

Computing Long Term Overview

(Updated November 2023)

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 1	Spring 2	Summer 1	Summer 2
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) Drawing a story (4) Self-portrait (5) 	Programming: Algorithms Unplugged <ul style="list-style-type: none"> What is an algorithm? (1) Algorithm pictures (2) Virtual assistants (3) Step by step (4) Debugging directions (5) 	Skills Showcase: Rocket to the Moon <ul style="list-style-type: none"> Rocket materials (1) Rocket design (2) Rocket building instructions (3) Making a rocket (4) Rocket launching (5) 	Programming: Bee-Bots <ul style="list-style-type: none"> Getting to know a Bee-Bot (1) Making a Bee-Bot video (2) 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) Searching for images (4) Photo collage (5) 	Data Handling: Introduction to Data <ul style="list-style-type: none"> Zoo data (1) Picture data (2) Minibeast hunt (3) Animal branching databases (4) Inventions (5)
	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) 	Online Safety <ul style="list-style-type: none"> How much time should we spend on technology? (5) 	
Year 2	Computing Systems and Networks 1: What is a Computer? <ul style="list-style-type: none"> Computer parts (1) Inputs (2) Technology safari (3) Invention (4) Real-world role play (5) 	Programming: Algorithms and Debugging <ul style="list-style-type: none"> Dinosaur algorithm (1) Machine learning (2) Through the maze (3) Making maps (4) Unplugged debugging (5) 	Computing Systems and Networks: Word processing <ul style="list-style-type: none"> Getting to know the keyboard (1) Getting started with word processing (2) Newspaper writer (3) Poetry book (4) Digital writer (5) 	Programming 2: ScratchJr <ul style="list-style-type: none"> Using ScratchJr (1) Creating an animation (2) Making a musical instrument (3) Programming a joke (4) 'The Three Little Pigs' algorithms (5) 	Creating Media: Stop Motion with iPads <ul style="list-style-type: none"> What is animation? (1) What is stop motion? (2) My first animation (3) Planning my project (4) Creating my project (5) 	Data Handling: International Space Station <ul style="list-style-type: none"> Homes in space (1) Space bag (2) Warmer, colder (3) Experiments in space (4) 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 Using loops Making an animation Programming a game 		
	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"> Who should I ask? (2) When being online makes me upset (3) 		Online Safety <ul style="list-style-type: none"> Sharing of information (4) Rules of social media platforms (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) Presenting forecasts (5) 		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 1	Spring 2	Summer 1	Summer 2
	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 communication (2) 		Online Safety <ul style="list-style-type: none"> Online bullying (4) Online health (5) 	
Year 6	Computing Systems and Networks: Bletchley Park <ul style="list-style-type: none"> Secret codes (1) Brute force hacking (2) Bletchley Park (3) 		Creating Media: History of Computers <ul style="list-style-type: none"> First computers (3) Computers that changed the world (4) Future computer (5) 		Programming: Micro:bit <ul style="list-style-type: none"> Tinkering with BBC Micro:bit (1) Programming an animation (2) Programming a pedometer (4) Programming a scoreboard (5) 	
	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) 	