic. Review a digital graphic.
	Links to previous learning	- KS3 Computer Hardware and Computer Networks. - HTML/CSS, Website Creation.	- KS3 Computer Hardware and Computer Networks. - HTML/CSS, Website Creation.	- KS3 Computer Hardware and Computer Networks. - HTML/CSS, Website Creation.	- KS3 Digital Graphics	- KS3 Digital Graphics	- KS3 Digital Graphics

SUCCEED

Creative iMedia Curriculum Map

		Autumn Term		Spring Term		Summer Term	
11	Unit Title	R087: Creating Interactive Multimedia Products	R087: Creating Interactive Multimedia Products R081: Pre-Production Skills	R087: Creating Interactive Multimedia Products R081: Pre-Production Skills	Revision of R081	Revision of R081	End of course
	Key Knowledge	Understand the uses and properties of interactive multimedia products. Plan interactive multimedia products.	Create interactive multimedia products. Understand the purpose and content of pre-production and plan pre-production documents.	Create interactive multimedia products. Review interactive multimedia products. Produce pre-production documents and review pre-production documents.	Practise exam technique, including short, medium and extended responses.	Final consolidation practise exam technique - short, medium and extended responses.	

	Links to previous learning	<ul style="list-style-type: none"> - KS3 Computer Hardware and Computer Networks. - HTML/CSS, Website Creation. 	<ul style="list-style-type: none"> - KS3 Computer Hardware and Computer Networks. - HTML/CSS, Website Creation. 	<ul style="list-style-type: none"> - KS3 Computer Hardware and Computer Networks. - HTML/CSS, Website Creation. 	<ul style="list-style-type: none"> - R085, R082 and R087. 	<ul style="list-style-type: none"> - R085, R082 and R087. 	
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