



Wentworth Primary School

Key Skills & Knowledge Progression Map

‘Striving for Excellence’

Computing

EYFS taught through EYFS Progression of Knowledge and Skills

	Foundation	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<p><u>Computer Science</u></p> <p>How computers work and coding</p>		<p><u>Spring 1</u> Programming - Beebots</p> <p><u>Spring 2</u> Programming - Espresso Coding (On the move)</p> <p><u>Summer 2</u> Programming - Espresso Coding (Simple inputs)</p> <p>Across the year, children develop their early programming skills through hands-on and on-screen activities. They begin by giving clear instructions to floor robots, learning sequencing, direction, and how to fix mistakes.</p>	<p><u>Autumn 2</u> Programming - Espresso Coding (Different sorts of inputs)</p> <p><u>Summer 1</u> Programming - Beebots</p> <p><u>Summer 2</u> Programming - Espresso Coding (Buttons and Instructions)</p> <p>Children develop their programming skills by exploring how different inputs and instructions control what happens in a program.</p> <p>They begin by using on-screen tools to see how actions like</p>	<p><u>Autumn 2</u> Programming - Espresso Coding (Sequence and animation)</p> <p><u>Spring 1</u> Programming - Probots</p> <p><u>Summer 1</u> Programming - Espresso Coding (Conditional Events)</p> <p>Year 3 pupils strengthen their programming skills by creating clear sequences and simple animations using on-screen coding tools.</p> <p>They then apply their understanding of instructions and</p>	<p><u>Autumn 2</u> Programming - Logo, text based (NCCE unit)</p> <p><u>Spring 1</u> Programming - Espresso Coding (Introduction to variables)</p> <p><u>Summer 1</u> Programming - Scratch (NCCE unit)</p> <p>Year 4 pupils extend their programming skills by learning to write precise text-based commands in Logo, developing accuracy and control through typed instructions.</p> <p>They then explore variables using on-screen coding</p>	<p><u>Autumn 2</u> Programming - Espresso Coding (Speed, direction and coordinates)</p> <p><u>Spring 1</u> Programming - Flowol</p> <p><u>Summer 2</u> Programming - Espresso Coding (HTML Website design)</p> <p>Year 5 pupils extend their programming skills by using on-screen coding tools to control speed, direction, and movement through coordinates, developing accuracy and spatial reasoning.</p>	<p><u>Autumn 1</u> Programming - Espresso Coding (More complex variables)</p> <p><u>Spring 1</u> Programming - Scratch (Twinkl Unit)</p> <p>Pupils refine their programming skills by working with more complex variables in Espresso Coding, using them to store, track, and manipulate changing information within a program.</p> <p>They then apply their understanding in Scratch, combining variables with sequences, selection, and events to create interactive projects with greater control and sophistication.</p>

