

Computing Long Term Overview

(Updated November 2024)

Key	Computer Science <ul style="list-style-type: none"> Can understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation. Can analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems. 	Information Technology <ul style="list-style-type: none"> Can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems. 	Digital Literacy <ul style="list-style-type: none"> Are responsible, competent, confident and creative users of information and communication technology.
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	Autumn 1	Autumn 2	Spring		Summer
Year 1	Computing Systems and Networks: Improving Mouse Skills <ul style="list-style-type: none"> Logging in (1) Click and drag skills (2) Drawing shapes (3) 	Programming: Algorithms Unplugged <ul style="list-style-type: none"> What is an algorithm? (1) Algorithm pictures (2) Step by step (4) Debugging directions (5) 	Programming: Bee-Bots <ul style="list-style-type: none"> Getting to know a Bee-Bot (1) Precise instructions (3) Bee-Bot world (4) Three little pigs (5) 		Creating Media: Digital Imagery (Office 365) <ul style="list-style-type: none"> Planning a photo story (1) Taking photos (2) Editing photos (3)
	Online Safety <ul style="list-style-type: none"> Using the internet safely (1) 	Online Safety <ul style="list-style-type: none"> Online emotions (2) 	Online Safety <ul style="list-style-type: none"> Always be kind and considerate (3) 	Online Safety <ul style="list-style-type: none"> Posting and sharing online (4) 	
Year 2	Computing Systems and Networks 1: What is a Computer? <ul style="list-style-type: none"> Computer parts (1) Inputs (2) Real-world role play (5) 	Programming: Algorithms and Debugging <ul style="list-style-type: none"> Dinosaur algorithm (1) Machine learning (2) Making maps (4) Unplugged debugging (5) 	Programming 2: Scratch Jr <ul style="list-style-type: none"> Using Scratch Jr (1) Creating an animation (2) Programming a joke (4) 'The Three Little Pigs' algorithms (5) 		Data Handling: International Space Station <ul style="list-style-type: none"> Homes in space (1) Warmer, colder (3) Goldilocks planets (5)
	Online Safety <ul style="list-style-type: none"> What happens when I post online? (1) 	Online Safety <ul style="list-style-type: none"> How do I keep my things safe online? (2) 	Online Safety <ul style="list-style-type: none"> It's my choice (3) 	Online Safety <ul style="list-style-type: none"> Is it true? (4) 	
Year 3	Computing Systems and Networks: Networks <ul style="list-style-type: none"> What is a network? (1) How a website works (3) What is packet data? (5) 		Creating Media <ul style="list-style-type: none"> Planning a book trailer (1) Filming (2) Editing the trailer (3) Transitions and text (4) 		Programming <ul style="list-style-type: none"> Tinkering with Scratch (1) Using loops (2) Making an animation (3) Programming a game (5)
	Journey Inside a Computer <ul style="list-style-type: none"> Inputs and outputs (1) Building a paper laptop (2) Dismantling a tablet (5) 				
	Online Safety <ul style="list-style-type: none"> Beliefs, opinions and facts on the internet (1) 		Online Safety <ul style="list-style-type: none"> What happens when I search online? (1) Who should I ask? (2) 		Online Safety <ul style="list-style-type: none"> When being online makes me upset (3) Rules of social media platforms (4&5)
Year 4	Computing Systems and Networks: Collaborative Learning (Office 365) <ul style="list-style-type: none"> Teamwork (1) Microsoft Forms 1 (3) Microsoft Forms 2 (4) Shared spreadsheets (5) 		Data Handling: Investigating Weather <ul style="list-style-type: none"> What's the weather? (1) Extreme weather (3) Satellites and forecasts (4) 		Programming: Computational Thinking <ul style="list-style-type: none"> What is computational thinking? (1) Decomposition (2) Abstraction and pattern recognition (3) Algorithm design (4)

	Autumn 1	Autumn 2	Spring	Summer
	Programming: Further Coding with Scratch <ul style="list-style-type: none"> Identifying what code does (2) Introduction to variables (3) Making a variable (4) 		Online Safety <ul style="list-style-type: none"> What happens when I search online? (1) How do companies encourage us to buy online? (2) 	Online Safety <ul style="list-style-type: none"> Fact, opinion or belief? (3) What is my #TechTimetable like? (5)
Year 5	Computing Systems and Networks: Search Engines <ul style="list-style-type: none"> Searching basics (1) Inaccurate information (2) Web quest (3) Information poster (4) 		Creating Media: Stop Motion Animation <ul style="list-style-type: none"> Animation explored (1) Exploring stop motion (2) Planning my stop motion project (3) Stop motion creation (4) 	Programming: Music in Scratch <ul style="list-style-type: none"> Tinkering with Scratch music elements (1) Scratch soundtracks (2) Planning a soundtrack (3) Programming a soundtrack (4)
	Data handling: Mars Rover 1 <ul style="list-style-type: none"> Mars Rover (1) Binary code (2) Using binary – numbers (4) 		Online Safety <ul style="list-style-type: none"> Online protection (1) 	Online Safety <ul style="list-style-type: none"> Online bullying (4) Online health (5)
Year 6	Computing Systems and Networks: Bletchley Park and the history of computers <ul style="list-style-type: none"> Secret codes (1) Brute force hacking (2) Computers of the past (3) 		Exploring AI <ul style="list-style-type: none"> What is AI? (1) AI and text (2) Ethics and AI (5) 	Programming: Intro to Python <ul style="list-style-type: none"> Tinkering with Logo (1) Nested loops (2) Using Python (3) Using loops in Python (4)
	Data Handling: Big Data <ul style="list-style-type: none"> Barcodes (1) RFID (3) Using RFID (4) Transport data (5) 		Online Safety <ul style="list-style-type: none"> Life online (1) Sharing online (2) Creating a positive online reputation (3) 	Online Safety <ul style="list-style-type: none"> Capturing evidence (4) Think before you click (6)