



Woodlands Park Primary and Nursery School

Computing Curriculum Map



Term	Early Years	Year One	Year Two	Years 3	Years 4	Years 5	Year 6
Autumn 1	<p>NOT LIMITED TO TERMS</p> <p>Show resilience and perseverance in the face of a challenge. Know and can talk about the different factors that support their overall health and wellbeing for example sensible amounts of screen time</p> <p>Develop motor skills so that they can use a range of tools competently, safely and confidently</p>	<p><u>Mouse and keyboard skills</u></p> <ol style="list-style-type: none"> 1. Move the mouse or trackpad and left click to select an object. 2. Drag and drop with mouse or trackpad to move objects around the screen. 3. Use double click or double tap. 4. Find letters or numbers on keyboard. 5. Begin touch typing with home row keys (lv1) 	<p><u>Typing and recognising the uses of IT</u></p> <p>Use mouse with increasing confidence</p> <p>Improved typing speed</p> <p>Continue to develop touch typing to home keys and top row (lv2)</p> <p>Understand computers store and follow instructions.</p> <p>Spot digital technology in school or at home.</p> <p>Find a piece of computer equipment amongst day to day objects and choose the correct definition.</p> <p>Understand how different technology helps us.</p>	<p><u>Typing and document editing and creation</u></p> <p>Improved typing speed</p> <p>Continue to develop touch typing to home keys, top row and bottom row (lv3)</p> <p>Copy and paste text and images</p> <p>Find and replace words</p> <p>Format text for a purpose</p> <p>Edit images inside documents</p> <p>Add bullet points to make lists</p> <p>Experiment with keyboard shortcuts</p>	<p><u>Typing and inside a computer</u></p> <p>Improved typing speed</p> <p>Continue to develop touch typing to majority of keys including shift for capital letter (lv5)</p> <p>Understand what important parts of inside a computer or mobile device do to help with the performance (CPU, Fan, Hard Drive, RAM, Graphics Card).</p> <p>Understand that memory is measured in bytes and gigabytes.</p> <p>Use search filters on websites to find suitable information.</p>	<p><u>Typing and operating systems</u></p> <p>Improved typing speed through touch typing</p> <p>Understand the importance of an operating system and its key features.</p> <p>Demonstrate important operating system skills (organising files etc), if possible, across multiple operating systems.</p>	<p><u>E-safety</u></p> <p>Understand to keep personal information private.</p> <p>Respect and protect against online bullies.</p> <p>Understand the consequences of sharing photo/videos online.</p> <p>Understand the term digital footprint.</p> <p>Check online content is trustworthy.</p> <p>Understand how, where and who can we report concerns we have to.</p> <p>Understand the pitfalls of in-app purchases.</p> <p>Understand how and why companies/people track our online behaviour and how we can prevent it.</p> <p>Understand how clones, trojans and hackers can steal your online identity.</p>
Autumn 2		<p><u>E-safety</u></p> <ul style="list-style-type: none"> – Understanding what the internet is and how people use it – Keeping personal information private. 	<p><u>E-safety</u></p> <p>Understand what personal information is and why we keep personal information private.</p>	<p><u>E-safety</u></p> <p>Understand what to do if something upsets you online.</p> <p>Understand why and how people can be nasty online.</p>	<p><u>E-safety</u></p> <p>Understand what to do if something upsets you online.</p>	<p><u>E-safety and computer networks</u></p> <p>Understand terms and conditions and how</p>	<p><u>Computers: past, present & future</u></p> <p>Show awareness of how computers and digital technology helps us today.</p>

