Wraysbury Primary School Curriculum Overview: Computing

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
	Offered as part of daily 'Continuous Provision'– following children's interests					
	Focused Teaching					
Reception	Set up continuous provision in the classroom following the children's needs and interests.	Networks and Systems 1: using a computer Learning about the main parts of a computer and how to use the keyboard and mouse. Learning how to log in and out	Programming 1: All about Instructions The children learn to receive and give instructions and understand the importance of precise instructions.	Computing Systems and Networks 2: Exploring Hardware Tinkering and exploring with different computer hardware and learning to operate a camera.	Programming 2: Bee-Bots Children learn about directions, experiment with programming a Bee-bot/Blue-bot and tinker with hardware.	Data Handling: Introduction To Data Children sort and categorise data and are introduced to branching databases and pictograms.
Year 1	Computing Systems and Networks: Improving Mouse Skills Learning how to login and navigate around a computer, developing mouse skills, learning how to drag, drop, click and control a cursor to create works of art inspired by Kandinsky and self-portraits	Creating Media digital Imagery: Using creativity and imagination to plan a miniature adventure story and capture it using developing photography skills. Learn to enhance photos using a range of editing tools as well as searching for and adding other images to a project, resulting in a high-quality photo collage showcase	Programming 1 Algorithms unplugged Algorithms, decomposition and debugging are made relatable to familiar contexts, such as dressing up and making a sandwich, whilst learning why instructions need to be very specific	Skills Showcase: Rocket to the Moon Developing keyboard and mouse skills through designing, building and testing individual rockets by creating a digital list of materials, using drawing software and recording data	Programming 1 Programming Bee-bots: Developing early programming skills using the Bee-Bot	Data Handling: Introduction to data Learn what data is and the different ways that it can be represented and developing an understanding of why data is useful, how it can be used and ways in which it can be gathered and recorded both by humans and computers
	Online Safety					
Year 2	Computing Systems and Networks 1: What is a computer? What a computer is. identifying and learning	Computing Systems and Networks 2: Word Processing Word processing and how to stay safe online as well developing touch typing	Programming 1: Algorithms and debugging develop an understanding of; what algorithms are, how to program them and how they can be developed	Programming 2: Scratch Jnr Explore what 'blocks' do, using the app 'Scratch Jr,' by carrying out an informative cycle of predict > test > review, programme a familiar story and an animation of an animal,	Creating Media: Stop Motion Storyboarding and simple animation creation using either tablet devices or devices with cameras	Data Handling: International Space Station The International Space Station (ISS) is a fascinating real-world setting for teaching how data is collected, used and

	how inputs and outputs work, how computers are used in the wider world and designing their own computerised invention	skills. Important keyboard shortcuts, as well as simple editing tools within a word processor including: bold, italics, underline and font colour as well as how to import images.	to be more efficient, introduction of loops	make their own musical instrument by creating buttons and recording sounds and follow an algorithm to record a joke		displayed as well as the scientific learning of the conditions needed for plants and animals, including humans, to survive.
	Online Safety					

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Year 3	Computing Systems and Networks 1: Networks and the Internet Introduction to the concept of networks, learning how devices communicate. Identifying components, learning how information is shared and exploring examples of real-world networks	Programming: Scratch Building on the use of the 'Scratch Jr' application in Year 2, progress to using the more advanced computer-based application called 'Scratch', learning to use repetition or 'loops' and building upon skills to program; an animation, a story and a game	Computing Systems and Networks 2: Emailing Learning how to send emails with attachments and how to be a responsible digital citizen by thinking about the contents of what is sent.	Computing Systems and Networks 3: Journey inside a Computer Assuming the role of computer parts and creating paper versions of computers helps to consolidate an understanding of how a computer works, as well as identifying similarities and differences between various models	Creating Media: Video Trailers Developing filming and editing video skills through the storyboarding and creation of book trailers.	Data Handling: Comparison Cards Databases Using the theme of a 'Comparison cards game' (based on the popular game, Top Trumps), to understand what a database is by learning the meanings of records, fields and data. Further exploration will lead to the development of the ideas of sorting and filtering
	Online Safety					
Year 4	Computing Systems and Networks: Working collaboratively in a responsible and considerate way as well as looking at a range of collaborative tools.	Programming 1: Further coding with Scratch Using variables in coding.	Programming 2: Computational Thinking Plugged and unplugged activities to develop the four areas of computational thinking	Data Handling: Investigating Weather Researching and storing data using spreadsheets; designing a weather station that gathers and records data; learning how weather	Creating Media: Website Design Children develop their research, word processing, and collaborative working skills whilst learning how web pages and web sites are created, exploring how to change layouts, embed	Skills Showcase: HTML Editing the HTML and CSS of a web page to change the layout of a website and the text and images

				forecasts are made and using green screen technology to present a weather forecast.	images and videos and link between pages.	
	Online Safety					
Year 5	Computing Systems and Networks: Search Engines Using keywords and phrases, identifying inaccurate information, learning page rank works as well.	Programming 1: Programming Music (Sonic Pi/Scratch) Applying programming skills to create sounds and melodies leading to a battle of the bands performance	Data Handling: Mars Rover 1 Data transfer and binary code	Skills Showcase: Mars Rover 2 3D design skills	Programming 2: Micro bit The meaning and purpose of programming	Creating Media: Stop Motion animation Storyboarding ideas, taking photographs and editing to create a video animation
	Online Safety					
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Year 6	Programming: Introduction to Python Using the programming language of Python	Computing Systems and Networks: Bletchley Park Code breaking and password hacking	Data Handling: Big Data 1 Barcodes, QR codes and RFID	Creating Media: History of Computers Children write, record and edit radio plays set during WWII, look back in time at how computers have evolved and design a computer of the future.	Data Handling Big Data 2 Data usage and smart schools	Skills Showcase: Inventing a Product Designing a product, pupils: evaluate, adapt and debug code to make it suitable and efficient for their needs; use a software program to design their products; create their own websites and video adverts to promote their inventions.
	Online Safety					