



# Computing Curriculum Overview

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
<b>Nursery</b>	<p><b>Online Safety</b></p> <p>Children to use a range of applications on the computer e.g. 2simple.</p> <p>Children to use bee bots independently.</p> <p>Children to use and know how to operate a range of technology in their indoor and outdoor learning environment.</p>	<p><b>Online Safety</b></p> <p>Children to understand Self-image and identity online.</p> <p>To understand Online relationships and being safe online.</p> <p>To understand and know the importance of being kind online.</p> <p>To understand and know the how to find information online.</p>	<p><b>Using Technology</b></p> <p>Children will grow in confidence to take turns, understand how to be successful with technology, use technology to share their feelings, drive and become DJs.</p>	<p><b>Healthy Technology</b></p> <p>Children will use technology to exercise, stay healthy, listen and understand instructions, as well as talk and understand messages shared.</p>	<p><b>Digital Communications</b></p> <p>Children will learn to become a digital reader, email, blog, use technology to count and to design.</p>	<p><b>Creating and using Digital Content</b></p> <p>Children will learn how to become a shape-maker. They will understand how technology enables them to become a community member. This will allow them opportunities to observe, become a game player, create digital content, including sound tracks and recording films.</p>
<b>Reception</b>	<p><b>Online Safety</b></p> <p>Children to use a range of applications on the computer.</p> <p>Children to use beebots independently.</p>	<p><b>Online Safety</b></p> <p>Children to understand Self-image and identity online.</p> <p>To understand online relationships and being safe online.</p>	<p><b>Using Technology</b></p> <p>Children will grow in confidence to take turns, understand how to be successful with technology, use technology to share</p>	<p><b>Healthy Technology</b></p> <p>Children will use technology to exercise, stay healthy, listen and understand instructions, as well as talk and understand messages shared.</p>	<p><b>Digital Communications</b></p> <p>Children will learn to become a digital reader, email, blog, use technology to count and to design.</p>	<p><b>Creating and using Digital Content</b></p> <p>Children will learn how to become a shape-maker. They will understand how technology enables them to become a</p>

	Children to use and know how to operate a range of technology in their indoor and outdoor learning environment.	<p>To understand and know the importance of being kind online.</p> <p>To understand and know the how to find information online.</p>	their feelings, drive and become DJs.			community member. This will allow them opportunities to observe, become a game player, create digital content, including sound tracks and recording films.
<b>Year 1</b>	<p><b>Online Safety</b></p> <p>Children work collaboratively with teacher to establish a set of rules for staying safe online. They will gain a deeper understanding of why it is important to treat people with kindness online. They will learn the basic principles of what the internet is and its positives and negatives. Children discuss personal information and why it is important to protect. They will be taught how to be a 'digital citizen' – being respectful. Children will learn how to play safely and why it's important.</p>	<p><b>We are Treasure Hunters (Coding)</b></p> <p>Children explore how to create an algorithm using a treasure hunt. They will then record these instructions clearly and in writing whilst continuing to explore whether they are clear and concise. Children will be taught to programme and manoeuvre Bee-Bots accurately. They will then work to debug a Bee-Bot that has been programmed incorrectly</p>	<p><b>We are Digital Artists</b></p> <p>In this unit pupils use iPads to create paintings inspired by the work of famous artists. They will learn to select colours and brushes, create a range of artwork and learn to use the undo function if they make a mistake. Children will also use multiple layers in their art and transform those layers.</p>	<p><b>We are Publishers</b></p> <p>Children will use Book Creator to create a multimedia eBook about what they enjoy and have achieved. They will decide what content to include, add titles to their book, add images and record audio commentary for it. The children will learn to copy images from elsewhere and will change colour and font too.</p>	<p><b>We are Rhythmic</b></p> <p>Pupils will use Scratch Jr and GarageBand to create patterns of sounds. They will record audio on a digital device, program sprites to playback recorded audio and create repeating rhythms. The children will explore different effects that can be applied to audio and will create repeating percussion using a virtual drum machine.</p>	<p><b>We are Detectives</b></p> <p>Pupils will work with a set of data on pirates and will learn how data is structured as records with fields for information. They will understand how data can be organised into groups and subgroups and how data can be structured as a tree or organised into a table. Then how that data in a table can be filtered and searched.</p>

