

ICT Year 9 - SOW Long term plans by Year group

½ Terms	Year group	Topic	Skills taught plus links to spiritual, moral, social and cultural development
Autumn 1st ½ Term	Y9	<p>9.1 – Understanding computers</p> <p>This is a theoretical unit covering the basic principles of computer architecture and use of binary. Students will revise some of the theory on input and output covered in previous learning and continue to look at the Input-Process-Output sequence and the Fetch-Decode-Execute cycle through practical activities. Students will then look at some simple binary to decimal conversion and vice versa, and learn how text characters are represented using the ASCII code.</p>	<p>Understand simple Boolean logic eg AND, OR, NOT and perform simple binary calculations eg ADD and convert binary to decimal.</p> <p>Identify hardware and software components that make up a computer system.</p> <p>Explain how instructions are stored and executed within a computer system.</p> <p>Identify how data (including text, sounds and pictures) can be represented and manipulated digitally in the form of binary digits.</p> <p>Spiritual, moral, social and cultural development links: M/IMVEI – see key below</p>
Autumn 2nd ½ Term	Y9	<p>9.2 – Scratch Advanced games programming</p> <p>Students begin this unit with an introduction to the Scratch programming environment, and by reverse-engineering some existing games. They then progress to planning and developing their own game, learning to incorporate variables, procedures (using the Broadcast function), lists and operators. They should be able to create a fully working game with lives, scoring and some randomisation of objects. Finally they will learn to test and debug their programs.</p>	<p>Design and evaluate computational abstractions using a programming language.</p> <p>Understand key algorithms for example ones for sorting and searching</p> <p>Understand simple Boolean logic eg AND, OR, NOT.</p> <p>Evaluate the end product and offer suggestions for improvements.</p> <p>Spiritual, moral, social and cultural development links: SP/UICL – see key below</p>

<p>Spring 1st ½ Term</p>	<p>Y9</p>	<p>9.3 - Networks This is a theoretical unit covering the basic principles and architecture of local and wide area networks. Students will learn that the World Wide Web is part of the Internet, and how web addresses are constructed and stored as IP addresses using DNS. Students will learn about data transmission and through an understanding of different network topologies and network hardware, they will plan the structure of a local area network. Client-server, peer-to-peer networks and the concept of cloud computing are all described. Ways of keeping data secure and simple encryption techniques are also covered. In the final lesson, Students will sit a multiple choice test which will form the Unit assessment.</p>	<p>Identify hardware and software components that make up a computer system and how they communicate with one another and with other systems.</p> <p>Spiritual, moral, social and cultural development links: SC/PCRC – see key below</p>
<p>Spring 2nd ½ Term</p>	<p>Y9</p>	<p>9.4 - Graphics – Faking it Students will edit, design and manipulate a range of images and create their own images using appropriate image editing software</p>	<p>Design creative projects that include using and combining multiple applications. Create, re-use, revise digital artefacts for a given audience with attention to trustworthiness, design and usability. Evaluate the end product and offer suggestions for improvements. Spiritual, moral, social and cultural development links: M/IMVEI – see key below SP/UICL – see key below</p>

<p>Summer 1st ½ Term</p>	<p>Y9</p>	<p>9.5 – Html code In the first three lessons, Students will learn the basics of HTML and CSS, and how to create a responsive design which adapts to any size of screen for viewing on, say, a mobile phone or a PC. They will learn how to create text styles and add content, including text and graphics, in a specified position on a page, as well as navigation links to other pages on their website and to external websites. They will decide on a topic for their own websites, document their designs and collect suitable text and images. They will then use HTML templates to create their websites, including a web form.</p>	<p>Design creative projects that include using and combining multiple applications eg video editing, websign and sound manipulation.</p> <p>Spiritual, Moral, Social And Cultural Development Links: SP/UICL – see key below</p>
<p>Summer 2nd ½ Term</p>	<p>Y9</p>	<p>9.6 – Advanced Spreadsheets Students will create an advanced spreadsheet to model data and calculate profit/loss. The spreadsheet will make good use of formula/functions to ensure accurate calculations are made.</p>	<p>Model data using a spread sheet and change variables within it. Evaluate the end product and offer suggestions for improvements. SP/UICL – see key below</p>

Aspect	Area covered	Code
Cultural	Exploring, understanding and respecting diversity	C/EURD
	Participating and responding to cultural activities	C/PRCA
	Understanding and appreciating personal influences	C/UAPI
Moral	Developing and expressing personal views or values	M/DEPV
	Investigating moral values and ethical issues	M/IMVEI
	Recognising right and wrong and applying it	M/MCMV
	Developing personal qualities and using social skills	M/RRWA
	Understanding the consequence of actions	M/UCA
Social	Developing personal qualities and using social skills	SC/PQSS
	Participating, cooperating and resolving conflicts	SC/PCRC
	Understanding how communities and societies function	SC/UCSF
Spiritual	Developing personal values and beliefs	SP/DPVB
	Experiencing fascination, awe and wonder	SP/EFAW
	Exploring the values and beliefs of others	SP/EVBO
	Understanding human feelings and emotions	SP/UHFE
	Using imagination and creativity in learning	SP/UICL