

	Year Group	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Aims	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 Can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems Are responsible, competent, confident and creative users of information and communication technology.						
Knowledge (Breadth)	1	Writing in different styles (laptops)	Programming with ScratchJr (iPads)	An introduction to animation (Laptops needed for first 3 lessons. Second half iPads)		Finding and presenting information (laptops)	
Skills		Introduce children to word processing and desktop publishing using a number of different tools and design tasks.	Introduce students to this great block-based programming language to create animations and games perfect for KS1. Write and debug algorithms, learn about repeating, and different triggers to create actions.	Get really creative as you introduce both 2D and stop frame animation. Students will love creating their own animated clips and stories with a variety of tools.		Introduces children to web browsers to explore and search websites safely, collecting and presenting information in graphs, and different ways of sorting and classifying data with databases.	
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Knowledge (Breadth)	2	Writing in different styles (laptops)	Programming with ScratchJr (iPads)	An introduction to animation (Laptops needed for first 3 lessons. Second half iPads)		Finding and presenting information (laptops)	
Skills		Introduce children to word processing and desktop publishing using a number of different tools and design tasks.	Introduce students to this great block-based programming language to create animations and games perfect for KS1. Write and debug algorithms, learn about repeating, and different triggers to create actions.	Get really creative as you introduce both 2D and stop frame animation. Students will love creating their own animated clips and stories with a variety of tools.		Introduces children to web browsers to explore and search websites safely, collecting and presenting information in graphs, and different ways of sorting and classifying data with databases.	

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Knowledge (Breadth)	3	Computational Thinking - Alien Contact! (unplugged - no laptops)	Communication and collaboration (laptops)	Programming Scratch Maze Games (laptops)	Searching the web (laptops for searching the web. Loan kit for WeDO)
Skills		An unplugged unit to develop your students into strong computational thinkers by solving a wide range of exciting unplugged problems. Will they be able to solve the problems, earn the trust of an alien species and cement a new galactic friendship?!	Introduce students to email and online collaborative tools. Learn how to safely and appropriately make use of these essential digital tools.	Teach algorithms, repetition, conditions and variables, while introducing students to Scratch's block-based coding language. Build adventure maze games and design your own levels, characters and objects to collect.	Take a detailed look at all elements of searching the web with care and consideration, covering: searching tricks, validating websites, improving your searches, searching images and searching online maps.
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Knowledge (Breadth)	4	Computational Thinking - Alien Contact! (unplugged - no laptops)	Communication and collaboration (laptops)	Programming Scratch Maze Games (laptops)	Machines and mechanisms (laptops for searching the web. Loan kit for WeDO)
Skills		An unplugged unit to develop your students into strong computational thinkers by solving a wide range of exciting unplugged problems. Will they be able to solve the problems, earn the trust of an alien species and cement a new galactic friendship?!	Introduce students to email and online collaborative tools. Learn how to safely and appropriately make use of these essential digital tools.	Teach algorithms, repetition, conditions and variables, while introducing students to Scratch's block-based coding language. Build adventure maze games and design your own levels, characters and objects to collect.	A unit that investigates building mechanisms with Lego WeDo then choose one of our 3 WeDo projects to design, build and program machines.

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Knowledge (Breadth)	5	Building Retro Games - Pick a project (laptops)	Digital Literacy and online safety (Y5) (unplugged - no laptops)	What is a computer? (unplugged - no laptops)	Programming Robots (Visit and EV3 Loan kit)
Skills		Choose from 3 classic video game projects with this fantastic coding unit. Analyse the original games, build a simple version of them, then let the students get creative and independently extend their projects.	Six lessons taken from Common Sense Education's excellent digital citizenship curriculum, covering a wide range of topics including well-being, privacy and security, online identity, relationships, communication and the media.	Delve into what really makes a computer a computer. Is a TV a computer? Is a fridge a computer? Is a toilet a computer?! It also investigates just what is inside that metal box, how a computer works, memory, data and binary code. By the end you'll know your RAM from your ROM and your CPU from your GPU.	Introduce students to programming LEGO EV3 Robots. Control their movement with precise calculations and coding, then utilise the robot's sensors to interact with its environment and solve problems.
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Knowledge (Breadth)	6	Digital Literacy and online safety (Y6) (unplugged - no laptops)	Inside the internet (laptops)	Creating Instructional Videos (iPads)	Getting started with the BBC micro:bit (laptops. Visit and Loan kit) (cross curricular with DT)
Skills		Six lessons taken from Common Sense Education's excellent digital citizenship curriculum, covering a wide range of topics including well-being, privacy and security, online identity, relationships, communication and the media.	Get under the skin of the Internet to investigate how the web works, how it's built and written with HTML code.	Plan, design and create instructional teaching videos. Perfect for reinforcing other areas of the curriculum. Students can create videos to support each other with revision and then share them online to give access to everyone in the class.	Introduce students to physical computing with a BBC micro:bit. Control the LED matrix and find out how screens work, learn about inputs and outputs, turn your micro:bit into a scoring or game device while learning about variables, conditionals and iteration.