

Programme of study for Year 9 Computer Science

Autumn (1 st term)	Autumn (2 nd term)	Spring (1 st term)	Spring (2 nd Term)	Summer (1 st term)	Summer (2 nd term)
<p>Programming:(3)</p> <p>App design skills</p> <p>Skills:</p> <p>Literacy: Technical terms creativity</p>	<p>Programming:(3)</p> <p>Appshed introduction, learning new skills</p> <p>Skills:</p> <p>Literacy: Technical terms Logical thinking</p>	<p>Programming constructs:</p> <p>Programming Refresher</p> <p>Variables</p> <ul style="list-style-type: none"> - Operators =-/*, - Data types string, real, integer, boolean, character. - inputs and casting - Selection - Iteration - Sequencing <p>Skills:</p> <p>Literacy: Technical terms. Logical thinking</p>	<p>Standard Algorithm to process data</p> <p>Serial Search:</p> <p>Programming:</p> <p>Python lists and index positions. Loop refresher and coding a serial search</p> <p>Skills:</p> <p>Literacy: Technical terms Logical thinking</p>	<p>Standard Algorithm to process data</p> <p>Binary Search and bubble sort algorithm</p> <p>Skills:</p> <p>Logical thinking</p>	<p>Kodu Introduction</p> <p>How 3D games are created.</p> <p>Skills:</p> <p>Creativity</p>
<p>End of term 1 evidence to cover:</p> <p>Design and Programming Skills.</p>		<p>End of term 2 evidence to cover:</p> <p>Understanding of a standard algorithm and coding a serial search</p>		<p>End of year evidence to cover:</p> <p>Understanding of standard algorithms and creativity through gaming</p>	
<p>Rationale for sequence:</p> <p>Using programming constructs in a block coding environment to produce a creative interactive app</p>		<p>Rationale for sequence:</p> <p>introducing how data is stored on a computer and simple constructs</p>	<p>Rationale for sequence:</p> <p>Having revisited a text based language we look at the simplest search algorithm and build up</p>	<p>Rationale for sequence:</p> <p>Having looked at how to code a serial search we look at an alternative search algorithm and</p>	<p>Rationale for sequence:</p> <p>Using programming skills learnt over KS3. An introduction to game coding for those wanting</p>

			the coding skills to achieve this	introduce a sorting algorithm	to code at home at the end of the year
Home – Learning: Home learning <u>related to the topic</u> completed during the term.	Home – Learning: Home learning <u>related to the topic</u> completed during the term.	Home – Learning: Home learning <u>related to the next topic</u> to be completed so that students get a chance to become familiar with the content.	Home – Learning: Home learning <u>related to the next topic</u> to be completed so that students get a chance to become familiar with the content.	Home – Learning: Home learning <u>related to the topic</u> completed during the term.	Home – Learning: Home learning <u>related to the next topic</u> to be completed so that students get a chance to become familiar with the content.
Reading / High Quality Text: Numerous reading opportunities, students read the objectives, presentation slides and other content related to the lesson https://appinventor.mit.edu/explore/news	Reading / High Quality Text: Numerous reading opportunities, students read the objectives, presentation slides and other content related to the lesson https://www.linkedin.com/pulse/educations-new-era-ai-how-empowering-young-generation-maria-ko	Reading / High Quality Text: Numerous reading opportunities, students read the objectives, presentation slides and other content related to the lesson https://www.learnpython.org/	Reading / High Quality Text: Numerous reading opportunities, students read the objectives, presentation slides and other content related to the lesson https://www.bbc.co.uk/bitesize/guides/zgr2mp3/revision/2	Reading / High Quality Text: Numerous reading opportunities, students read the objectives, presentation slides and other content related to the lesson https://isaacomputerscience.org/concepts/dsa_search_bubble?examBoard=all&stage=all	Reading / High Quality Text: Numerous reading opportunities, students read the objectives, presentation slides and other content related to the lesson https://kodu.en.softonic.com/
Numeracy: research how many variations there are e.g. navigation?	Numeracy: Research big numbers e.g. How many apps are currently on the Apple App Store?	Numeracy: Variables, float numbers	Numeracy: Variables int numbers	Numeracy: Binary search, division	Numeracy: Variable movement speeds, hit counts, scores
Enrichment / opportunities to develop cultural capital (including careers, WRL and SMSC):					

Are all apps good? Are all programmers doing good? SMSC

Encourage participation of masterclasses, hackathons and competitions