Computing | Curriculum Overview

	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5
Year 1	**Computing systems and networks: Improving mouse skills**	**Programming 1: Algorithms unplugged**	**Creating media: Digital imagery**	**Programming 2: Virtual Bee-Bot**	**Online safety: Year 1**
	Develops purposeful computer use by learning to log in, navigate, and use mouse control to create and edit digital artwork.	Introduces algorithms, inputs, and outputs through practical, unplugged activities, enabling pupils to write, follow, and debug simple programs.	Teaches planning, taking, editing, and organising photographs, including importing and arranging images to create a final visual story.	Builds sequencing and problem-solving skills by programming a virtual Bee-Bot, creating demonstration videos, and debugging instructions.	Explores safe internet use, managing emotions online, showing kindness, and making responsible decisions about sharing and screen time.
Year 2	**Computing systems and networks 1: What is a computer?**	**Programming 1: Algorithms and debugging**	**Data handling: International Space Station**	**Programming 2: ScratchJr**	**Online safety: Year 2**
	Introduces the parts and functions of a computer, the role of technology in daily life, and the concepts of inputs, outputs, and invention design.	Develops problem-solving skills by creating, testing, and debugging algorithms, using loops for efficiency, and understanding abstraction.	Explores how astronauts meet survival needs, uses data to monitor conditions, and creates algorithms to solve real-world space challenges.	Introduces block coding through ScratchJr, teaching animation, loops, and interactive programming to follow and create algorithms.	Teaches safe sharing, password protection, consent, and how to judge the reliability of online information.
Year 3&4A	**Computing systems and networks 1: Networks**	**Computing systems and networks 3: Journey inside a computer**	**Creating media: Video trailers (Using iPads)**	**Programming: Scratch**	**Online safety: Year 3/4A**
	Introduces how networks connect devices, the role of servers and routers, and how data travels in	Explores the components and functions inside computers, recognising inputs, outputs, memory,	Teaches planning, filming, and editing a video trailer, incorporating text, transitions, and	Develops block coding skills in Scratch, using loops, animations, storytelling, and	Focuses on distinguishing fact, opinion, and belief online, managing upsetting content,

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	packets to deliver websites and files.	and comparing different device types.	evaluation skills to create a polished product.	debugging to design interactive programs.	protecting personal information, and understanding social media rules.
Year 3&4B	**Microsoft Office 365: Computing systems and networks: Collaborative learning**	**Programming 1: Further coding with Scratch**	**Data handling: Investigating weather**	**Computational thinking**	**Online safety: Year 3/4B**
	Covers collaborative working in Microsoft Office 365, including sharing and commenting on documents, creating surveys in Forms, and analysing data in spreadsheets.	Builds on previous Scratch knowledge to create scripts, introduce and use variables, and design quiz games through decomposition and coding skills.	Teaches how to collect, record, and present weather data using spreadsheets, design weather stations, and create forecasts with digital tools.	Explores the four strands of computational thinking, applying skills such as decomposition, abstraction, and algorithm design to solve problems in Scratch.	Focuses on evaluating online search results, recognising persuasive online techniques, understanding bots, and managing digital distractions.
Year 5	**Computing systems and networks: Search engines**	**Data handling: Mars Rover 1**	**Creating media: Stop-motion animation**	**Programming 1: Music**	**Online safety: Year 5**
	Explores how search engines work, how to search effectively using keywords, how to check information accuracy, and the concepts of copyright and fair use.	Investigates how the Mars Rover collects, transmits, and processes data, introduces binary and ASCII, and applies these to space-related challenges.	Teaches planning, capturing, and editing stop-motion animation, incorporating techniques to create smooth, engaging visual narratives.	Introduces coding to create music, using programming concepts to compose, sequence, and edit digital sounds.	Covers strong passwords, online communication, online reputation, tackling online bullying, and understanding how technology impacts well-being.
Year 6	**Computing systems and networks: Bletchley Park and the history of computers**	**Data handling 1: Big Data 1**	**Computing systems and networks: Exploring AI**	**Programming: Intro to Python**	**Online safety: Year 6**

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	Examines the history of computers, the role of Bletchley Park, the use of secret codes, and the importance of secure passwords, culminating in designing a future computer and creating an audio advert.	Introduces how barcodes, QR codes, infrared, and RFID work, and applies spreadsheet skills to collect, analyse, and evaluate real-time transport data.	Explores artificial intelligence, how AI systems work, their benefits and risks, and how they can be applied responsibly in real-world contexts.	Teaches the fundamentals of Python coding, including nested loops, random number generation, and using commands to create drawings and interactive programs.	Covers advanced online safety skills including managing privacy, creating a positive online reputation, protecting against scams, and using strategies to enhance security.