

Year 7 Computing Sequence

Year	Content Taught	National Curriculum Reference	Essential Knowledge	Assessment	Rationale
Year 7					
YEAR 7 HT1/HT2	In this half term students will study a topic focused on: E-Safety Digital Footprint.	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	Cyberbullying including: <ul style="list-style-type: none"> • Malware • Phishing • Hacking etc Students develop essential knowledge in lessons.	Formative Students will complete retrieval exercises each lesson to review and recall knowledge from previous lessons and apply this knowledge to alternate scenarios to deepen understanding. Summative Students will complete a Teams based KO Test to summarise content. Within this half term students will develop essential knowledge in lessons and 'bring it all together', by implementing it into a challenging and motivational ICT based "design and create" task using the software that students have been	This Essential Knowledge builds on knowledge gained in KS2, learning how technology is used safely, respectfully and responsibly. We introduce e-safety to ensure all students know how to stay safe online. We highlight our school network rules and regulations. They are introduced programming using the Python Programming Language to increase their understanding of algorithms and computational thinking. All further units link to Computer Science so students are given a wide selection of essential

				developing skills in using.	knowledge. This will be further developed in KS4
HT2	In this half term students will study a topic focused on: Creating Algorithms in Flowol	Understand several key algorithms that reflect computational thinking [for example, ones for sorting and searching]; use logical reasoning to compare the utility of alternative algorithms for the same problem	Instructions learned include: Computational thinking, Flowol, print, variables, data types, input, if and for loops, angles of shapes, iteration, and procedures Draws on essential knowledge learned in Year 7	Formative Students will complete retrieval exercises each lesson to review and recall knowledge from previous lessons and apply this knowledge to alternate scenarios to deepen understanding. Summative Students will complete a Teams based KO Test to summarise content. Within this half term students will develop essential knowledge in lessons and ‘bring it all together’, by implementing it into a challenging and motivational Flowol based “design and create” task to apply algorithmic thinking into a challenging Flowol based scenario.	Sequence and Progression: E-safety is linked to the Year 8 Units: Binary and Networks, Cyber Security & Encryption. It is also linked in KS4 to Component 3 Digital Working Practices. Algorithms in Flowol is linked to all programming based units including Python programming turtle, Scratch programming, Kodu and Python programming (text-based). Cross Curricular Knowledge Connections with Maths in Yr7 Calculations, shapes and angles. Programming Python Turtle is linked to Kodu in Year 8. It is also linked in KS4 to Algorithms and
HT3 & HT4	In this half term students will study a topic focused on:	Understand several key algorithms that reflect computational thinking [for	Instructions include: Computational thinking, python, print, variables,	Formative Students will complete retrieval exercises each	

	<p>Programming Python Turtle.</p>	<p>example, ones for sorting and searching]; use logical reasoning to compare the utility of alternative algorithms for the same problem</p>	<p>data types, input, if and for loops, angles of shapes, iteration and procedures.</p> <p>Draws on essential knowledge learned in HT2 and HT3</p>	<p>lesson to review and recall knowledge from previous lessons and apply this knowledge to alternate scenarios to deepen understanding.</p> <p>Summative Students will complete a Teams based KO Test to summarise content.</p> <p>Within this half term students will develop essential knowledge in lessons and 'bring it all together', by implementing it into a challenging Python programming creation task. Students will apply algorithmic thinking to create a Python based solution to the task set.</p>	<p>Programming techniques, Translators in Computer Science in Yr10 and Systems Architecture in Yr11.</p> <p>Cross Curricular Knowledge Connections with Maths in Yr7 Calculations, shapes and angles.</p>
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<p>HT5 & HT6</p>	<p>In this half term students will study a topic focused on:</p> <p>Scratch programming</p>	<p>Understand several key algorithms that reflect computational thinking [for example, ones for sorting and searching]; use logical reasoning to compare the utility of alternative algorithms for the same problem</p>	<p>Instructions include:</p> <p>Computational thinking, using block-based programming constructs including sequencing, iteration and selection.</p> <p>Draws on essential knowledge learned in HT2, HT3 & HT4</p>	<p>Formative</p> <p>Students will complete retrieval exercises each lesson to review and recall knowledge from previous lessons and apply this knowledge to alternate scenarios to deepen understanding.</p> <p>Summative</p> <p>Students will complete a Teams based KO Test to summarise content.</p> <p>Within this half term students will develop essential knowledge in lessons and ‘bring it all together’, by implementing it into a challenging and motivational Scratch based “design and create” task which challenges students to apply all of their knowledge of Scratch to create their own functional game.</p>	
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