		<p>– Respecting people online and an introduction to cyberbullying. – How to report concerns. – Online gaming and more</p>	<p>Understand why websites want personal information. Identify when and where to go for help when concerned. Understand the dangers of sharing photos online? Understand that people online are not always who they say they are. Understand how to trust information online. Learn to use the Internet responsibly. Understand why we should be respectful.</p>	<p>Describe the term 'sharing online' and why we need to get permission to share photos and videos of other people. Understand why people pretend to be someone else online. Understand why we only talk to people we know in the real world, when online. Understand why we should not always trust what we read online and how to check. Understand the importance of being kind in the real world and also online. Understand how to protect digital content with a strong password. Understand the importance of using avatars and how to make them.</p>	<p>Understand why and how people can be nasty online. Describe the term 'sharing online' and why we need to get permission to share photos and videos of other people. Understand why people pretend to be someone else online. Understand why we only talk to people we know in the real world, when online. Understand why we should not always trust what we read online and how to check. Understand the importance of being kind in the real world and also online. Understand how to protect digital content with a strong password. Understand the importance of using avatars and how to make them.</p>	<p>companies can use your data. Understand why people pretend to be someone else online. Understand why we only talk to people we know in the real world, when online. Understand the importance of being kind in the real world and also online. Respect and protect against online bullies. Check online content is trustworthy. Understand to keep personal information private. Understand Computer Networks, Internet, Cloud Computing and Bluetooth and how they help us. What is email and how can we use it safely? Understand how and why we collaborate online (including blogging).</p>	<p>Understand how technology has changed over time and represent it as an interactive timeline. Understand the impact (positive/negative) technological changes have on society. Predict how technology will change in the future.</p>
Spring 1		<p><u>Introducing programming</u> 1. Place instructions into the correct order (sequence) to make something work. 2. Use direction arrows to move an on-screen object (character/sprite) to achieve an objective. 3. Predict a route and sequence direction</p>	<p><u>Developing programming</u> Place instructions into the correct order (sequence) to make something work. Use direction arrows to move an on-screen object (character/sprite) to achieve an objective.</p>	<p><u>Programming in scratch</u> Know that code blocks in Scratch are different colours to help you find the blocks you need. Know that code blocks can be used to draw shapes by programming a pen trail and movements.</p>	<p><u>Programming in scratch</u> Program inputs with loops, selection and sensing for interactions. Work with variables and various forms of input and output. Debug programs that accomplish goals. (correcting errors) Use selection, data variables and operators.</p>	<p><u>Programming in scratch</u> Program inputs for control, selection (conditions) and sensing for interaction and data variables for scoring and a game timer. Program distance sensing and movement.</p>	<p><u>Data detectives</u> Use comprehension skills to find clues that match the column headings of a spreadsheet. Use spreadsheet tools (filters and conditional formatting) to find the specific data to match the clues.</p>

		<p>commands (algorithm) to achieve an objective. Correct the errors if necessary (debug).</p> <p>4. Predict a route and sequence distance commands to program an on-screen object to achieve an objective.</p> <p>5. Predict and sequence movement and pen commands to program the drawing of different 2D shapes.</p> <p>6. Sequence code blocks, including movements and execute (start program) blocks to write a program to achieve an objective.</p>	<p>Predict a route and sequence direction commands (algorithm) to achieve an objective. Correct the errors if necessary (debug).</p> <p>Sequence code blocks, including movements and execute (start program) blocks to write a program to achieve an objective.</p>	<p>Know that a repetition can be used to make a program simpler.</p> <p>Know how to program an input, such as keyboard arrow keys to make a sprite move.</p> <p>Know how to find errors in a program and correct them.</p>	<p>5. Program a virtual robot using Scratch blocks.</p>	<p>Program Inputs, outputs, loops, selection, sensing and variables.</p> <p>Program list variables that chooses randomly.</p>	
Spring 2		<p>blocks, including movements and execute (start program) blocks to write a program to achieve an objective.</p>	<p><u>Programming with scratch jr</u></p> <p>Program movements.</p> <p>Program outputs for audio or text.</p> <p>Find errors in a program (debug).</p> <p>Program inputs (touch or clicking)</p> <p>Program selection/conditions (if statements).</p>	<p><u>Digital storyboards</u></p> <p>Add and edit backgrounds.</p> <p>Add and edit characters, including changing posture, expression and clothing.</p> <p>Add narration and speech bubbles, including formatting text.</p> <p>Duplicate objects to match scenes.</p> <p>Search for objects to use.</p>	<p><u>Internet research</u></p> <p>Appreciate how search results are selected and ranked and show awareness of different strategies for finding specific information</p> <p>Understand the features of an Internet Browser</p> <p>Use search technologies (different websites) to find specific pieces of information</p> <p>Reference the correct source of information</p> <p>Be discerning in evaluating digital content.</p> <p>Check the internet for fake news by cross-referencing facts</p>	<p><u>Programming physical devices</u></p> <p>Understand that computers use physical inputs and outputs and give examples.</p> <p>Program physical inputs, outputs (e.g program LED lights), loops and random variables.</p> <p>Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems.</p>	<p><u>Programming in scratch</u></p> <p>Program inputs, selection, loops and random variables (operators) for unpredictability.</p> <p>Program inputs, selection (conditions), sensing, random variables, operators for direction and data variables for scoring.</p> <p>Use inputs, selection (conditions), loops, sensing, costume changes and broadcasts.</p> <p>Work with multiple sprites to send broadcast messages between them.</p>
Summer 1		<p><u>Digital art</u></p> <p>1. Change the colour of individual pixels to accurately re-create basic artwork.</p> <p>2. Make changes where required.</p>	<p><u>Internet research</u></p> <p>Understand how a web-page displays information in different ways; text, images, videos and interactive elements.</p>	<p><u>Music creation</u></p> <p>Create ascending and descending scales.</p> <p>Add chords evenly across the scales.</p> <p>Add arepeggios and melodies.</p>	<p><u>Animation and 3d design</u></p> <p>Create a stop-motion video by duplicating slides that include backgrounds and shapes.</p>	<p><u>Text based programming</u></p> <p>Change the variables of text-based commands.</p> <p>Write text-based commands accurately</p>	<p><u>Binary code</u></p> <p>Understand why computers/electronics use binary.</p> <p>Match a sequence of binary code to create digital art.</p>

