



Comp		AUTUMN	SPRING	SUMMER
EYFS	Unit title and key focus	Using a computer Physical development – fine motor / gross motor Learning about the main parts of a computer and how to use the keyboard and mouse. Learning how to log in and out.	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 Physical development – develop their small motor skills to use a range of tools competently, safely and confidently. 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
		Topic: Food & Feasts – use of media to explore and draw different foods.	Topic: Feelings – Expressive Arts & Design – explore and use a variety of artistic effects to express their ideas and feelings.	
	Key vocabulary	Computing Knowledge organisers - Kapow Primary	Computing Knowledge organisers - Kapow Primary	Computing Knowledge organisers - Kapow Primary
Year 1	Unit title and key focus	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 Online Safety 1 Programming - Algorithms unplugged Algorithms, decomposition and debugging are made relatable to familiar contexts, following directions, learning why instructions need to be specific. Online Safety 2	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. Online safety 3 Programming - Bee Bots Introducing programming through the use of a Bee-Bot and exploring its functions. Online safety 4	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.
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Year 2	Unit title and Core Knowledge	Computing systems and 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. Online safety 1 Programming – 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. Online safety 2	Computing systems and networks –Word processing Developing touch typing skills, learning keyboard shortcuts and simple editing tools. Online safety 3 Programming – ScratchJr Exploring what 'blocks' do' by carrying out an informative cycle of predict > test > review. Programming a familiar story and make a musical instrument. Online safety 4	Creating media – Stop motion Learning how to create simple animations from storyboarding creative ideas. Online safety 5 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.

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Year 3	Unit title and key NC content	<p>Computing systems and networks –Networks and the Internet</p> <p>Learning what a network and how devices communicate and share information.</p> <p>Online safety 1</p> <p>Programming – Scratch</p> <p>Exploring the programme Scratch, following the predict > test > review cycle. Learning about 'loops' and programming an animation, story and game.</p> <p>Online safety 2</p>	<p>Computing systems and networks –Emailing</p> <p>Sending emails with attachments and understanding what cyberbullying is.</p> <p>Online safety 3</p> <p>Computing systems and networks – Journey inside a computer</p> <p>Assuming the role of computer parts and creating paper versions of computers to consolidate understanding of how a computer works</p> <p>Online safety 4</p>	<p>Creating media – Video trailers</p> <p>Developing digital video skills to create trailers, with special effects and transitions.</p> <p>Online safety 5</p> <p>Data Handling – Comparison card databases</p> <p>Learning about records, fields and data and sorting and filtering data.</p>
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Year 4	Unit title and key NC content	<p>Computing systems and networks – Collaborative learning</p> <p>Learning how to work collaboratively and exploring a range of collaborative tools.</p> <p>Online safety 1</p> <p>Programming – Further coding with scratch</p> <p>Revisiting the key features and beginning to use 'variables' in code scripts.</p> <p>Online safety 2</p>	<p>Creating media – Website design</p> <p>Learning how web pages and sites are created and how to embed media and links.</p> <p>Online safety 3</p> <p>Skills showcase – HTML</p> <p>Learning about the mark-up language behind a webpage; becoming familiar with HTML tags, changing HTML and CSS code to alter images and 'remix' a live website</p> <p>Online safety 4</p>	<p>Programming – Computational thinking</p> <p>Solving problems effectively using the four areas of abstraction, algorithm design, decomposition and pattern recognition.</p> <p>Online safety 5</p> <p>Data Handling – Investigating water</p> <p>Researching and storing data on spreadsheets and designing a weather station.</p> <p>Online safety 6</p>
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Year 5	Unit title and key NC content	<p>Computing systems and networks –Search engines</p> <p>Learning about how page rank works and how to identify inaccurate information.</p> <p>Online safety 1</p> <p>Programming- Programming Music</p> <p>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!</p>	<p>Data Handling – Mars Rover</p> <p>Learning about the Mars Rover, exploring how and why it transfers data including instructions, and how messages can be sent using binary code</p> <p>Online safety 3</p> <p>Programming – Microbit</p> <p>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.</p>	<p>Creating media – Stop animation</p> <p>Creating animations, storyboard ideas and decomposing a story into small parts before putting together to create the illusion of a moving image.</p> <p>Online safety 5</p> <p>Skills showcase – Mars Rover 2</p> <p>Exploring how the Mars rover: moves, follows instructions, collects and sends data; understanding how computers work, what data is and how it is transferred.</p>



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Year 6	Unit title and key NC content	<p>Computing systems and networks – Bletchley Park</p> <p>Discovering the history of Bletchley and learning about code breaking and password hacking. Demonstrating digital literacy skills by creating presentations.</p> <p>Online Safety 1</p> <p>Programming – Intro to Python</p> <p>Using the programming language 'Python' to create designs and art. Learning how to create loops and nested loops to make their code more efficient.</p> <p>Online safety 2</p>	<p>Data Handling – Big Data 1</p> <p>Identifying how barcodes and QR codes work. Learning how infrared waves are used for the transmission of data while recognising the uses of RFID.</p> <p>Online safety 3</p> <p>Creating media- History of Computers</p> <p>Writing, recording and editing radio plays set during WWII, learning about how computers have evolved.</p> <p>Online safety 4</p>	<p>Data Handling – Big Data 2</p> <p>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.</p> <p>Online Safety 5</p> <p>Skills showcase – Inventing a product</p> <p>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.</p> <p>Online safety 6</p>
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