

# Beamont Collegiate Academy Curriculum Map



**Year: 7**

**Subject: Computing**

Intent	Implementation	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Clarity around knowledge	Theme / topic	Introduction to the digital environment	Become an active and safe participant in the digital world	Develop your digital literacy, with flair and confidence	Going deeper with Computer Science basics	Data and logic will develop the computational thinker	Purposeful programming project, to satisfy a brief
	Key substantive knowledge	<ul style="list-style-type: none"> <li>• What is the network</li> <li>• What is the cloud</li> <li>• E-safety the risks</li> <li>• E-safety measures</li> <li>• Conveying a message</li> <li>• Purpose and audience</li> </ul>	<ul style="list-style-type: none"> <li>• Static content vs dynamic content</li> <li>• Animation as a collection of frames</li> <li>• IT security</li> </ul>	<ul style="list-style-type: none"> <li>• BIOS (understanding input process output)</li> <li>• Purpose of the CPU</li> <li>• Stages of the fetch decode execute cycle</li> <li>• CPU components</li> </ul>	<ul style="list-style-type: none"> <li>• Memory (RAM &amp; ROM)</li> <li>• Kinds of instructions and volatility</li> <li>• Binary conversion methods</li> <li>• Binary addition method</li> </ul>	<ul style="list-style-type: none"> <li>• Logic gates and truth tables</li> <li>• Logic circuits</li> <li>• Programming basics (the 3 constructs and the main programming techniques)</li> </ul>	<ul style="list-style-type: none"> <li>• Reaction to a design brief</li> <li>• Target Audience and purpose</li> <li>• Game development</li> <li>• Programming techniques: variables / assignment / sequencing / selection / iteration</li> </ul>
	Disciplinary knowledge	<ul style="list-style-type: none"> <li>• Accessing and using network and cloud</li> <li>• Recognising risks and taking precautions</li> <li>• Developing a poster to convey a message to a specific audience</li> </ul>	<ul style="list-style-type: none"> <li>• Animation creation using stop frame / framerate</li> <li>• development of animated social media content.</li> <li>• Embedding dynamic content into e-portfolio</li> </ul>	<ul style="list-style-type: none"> <li>• Identification of internal components</li> <li>• Embedding dynamic content into e-portfolio</li> </ul>	<ul style="list-style-type: none"> <li>• Converting binary to denary</li> <li>• Converting denary to binary</li> <li>• Adding binary numbers (4 bit)</li> </ul>	<ul style="list-style-type: none"> <li>• Drawing the logic gates</li> <li>• Drawing logic circuits</li> <li>• Solving truth tables</li> <li>• Simple variable, input output programs</li> </ul>	<ul style="list-style-type: none"> <li>• Composing a response to a brief</li> <li>• Game interface and character creation</li> <li>• Using the programming techniques: variables / assignment / sequencing / selection / iteration</li> </ul>
Clarity around sequencing	Main links across the curriculum	<ul style="list-style-type: none"> <li>• IT sec Term 1 in y8 (encryption / Turing)</li> <li>• Digi lit for working between network and cloud and</li> </ul>	<ul style="list-style-type: none"> <li>• Animations dev Term 2 in year 9</li> <li>• Digi lit for working between network and cloud and developing eportfolio</li> </ul>	<ul style="list-style-type: none"> <li>• Revisited in term 2 year 8</li> <li>• Digi lit for working between network and cloud and developing eportfolio</li> </ul>	<ul style="list-style-type: none"> <li>• Revisited in term 2 year 8</li> <li>• Digi lit for working between network and cloud and</li> </ul>	<ul style="list-style-type: none"> <li>• Revisited in term 2 / 3 year 8</li> <li>• Digi lit for working between network and cloud and developing eportfolio</li> </ul>	<ul style="list-style-type: none"> <li>• Digi lit for working between network and cloud and developing eportfolio</li> </ul>

		developing eportfolio			developing eportfolio		
	Authentic cross curricular links	<ul style="list-style-type: none"> <li>• Reading curric (Turing)</li> </ul>	<ul style="list-style-type: none"> <li>• Sequencing as a concept for animations applied in programming in Term 5 and in year 8 term 5</li> </ul>	<ul style="list-style-type: none"> <li>• Circuitry on motherboard links with engineering and technology</li> </ul>	<ul style="list-style-type: none"> <li>• Binary conversions and addition require numeracy skills / maths</li> </ul>	•	•
Vocabulary	Key word	<ul style="list-style-type: none"> <li>• Network / cloud / user area / shared area / folder structure</li> <li>• E-safety / cyberbullying / sexting / privacy settings / geo tagging / personal</li> </ul>	<ul style="list-style-type: none"> <li>• Animate / frames / frame rate / stop frame / static content / dynamic content</li> <li>• It security / malware / phishing scams / hacking / brute force attack / firewall</li> </ul>	<ul style="list-style-type: none"> <li>• Input / process / output / storage / general purpose computer / embedded computer</li> <li>• CPU / CU / ALU / FDE / cache / RAM / processing / instruction cycles / cores / clockspeed / mther board / address bus / data bus</li> </ul>	<ul style="list-style-type: none"> <li>• RAM / ROM / Instructions / Volatile / bootstrapping instructions / address locations</li> <li>• Binary / denary notation system / conversion / bit / nibble / byte</li> </ul>	•	•
Assessment	Summative assessment	<ul style="list-style-type: none"> <li>• MCQs</li> <li>• Peer marked timed Q activity</li> <li>• Quality of development and embedded content into e-portfolio</li> </ul>	<ul style="list-style-type: none"> <li>• MCQs</li> <li>• Peer marked timed Q activity</li> <li>• Quality of development and embedded content into e-portfolio</li> </ul>	<ul style="list-style-type: none"> <li>• MCQs</li> <li>• Peer marked timed Q activity</li> <li>• Quality of development and embedded content into e-portfolio</li> </ul>	<ul style="list-style-type: none"> <li>• MCQs</li> <li>• Peer marked timed Q activity</li> <li>• Quality of development and embedded content into e-portfolio</li> </ul>	<ul style="list-style-type: none"> <li>• MCQs</li> <li>• Peer marked timed Q activity</li> <li>• Quality of development and embedded content into e-portfolio</li> <li>•</li> </ul>	•
Links to the real world / careers / PD		<ul style="list-style-type: none"> <li>• It security jobs</li> <li>• Digital development pathways</li> </ul>	•	•	•	•	•