		<p>3. Change the colour of individual pixels to accurately re-create detailed artwork.</p> <p>4. Use custom colours to make digital art your own.</p> <p>5. Use zoom controls to help fill small shapes.</p>	<p>Use a web-page to answer questions by using keywords.</p>	<p>Add a steady and even rhythm.</p> <p>Use sampled sounds to create an effective mix.</p> <p>Build beats, melody (tones) and effects</p>	<p>Create animation using transition and animation effects (morph, motion paths, pulse etc), including taking and editing a screenshot.</p> <p>Animate individual elements of objects.</p> <p>Create animated GIF files by animating pixels.</p> <p>Add, move, change colour and duplicate a brick.</p> <p>Rotate bricks.</p> <p>Use sloping bricks and special bricks for a purpose.</p> <p>Change the transparency of bricks.</p>	<p>and use fill effects, stamps and functions.</p> <p>Write text commands/functions to program keyboard inputs in a game.</p> <p>Programming a Logo turtle to move and use pen</p> <p>Use co-ordinates in with a Logo turtle</p> <p>Print labels in Logo.</p> <p>Program a loop and shapes in Logo Turtle.</p> <p>Program colours in Logo turtle.</p> <p>Program variables in Logo turtle</p>	<p>To convert binary code to denary numbers (decimal numbers) and visa versa.</p>
<p>Summer 2</p>		<p><u>Music creation</u></p> <p>Understand the advantages and disadvantages of making music on a computer.</p> <p>Understand that different instruments make their own sound and that instruments can be divided into groups</p> <p>Create a rhythm using a pattern of beats.</p> <p>Create digital sounds using patterns and shapes.</p> <p>Create a simple melody using patterns and adjust tempo.</p>	<p><u>Introducing data handling</u></p> <p>Understand what data is and collect it as a tally.</p> <p>Use software to label a pictogram and add data to each column.</p> <p>Edit a table with correct titles and numbers.</p> <p>Use software to create a bar chart/pie chart/line chart suitable for the data.</p> <p>Interpret a pictogram/bar chart/line chart.</p>	<p><u>3D design</u></p> <p>Understand and use 3D space on a grid.</p> <p>Design cities/towns for a purpose and to a budget.</p> <p>Re-create or design familiar 3D models using cubes, such as tables and chairs.</p> <p>Use chisel tool to improve and adapt models.</p> <p>Colour individual blocks or whole models.</p>	<p><u>Data handling</u></p> <p>Change appearance of cells in a spreadsheet (fill colour and border) then add and align text.</p> <p>Find and add data to a spreadsheet, resize cells and use the software to create a suitable chart with a title.</p>	<p><u>Data Handling</u></p> <p>Select and use non-adjacent cells plus resize multiple cell widths and copy/paste cells</p> <p>Find data and create a spreadsheet to suit it.</p> <p>Use formulae to find totals, averages and maximum/minimum numbers</p> <p>Search a database for specific information.</p>	<p><u>Staging a Production (Lighting and Sound)</u></p> <p>To understand the importance of technology in a play production through lighting, sound and backgrounds.</p>