HIPPINGS METHODIST PRIMARY COMPUTING OVERVIEW

COMPUTING OVERVIEW	AUTUMN		SPRING		SUMMER	
EYFS	**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. **Computing Through Continuous Provision**	**All about instructions** The children learn to receive and give instructions and understand the importance of precise instructions.	**Exploring hardware** Tinkering and exploring with different computer hardware and learning to operate a camera.	**Programming Bee-Bots** Children learn about directions, experiment with programming a Bee-bot/Blue-bot and tinker with hardware.	**Introduction to data** Children sort and categorise data and are introduced to branching databases and pictograms.	
YEAR 1	**Improving Mouse Skills** Learning how to login and navigate around a computer	**Algorithms Unplugged** Algorithms, decomposition and debugging are made relatable to familiar contexts, following directions, learning why instructions need to be specific.	**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 Bee-Bots** Introducing programming through the use of a Bee-Bot and exploring its functions.	**Digital Imagery** Taking and editing photos, searching for and adding images to a project.	**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	**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.	**Algorithms and debugging** Developing an understanding of; what algorithms are, how to program them and how they can be developed to be more efficient, introduction of loops.	**Word processing** Developing touch typing skills, learning keyboard shortcuts and simple editing tools.	**Programming Scratch Jr** Exploring what 'blocks' do' by carrying out an informative cycle of predict > test > review.	**Stop Motion** Learning how to create simple animations from storyboarding creative ideas.	**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	**Network and the Internet** Learning what a network and how devices communicate and share information.	**Programming: Scratch** Exploring the programme Scratch. Learning about 'loops' and programming an animation, story and game.	**Emailing:** Sending emails with attachments and understanding what cyberbullying is.	**Journey Inside a Computer** Assuming the role of computer parts and to consolidate understanding of how a computer works.	**Video Trailers** Developing digital video skills to create trailers, with special effects and transitions	**Comparison card database** Learning about records, fields and data and sorting and filtering data.
YEAR 4	**Collaborative Learning** Learning how to work collaboratively and exploring a range of collaborative tools.	**Further Coding with Scratch** Revisiting the key features and beginning to use 'variables' in code scripts.	**Website Design** Learning how web pages and sites are created and how to embed media and links.	**HTML** Learning about the markup language behind a webpage; becoming familiar with HTML tags,	**Computational Thinking** Solving problems effectively using the four areas of abstraction, algorithm design,	**Investigating weather**

				changing HTML and CSS code to alter images and 'remix' a live website	decomposition and pattern recognition.	
YEAR 5	**Search Engines** Learning about how page rank works and how to identify inaccurate information.	**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!	**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.	**Mirco: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.	**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.	**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	**Bletchley Park** Discovering the history of Bletchley and learning about code breaking and password hacking. Demonstrating digital literacy skills by creating presentations.	**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.	**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.	**History of Computers** Writing, recording and editing radio plays set during WWII, learning about how computers have evolved.	**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	**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.