Year 7 Curriculum Plan
Computing

	Autumn 1 Using computers safely, effectively and reliably	Autumn 2 Computing systems	Spring 1 Flowol	Spring 2 Networks	Summer 1 Modelling with spreadsheets	Summer 2 Programming with the Microbit
PRIOR LEARNING	Students will build on any KS2 prior knowledge on internet safety and use of Office 365. It is a legal requirement and underpins the curriculum requirements in both primary and secondary school.	Students will build on any KS2 knowledge on selecting and using a variety of software on a range of digital devices to design and create a range of programs to accomplish given goals.	Students will build on any KS2 knowledge of control technologies and how they help make our lives easier and sequence, selection, iteration and variables within algorithms.	Students will build on any KS2 knowledge on computer networks, including the internet; how they can provide multiple services, such as the World Wide Web, and the opportunities they offer for communication and collaboration	Students will have been using the Microsoft Office package throughout the year which makes Excel very intuitive to use	This topic will allow students to continue building on computational thinking and algorithms from Spring 1 Flowol and also build upon their knowledge of block-based programming taught in KS2.
KNOWING WHAT…	This theoretical and practical unit covers navigating around the network and Office 365, files/folders, email, OneDrive and staying safe online.	This theoretical unit covers internal parts, external parts, sensors, hardware, software, digital devices, binary and AI.	This practical unit covers the principles of producing control and monitoring solutions using flowcharts in the Flowol 4 app such as traffic lights, a lighthouse, a greenhouse, and an automated home.	This theoretical unit develops a clear understanding of why we use networks in our day-to-day life. Looking at different networking hardware that allows us to benefit from both wired and wireless networks, an understanding of how the internet works and how the interconnectivity we take for granted.	This practical unit covers identifying columns, rows, cells and cell references, sorting and filtering data, analysing data, using the functions SUM, COUNT, MAX, MIN, AVERAGE, COUNTIF, IF and conditional formatting	This practical unit teaches students problem-solving and block-based coding. Students will program the BBC Micro:Bit by sequencing the steps, asking questions, using loops and variables to store data.
KNOWING HOW…	Students will know how to be socially aware of the internet and the tools it embodies, how to use digital tools across the whole school community, how to access emails, Office 365 and explain the implications of e-safety and cyberbullying.	Students will be able to define a computer, identify computer hardware and their functions and they will be able to explain how binary logic works and the fetch-decode-execute cycle and how all the devices work together, e.g. CPU, RAM, Hard Drive, Motherboard and input/output devices,	Students will be able to use flowchart symbols and processes in Flowol 4 to create programs that control devices. Students will produce control systems that use loops, basic input and outputs and a variety of sensors as an input source.	Students will be able to explain the purpose of a network, describe the different types, explain the difference and origins of the internet and the WWW, explain how mobile networks work and explain the purpose of the different networking hardware.	Students will be able to create and format a spreadsheet. They will also be able to use basic formula and functions and how to use spreadsheets in the real world for an intended purpose.	Students will be able to apply concepts such as sequencing, selection and iteration to create various programs on the Microbit such as a rock-paper-scissors and bop-it style game.

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ASSESSMENT	Students will be assessed through; -An on-screen Office Forms test with questions on e-safety, cyberbullying, the Office 365 screen, cyber security. -A set of practical challenges to check skills of using Office 365 to edit documents and use email	Students will complete formative assessment through the ongoing creation of an ongoing interactive presentation plus a final on-screen Office Forms test with questions on the purpose of hardware devices, the purpose of the CPU, binary logic and input and output devices.	Students will complete formative assessment activities to check understanding each lesson. They will then complete a final assessment on Office Forms with questions on	Students will be assessed through an on-screen Office Forms test with questions about the types of networks, networking hardware, mobile networks and the Internet v WWW.	Students will be assessed through; -An on-screen Office Forms test asking questions about formulas, functions, graphs and formatting of spreadsheets. -A practical task involving students creating a spreadsheet with formulas and functions for a sports day scenario.	Students will be assessed through; -An on-screen Office Forms test covering the importance of sequencing in programming and identifying missing key words in sections of code

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