

Computing KS3 Curriculum Overview - 2020-2021.

Our 4 Cornerstones of Computing Curriculum are:

1. Problem solving through programming
2. Cyber Security/Data Awareness
3. Creative use of Computers
4. Data structures using ICT

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 7 (2 hours per fortnight.)	<i>ICT</i> Logon Office 365/SMH E-Safety Social Network Data-safe Email Web searching	<i>Understanding Computers</i> Elements of a Computer CPU Understanding Binary Storage	<i>Programming</i> Introduction to Kodu Modelling Real world Gaming Programming constructs	<i>Spreadsheet Modelling</i> Computer Models Financial Model What if Conditional Formatting Charts	<i>ICT Computing</i> Web design CSS Design Development Web-Forms	<i>Graphics</i> Vector Graphics Bitmap Graphics Effects and Enhance Adding text
<i>Assessment</i>	Online Quiz-MCQ's	Online Quiz- MCQ's	Online Quiz- MCQ's Game Evaluation	Online Quiz- MCQ's	Online Quiz- MCQ's	Online Quiz- MCQ's EOU assessment
		Christmas Assessment		Easter Assessment		EOY Assessment
	Cyber Security/Data structures	Data structures/Problem solving	Problem solving/Creative/Data Structure	Data Structures/Problem Solving	Data structures/Creative/data security	Creative/ Security
	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 8 (2 hours per fortnight.)	<i>Binary</i> SMH-Office365 Binary to denary Denary to binary <ul style="list-style-type: none"> • 8 Bit/9 bit numbers Hex AND/OR/NOT gates	<i>Computing-Cyber Security</i> Email scams Hacking Personal Data Copyright H&S	<i>Computing Interface</i> Intro to apps Home-screen and navigation Adding files Using map functions	<i>Sound Manipulation in Audacity</i> Digitizing sound Jobs in Sound Listening and planning Advertising Finishing	<i>Computing</i> Python If statements Controlled and conditional loops Procedures	<i>Database Development</i> Introduction Creating a table Queries Input forms Creating a report testing
<i>Assessment</i>	Online Quiz- MCQ's Excel document	Online Quiz- MCQ's	Online Quiz- MCQ's	Online Quiz- MCQ's Sound file	Online Quiz- MCQ's Python Quiz	MCQ's EOU assessment
		Christmas Assessment		Easter Assessment		EOY Assessment
	Problem solving/data Structures	Cyber Security	Creative/Problem solving	Creative/Data structures/security	Problem solving, Creative use	Data structures/security use

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 9 (2 Hours per fortnight)	Project production skills Gant charts Mood Boards Visualisation techniques	Computing Project Using Python to solve real world problems	Creating a multipage website Analysing existing Webpages Planning and design Assets creation Navigation	Cyber Security Networks and security online Ethical hacking Cypher script	Creating digital graphics for context briefs File Formats Image evaluation Sourcing and creating digital assets	Designing a game Concept Analysing requirements Plan a concept Design a digital proposal
Assessment Type	Project plan hand in	Online MCQ	Project hand in	Online MCQ	Project hand in	Proposal hand in
		Christmas Assessment		Easter assessment		EOY Assessment
Curriculum Content	Problem solving/data structures	Problem solving/Creative use of computers	Creative use of Computers/Data structures	Cyber Security/Data structures	Creative use of Computers/Problem solving	Creative use of Computers/Problem solving and design
	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 10 (5 Hours per fortnight)	Computer Systems Systems architecture – purpose of a CPU, Von Neumans structure, Components and function	Memory – Difference between RAM and ROM, types of memory Storage – data storage, capacity, types of storage	Wired and wireless networks – LAN WAN, Internet as worldwide, DNS, Hosting and The cloud, Roles of computers in client - server and peer to peer,	Wired and wireless networks Network topologies, protocols and Layers, network concepts	Systems Security – forms of attacks, encryption	Systems software Types of software Utility Software Operating systems Ethical legal, Cultural and environmental impact Legal impact and restrictions, Computing Laws
	EOU tests MCQ's	EOU tests MCQ's	EOU tests MCQ's	EOU tests MCQ's	EOU tests MCQ's	EOU tests MCQ's
Year 11 (5 Hours per fortnight)	Programming project • Programming techniques • Analysis • Design • Development • Testing and evaluation and conclusions	Programming project • Programming techniques • Analysis • Design • Development • Testing and evaluation and conclusions	Computational Thinking, Algorithms and Programming Programming project Programming techniques Variables Operators Sequence Selection Iteration	Computational Thinking, Algorithms and Programming Programming project Programming techniques File handling String manipulation Records Arrays Sub programs Data types	Computational logic Robust programs Logic – Binary Logic gates Logic circuits	
	Exam Board Guidance	Exam Board Guidance	EOU tests MCQ's – Program notes	EOU tests MCQ's – Program notes	EOU tests MCQ's	