Computing & IT Curriculum Learning Journey

Knowledge & Concepts increase students depth/ challenge and build on previous learning where topics are revisted throughout their learning journey

		Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13
Half Term 1	Topics	Welcome to Computing & E-Safety	E-Safety and Networks	Computational Thinking		IT-R012- LO 4: Security, prevention, Legislation, and Validity	Unit 1 Fundamentals of IT	Product Development & Cyber Security
	Knowledge	Introduction to school computing system/staff/protocols	Using technology safely, respectfully, responsibly and securely. Develop an understanding the use of the internet & Global networks.	Learning how to break down problems into manageable tasks when solving problems.		Cyber Security, preventing breaches in digital systems. Legal protection & Ethics.	Hardware, Software & Communication. Understanding Computer Systems	Product Development: Implementation &Testing. Cyber Security: Threats to Systems
Half Term 2	Topics	Scratch	Computational Thinking and Python Programming	Python Programming		LO6: Methods for Processing Data & Presenting Information.	Servers & Networks	Risk Management & Controls
	Knowledge	Developing modular programs that use procedures or functions	Learning how to break down problems into manageable tasks. Developing modular programs that use procedures or functions	Developing and writing programs in text based language.		Selecting appropriate software tools and techniques to process data.	Communication skills & exam Preparation	Exam Preparation.

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	Topics	Flowol	Understanding Computers Systems	The CPU		LO1.1 & 2: System Life cycle.	Unit 2: Global Information	Unit 17 IoE: Research Products

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Half Term 3	Knowledge	Boolean logic Hardware/software Data representation	Computer Hardware, CPU and digital devices.	Functions, components & embedded systems.		Stages of the project life cycle.	Information & Data. Legislation, Data Protection & Green IT.	Application of products. Client Problem. Presentation of ideas.
Half Term 4	Topics	Spreadsheets	Computer Crime & Security	Networks		LO3.1: Data collection, storage and use	Global Information in Practice.	Product Development: Unit 9: Merit+
	Knowledge	Data manipulation/presentation	legal safeguards regarding computer use and protecting online identity and privacy.	Router, IP address Switches & Packet		Data types. Understanding how Data is stored with its benefits and limitations.	Case Studies and the practical application.	Analyse Results & potential enhancements.

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Half Term 5	Topics	Hardware	Python Extended	Ethics & Legislation		Exam RO12	Exam: Unit 2	Coursework
	Knowledge	Understanding Computer Systems	Develop programming language to write efficient programmes.	Legal safeguards regarding computer use.		Exam Revision, Mock exam	Exam Preparation.	Review & Evaluate..

Half Term 6	Topics	Micro bit Programming	Databases	Cyber Security			Unit 9 Product Development	
	Knowledge	Using block code to write programs.	Structured Query Language	Securing data and Devices			System Life Cycle	