

Computing Long Term Plan

Ideally, computing will be taught termly with a session each time for internet safety. If this is not possible boxes which are shaded grey, show units which can be omitted, and the National curriculum will still be covered.

	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
EFYS		Programming (1) All about instructions The children learn to receive and give instructions and understand the importance of precise instructions.	Programming (2) Programming Beebots 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.	Computer system & Networks Exploring Hardware Tinkering and exploring with different computer hardware and learning to operate a camera.	Computer system & Networks 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.
Year 1	Computer system & 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	Programming (1) Algorithms unplugged Algorithms, decomposition and debugging are made relatable to familiar contexts, following directions, learning why instructions need to be specific.	Skills Showcase Rocket to the moon Developing keyboard and mouse skills through designing, building and testing. Creating a digital list of materials, using drawing software and recording data.	Programming (2) Programming Beebots Introducing programming through the use of a Bee-Bot and exploring its functions.	Creating Media Digital Imagery Taking and editing photos, searching for and adding images to a project.	Data Handling Introduction to data Learning what data is and the different ways it can be represented. Learning why data is useful and the ways it can be gathered and recorded.
Year 2	Computer system & Networks What is a computer? Exploring what a computer is by identifying how inputs and outputs work and how computers are used in the wider world to design their own computerised invention.	Programming (1) Algorithms and debugging Exploring what a computer is by identifying how inputs and outputs work and how computers are used in the wider world to design their own computerised invention.	Computer system & Networks Word Processing Developing touch typing skills, learning keyboard shortcuts and simple editing tools.	Programming (2) Scratch Jr Exploring what 'blocks' do' by carrying out an informative cycle of predict > test > review. Programming a familiar story and make a musical instrument.	Creating media Stop Motion Learning how to create simple animations from storyboarding creative ideas.	Data Handling International Space Station Learning how data is collected, used and displayed and the scientific learning of the conditions needed for plants and humans, to survive
Year 3	Computer system & Networks Networks and the internet Learning what a network and how devices communicate and share information.	Programming Scratch Exploring the programme Scratch, following the: predict > test > review cycle. Learning about 'loops' and programming an animation, story and game.	Computer system & Networks Emailing Sending emails with attachments and understanding what cyberbullying is	Computer system & Networks Journey Inside a computer Assuming the role of computer parts and creating paper versions of computers to consolidate understanding of how a computer works.	Creating Media Video Trailers Developing digital video skills to create trailers, with special effects and transitions.	Data Handling Comparison cards databases Learning about records, fields and data and sorting and filtering data.
Year 4	Computer system & Networks Collaborative Learning Learning how to work collaboratively and exploring a range of collaborative tools.	Programming Further Coding with Scratch Revisiting the key features and beginning to use 'variables' in code scripts.	Creating Media Computational thinking Solving problems effectively using the four areas of abstraction, algorithm design, decomposition and pattern recognition.	Computer system & Networks Website design Learning how web pages and sites are created and how to embed media and links.	Data Handling Investigating Weather Researching and storing data on spreadsheets and designing a weather station.	Computer system & Networks HTML Learning about the markup language behind a webpage; becoming familiar with HTML tags, changing HTML and CSS code to alter images and 'remix' a live website.
Year 5	Computer system & Networks Search engines Learning about how page rank works and how to identify inaccurate information	Programming Programming music Building-on programming and music skills to create different sounds, beats and melodies which are put to the test with a Battle of the Bands performance!	Data Handling Mars Rover 1 Learning about the Mars Rover, exploring how and why it transfers data including instructions, and how messages can be sent using binary code.	Programming Micro:bit Creating algorithms and programs that are used in the real world. Using the 'predict, test and evaluate' cycle to create and debug programs with specific aims.	Creating Media Stop Motion Animation Creating animations, storyboard ideas and decomposing a story into small parts before putting together to create the illusion of a moving image.	Skills Showcase Mars Rover 2 Exploring how the Mars rover: moves, follows instructions, collects and sends data; understanding how computers work, what data is and how it is transferred.
Year 6	Data Handling Big Data 1 Identifying how barcodes and QR codes work. Learning how infrared waves are used for the transmission of data while recognising the uses of RFID.	Programming Intro to Python Using the programming language 'Python' to create designs and art. Learning how to create loops and nested loops to make their code more efficient.	Computer system & Networks Bletchley Park Discovering the history of Bletchley and learning about code breaking and password hacking. Demonstrating digital literacy skills by creating presentations.	Creating Media History of Computers Writing, recording and editing radio plays set during WWII, learning about how computers have evolved.	Data Handling Big Data 2 Further developing understanding of how networks and the Internet are able to share information. Learning how big data can be used to design smart buildings.	Skills showcase Inventing a product Designing a product, pupils: evaluate, adapt and debug code to make it suitable for their needs and designing products in CAD and creating a website and video.