<p><b>Year 2</b></p>	<p><b>Online Safety</b></p> <p>Children to review the rules their learning from year 1 to establish how to remain safe online. There is a greater focus on the term anti-bullying. Children learn to research responsibility and how to protect personal information. Children learn about that how we use technology is impacts those around them and also about the age-related suitability of different games and why they are given.</p>	<p><b>We are Astronauts (Coding)</b></p> <p>Children will learn how to plan a sequence of instructions to move sprites in Scratch Jr. They will create, test and debug programs from sprites in Scratch Jr. Children will work with input and output, use repetition in their programs and design costumes for sprites.</p>	<p><b>We are Researchers</b></p> <p>Children will learn to safely and effectively use search engines to research information on a chosen topic. They will focus on filtering necessary information in order to select that of which is relevant. The children will learn how to prepare and present the information collected in the form of a multimedia presentation.</p>	<p><b>We are Zoologists</b></p> <p>Children will classify and sort bugs. The children will use cameras to take photos of bugs and will learn to upload and store these images, followed by learning to edit them. Children will sort the data they have collected by creating charts in Excel – learning how to alter the different features of a chart e.g. titles or colour changes. Children will then learn to use Google Maps/ Earth to pinpoint where they found the bugs they studied.</p>	<p><b>We are Game Testers (Coding)</b></p> <p>Children will play Scratch games to understand how algorithms work and how they link to everyday instructions. The children will learn to make sensible predictions about what is going to happen next in a game and will be able to recognise simple improvements needed. They will solve problems and will learn to accurately follow the rules of a game.</p>	<p><b>We are Photographers</b></p> <p>Pupils will be taught how to use technology purposefully to create, organise, store, manipulate and retrieve digital content.</p> <p>The children will learn the features that make a good photo and then will work to take some using cameras. The children will then sort these and edit/ enhance them to improve and change their quality.</p>
<p><b>Year 3</b></p>	<p><b>Online Safety</b></p> <p>Children review learning from Year 2 on how to remain safe online and respond to incidents. They focus on the consequences to online bullying. The children study the trustworthiness of website and develop skills of how to spot untrustworthy websites. They learn to understand that things on the internet can leave a digital trail and may last forever.</p>	<p><b>We are Presenters</b></p> <p>Pupils develop web-based research skills, preparing and delivering a talk on a given topic they've researched. They will record a piece to camera, edit a movie using static images and green scene footage. Once completed, children will give constructive feedback on presentations.</p>	<p><b>Coding</b> <b>We are Programmers / We are Bug Fixers</b></p> <p>Children plan and create an algorithm for an animated scene, write a program in Scratch to create the animation and review programs, correcting any mistakes.</p> <p>Pupils develop strategies for finding errors in programs, build up resilience and strategies for problem solving &amp; increase knowledge of understanding Scratch. They will also recognise a number of common bugs in software.</p>	<p><b>We are Who We Are</b></p> <p>Pupils create a set of presentations for different audiences and discuss issues of online trust and privacy. They will learn to create a number of structured presentations, create a narrated presentation and consider issues of trust and privacy when sharing information.</p>	<p><b>We are Opinion Pollsters</b></p> <p>Pupils understand some elements of survey design. They understand some ethical and legal aspects of online data collection. Use the internet to facilitate data collection. Use charts to analyse data and interpret results.</p>	

