

Computing – Long Term Plan



Year group	Autumn	Spring	Summer			
Seedlings (N2)	<p>To support pupils with computing skills all Children learn to:</p> <ul style="list-style-type: none"> • Turn an iPad on and off. • Use cause and effect toys such as push and pull to make objects move. • Engage with videos, songs and clips on digital devices such as iPads and interactive whiteboards. 					
Acorns (N3)	<p>To support pupils with computing skills all Children learn to:</p> <ul style="list-style-type: none"> • Navigate to a chosen app on an iPad. • Play an age appropriate interactive game on an iPad. • Play an age appropriate interactive game on the interactive whiteboard. • Press stop and go buttons on interactive toys such as Bee Bots and remote controlled cars. 					
Reception	<p>To support pupils with computing skills all Children learn to:</p> <ul style="list-style-type: none"> • Turn the volume on an iPad up or down. • Take a photograph with the camera app on an iPad. • Play an age appropriate interactive game on an iPad. • Play an age appropriate interactive game on the interactive whiteboard. Select the tools that they would like to use from the menu on these games, for example, different colours or shapes on drawing games. • Press directional buttons on interactive toys such as Bee Bots and remote controlled cars to control their direction. • Turn on a CD player and play a CD. • Skip a track or stop a track. 					
Year 1	<p><u>Computing systems and networks: Improving mouse skills</u> Learning how to login and navigate around a computer and develop mouse skills.</p> <p>Online safety</p>	<p><u>Programming 1: Algorithms unplugged</u> Learning about algorithms, debugging and decomposition by giving specific instructions.</p> <p>Online safety</p>	<p><u>Skills showcase: Rocket to the moon</u> Developing keyboard and mouse skills through designing.</p> <p>Online safety</p>	<p><u>Programming 2: Bee-Bot</u> Developing early programming skills using either the Bee:Bot or virtual Bee:Bot.</p> <p>Online safety</p>	<p><u>Creating media: Digital imagery</u> Developing photography skills and enhance photos using editing tools.</p> <p>Online safety</p>	<p><u>Data handling: Introduction to data</u> Learn what data is and the different ways that it can be represented and develop an understanding of why data is useful.</p> <p>Online safety</p>

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Year 2	<p><u>Computing systems and networks 1:</u> Identify what a computer is and learn how inputs and outputs work.</p> <p>Online safety</p>	<p><u>Programming 1: Algorithms and debugging</u> Learn what algorithms are, how to program them and how they can be developed to be more efficient with an introduction of loops.</p> <p>Online safety</p>	<p><u>Computing systems and networks 2: Word processing</u> Introduce 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.</p> <p>Online safety</p>	<p><u>Programming 2: ScratchJr</u> Explore what ‘blocks’ do using the app ‘ScratchJr,’ by carrying out an informative cycle of predict, test and review.</p> <p>Online safety</p>	<p><u>Creating media: Stop motion</u> Storyboarding and simple animation creation using either tablet devices or devices with cameras.</p> <p>Online safety</p>	<p><u>Data handling: International Space Station</u> The International Space Station (ISS) is a fascinating real-world setting for teaching how data is collected, used and displayed as well as the scientific learning of the conditions needed for plants and animals, including humans, to survive.</p> <p>Online safety</p>
Year 3	<p><u>Computing systems and networks 1: Networks and the internet</u> Introduction to the concept of networks, learning how devices communicate. Identifying components, learning how information is shared and exploring examples of real-world networks.</p> <p>Online safety</p>	<p><u>Programming: Scratch</u> 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.</p> <p>Online safety</p>	<p><u>Computing systems and networks 2: Emailing</u> Learning how to send emails with attachments and how to be a responsible digital citizen by thinking about the contents of what is sent.</p> <p>Online safety</p>	<p><u>Computing systems and networks 3: Journey inside a computer</u> 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.</p>	<p><u>Creating media: Video trailers</u> Developing filming and editing video skills through the storyboarding and creation of book trailers.</p> <p>Online safety</p>	<p><u>Data handling: Comparison cards databases</u> Using the theme of a ‘Comparison cards game’ (based on the popular game Top Trumps) understand what a database is by learning the meanings of records, fields and data.</p> <p>Online safety</p>

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Year 4	<p><u>Computing systems and networks: Collaborative learning</u> Working collaboratively in a responsible and considerate way as well as looking at a range of collaborative tools.</p> <p>Online safety</p>	<p><u>Programming 1: Further coding with Scratch</u> Using variables in coding.</p> <p>Online safety</p>	<p><u>Creating media: Website design</u> 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 images and videos and link between pages.</p> <p>Online safety</p>	<p><u>Skills showcase: HTML</u> Editing the HTML and CSS of a web page to change the layout of a website and the text and images.</p> <p>Online safety</p>	<p><u>Programming 2: Computational thinking</u> Plugged and unplugged activities to develop the four areas of computational thinking.</p> <p>Online safety</p>	<p><u>Data handling: Investigating weather</u> Researching and storing data using spreadsheets; designing a weather station that gathers and records data; learning how weather forecasts are made and using green screen technology to present a weather forecast.</p> <p>Online safety</p>
Year 5	<p><u>Computing systems and networks: Search engines</u> Using keywords and phrases, identifying inaccurate information, learning page rank works as well.</p> <p>Online safety</p>	<p><u>Programming 1: Music</u> Applying programming skills to create sounds and melodies leading to a battle of the bands performance.</p> <p>Online safety</p>	<p><u>Data handling: Mars Rover 1</u> To data transfer and binary code.</p> <p>Online safety</p>	<p><u>Programming 2: Micro:bit</u> Children to understand meaning and purpose of programming using micro:bits.</p> <p>Online safety</p>	<p><u>Creating media: Stop motion animation</u> Storyboarding ideas, taking photographs and editing to create a video animation.</p> <p>Online safety</p>	<p><u>Skills showcase: Mars Rover 2</u> Develop 3D design skills.</p> <p>Online safety</p>
Year 6	<p><u>Computing systems and networks: Bletchley Park</u></p>	<p><u>Programming: Intro to Python</u></p>	<p><u>Data handling 1: Big Data 1</u></p>	<p><u>Creating media: History of computers</u></p>	<p><u>Data handling 2: Big Data 2</u></p>	<p><u>Skills showcase: Inventing a product</u></p>

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	<p>Code breaking and password hacking</p> <p>Online safety</p>	<p>Using the programming language of Python</p> <p>Online safety</p>	<p>Identify how Barcodes, QR codes and RFID's are used.</p> <p>Online safety</p>	<p>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.</p> <p>Online safety</p>	<p>Data usage and smart schools</p> <p>Online safety</p>	<p>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.</p> <p>Online safety</p>