	Children focus on the term netiquette and why it's important and discover that internet identities can be misleading.					
<b>Year 4</b>	<p><b>Online Safety</b></p> <p>Children revisit rules made in Year 3 and think of strategies to stay safe online. They learn about positive and negative peer pressure and ways to report related concerns. Children learn about the speed that information can travel and how information may not always be accurate. Children learn about hacking, how it puts personal information at risk and ways to protect this. They develop a positive understanding of how to respect digital rights and how to virtual friendships differ from those in real life.</p>	<p><b>We are Musicians</b></p> <p>Pupils create repeating percussion rhythm, play music using virtual instruments. They compose and edit tunes (pitch and duration). Children will perform electronic music using pre-recorded loops and create their own loops. They will create multitrack composition or performance using multiple instruments and will give feedback to others</p>	<p><b>We are Artists</b></p> <p>Children develop an appreciation of the links between geometry and art. They become familiar with the tools and techniques of a vector graphics package. They develop an understanding of turtle graphic. They experiment with the tools available. They learn to refine and develop their work as they apply their own criteria to evaluate it, and receive feedback from their peers.</p>	<p><b>We are Meteorologists</b></p> <p>Children understand different measures of weather, use computer-based data logging to automate recordings and use spreadsheets to create charts. Children then analyse data, explore inconsistencies &amp; make predictions. Practice using presentation and video software.</p>	<p><b>Coding We are Software Developers</b></p> <p>Pupils develop educational computer game using selection and repetition, understand and use variables, begin to debug programs and recognise the importance of interface design, including consideration of input and output.</p>	<p><b>We are bloggers</b></p> <p>Children become familiar with blogs. Create a sequence of blog posts and incorporate multimedia. Comment on posts of others and develop a critical, reflective view of a range of media.</p>
<b>Year 5</b>	<p><b>Online Safety</b></p> <p>Children recall prior learning on how to stay safe online. They learn the importance of taking responsibility for online actions. Children</p>	<p><b>We are Adventure Gamers</b></p> <p>Pupils will learn to plan a non-linear presentation, creating text and adding and editing images. They use</p>	<p><b>We are Game Developers (Coding)</b></p> <p>The children plan their own simple computer game. They have autonomy over</p>	<p><b>We are Web Developers</b></p> <p>Pupils will learn how the school network and the internet work. They will explore HTML used to create websites and</p>	<p><b>We are VR Designers</b></p> <p>Pupils consider privacy issues in real world contexts. They will also be able to experiment with complex 'fractal' landscapes to create</p>	<p><b>We are Cryptographers</b></p> <p>Children will investigate early methods of communicating over distances, learn about two early ciphers and encrypt and decrypt</p>

	<p>are exposed to paid endorsements and how content creators may not always be trustworthy. A focus on how inappropriate content online lasts forever, can ruin reputations and may last forever. Children learn about how copyright protects original content and review the responsibilities they have when being online. Children focus on the business model for online games and understand accounts for devices can be linked to bank-accounts and cost money.</p>	<p>hyperlinks to navigate between slides within their presentation and record and add audio narration to it. Children work to give feedback, editing as appropriate.</p>	<p>designing the characters and backgrounds, and will work to create a prototype. The children then gather research and use the data to alter their designs.</p>	<p>edit their own website about online safety using Google Sites. The children will know what the source code for a web page looks like and how it can be edited, how a website can be structured and how to add content to a web page.</p>	<p>their own geometric imagery.</p>	<p>messages in various ciphers. They will be familiar with semaphore and Morse code, understand the need for private information to be encrypted and have some understanding of how encryption works on the internet. Pupils will also appreciate the need for complex passwords and why to keep them secure.</p>
<b>Year 6</b>	<p><b>Online Safety</b></p> <p>Children to recall prior learning and develop new strategies based on their experiences online. They learn the risks of being online in regards to indecent imagery and their legal notions. The children will understand the restrictions of networking sites and why they're in place. Children learn about others privacy and the</p>	<p><b>We are Advertisers</b></p> <p>Children work in small groups to create a short video advert with a specific purpose and audience in mind. Pupils will learn to use film-making and editing skills focusing on their uses, shooting a promotional video and the pros and cons of search engines.</p>	<p><b>We are Toy Makers</b></p> <p>In this unit, pupils design and develop a BBC micro:bit powered modification to a soft toy to make the toy interactive.</p>	<p><b>We are Toy Makers</b></p> <p>In this unit, pupils design and develop a BBC micro:bit powered modification to a soft toy to make the toy interactive.</p>	<p><b>We are Connected</b></p> <p>Children will use the school's blogging platform to explore issues related to social media. They will learn about appropriate rules and guidelines for a civil online discussion, how to search results are selected and ranked and how to argue their points effectively, supporting these with sources. The children will learn how to</p>	<p><b>We are Publishers</b></p> <p>In this unit children will produce a class yearbook using desktop publishing tools. They will manage and contribute to a large collaborative project, using online tools. The children will learn to write and review content, source digital media safely, respectfully and responsibly and will also design and produce a</p>

	<p>right to refuse permission of images and videos being uploaded as it can last forever. Children develop knowledge of how act appropriately online. They will understand the risks of online gaming and how to safely protect themselves whilst playing.</p>				<p>counter someone's argument while showing respect and tolerance and will be able to judge the reliability of an online source. Whilst also learning strategies for dealing with online bullying.</p>	<p>high-quality print document.</p>
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