		<p>They then move on to block-based coding, using simple commands to control movement and build short algorithms with a clear purpose.</p> <p>Finally, they explore how programs can respond to user actions, creating interactive effects using basic inputs. Together, these units build confidence, logical thinking, and an understanding of how digital systems follow and respond to instructions.</p>	<p>clicking or pressing keys trigger events, then apply sequencing and debugging skills with floor robots.</p> <p>By the end of the year, they create simple programs using buttons and clear instructions, strengthening their understanding of how computers follow and respond to the commands they give.</p>	<p>debugging when programming Probots to follow accurate routes.</p> <p>Later, they explore conditional events, making programs that respond to specific triggers. Across the year, they develop greater control, logical thinking, and confidence in building more complex programs.</p>	<p>tools, understanding how values can be stored and changed within a program.</p> <p>Later, they apply their knowledge in Scratch, creating programs that combine sequences, events, and variables to achieve more complex outcomes. Across these units, pupils deepen their logical thinking and gain confidence working with increasingly sophisticated programming concepts.</p>	<p>They then apply more complex logic in Flowol, using flowcharts to design and control sequences for real-world simulations. Later in the year, they are introduced to HTML, learning how simple website structures are created using text-based code.</p> <p>Across these units, pupils deepen their understanding of how different programming environments work and gain confidence in creating, controlling, and structuring increasingly sophisticated digital outcomes.</p>	<p>Across these units, pupils develop strong computational thinking, deepen their understanding of how programs manage data, and gain confidence designing and building more advanced digital outcomes.</p>
<p><u>Information Technology</u></p> <p>Using computers to create and find information</p>		<p><u>Autumn 1</u> Computer systems and networks - Technology around us (NCCE unit)</p> <p><u>Autumn 2</u> Creating media - Purple Mash</p> <p><u>Summer 1</u> Data and information - grouping data (NCCE unit)</p>	<p><u>Autumn 1</u> Data and information - Pictograms (NCCE Unit)</p> <p><u>Spring 1</u> Computer systems and networks - IT around us (NCCE Unit)</p> <p><u>Spring 2</u> Creating media - Purple Mash</p>	<p><u>Autumn 1</u> Computer systems and networks - Connecting computers (NCCE unit)</p> <p><u>Spring 2</u> Data and information - Branching databases (NCCE Unit)</p> <p><u>Summer 2</u></p>	<p><u>Autumn 1</u> Computer systems and networks - The Internet (NCCE unit)</p> <p><u>Spring 2</u> Creating media - Photo editing (NCCE unit)</p> <p><u>Summer 2</u> Creating media - Audio Editing (NCCE unit)</p>	<p><u>Autumn 1</u> Data and information - flat-file databases (NCCE unit)</p> <p><u>Spring 2</u> Computer systems and networks - Systems and searching (NCCE unit)</p> <p><u>Summer 1</u></p>	<p><u>Autumn 2</u> Data and information - Spreadsheets (NCCE unit)</p> <p><u>Spring 2</u> Creating media - 3D modelling (NCCE unit)</p> <p><u>Summer 1</u> Computer systems and networks - Communication (NCCE unit)</p> <p><u>Summer 2</u></p>

		<p>Children learn how technology is used in everyday life, beginning with recognising different digital devices and understanding their basic purposes. They explore how technology helps us communicate, create, and find information, and they learn simple ways to use it safely and responsibly.</p> <p>As the year continues, pupils develop their creative skills by using digital tools to make and edit media, building confidence in using software to present ideas.</p> <p>Later, they learn to sort and group data, recognising patterns and organising information in meaningful ways. Together, these units help children understand what technology is for, how it can be used to create and communicate, and how information can</p>	<p>Children build their understanding of information technology by learning how data can be collected and shown using pictograms, helping them spot simple patterns.</p> <p>They explore the technology used around them and how it supports everyday tasks, including how to use devices safely and responsibly. Later, they develop their creativity by using digital tools to make and edit media.</p> <p>Together, these units help pupils understand how technology is used to organise information, communicate, and create digital content.</p>	<p>Creating Media – Desktop publishing</p> <p>Pupils deepen their understanding of information technology by learning how computers connect and share information, creating branching databases to organise data using clear questions, and developing their digital creativity through desktop publishing.</p> <p>Across these units, they strengthen their ability to organise information, understand connected systems, and produce purposeful digital content.</p>	<p>Year 4 pupils deepen their understanding of information technology by learning how the internet works, exploring how information travels across networks and how to use online content responsibly.</p> <p>They then develop their creative skills through photo editing, adjusting and improving digital images for a purpose.</p> <p>Later in the year, they build confidence in working with sound by recording, editing, and arranging audio. Across these units, pupils strengthen their understanding of connected systems and develop greater control when creating and editing different types of digital media.</p>	<p>Creating media – Vector drawing (NCCE unit)</p> <p>Year 5 pupils broaden their understanding of programming by using on-screen tools to control speed, direction, and movement through coordinates, strengthening their precision and spatial reasoning.</p> <p>Later in the year, they are introduced to HTML, learning how simple website structures are created using text-based code.</p> <p>Across these units, pupils gain confidence working across different programming environments and develop the skills needed to create and control more sophisticated digital outcomes.</p>	<p>Creating media – Photo editor</p> <p>Year 6 pupils develop advanced information-technology skills by using spreadsheets to organise data, apply formulas, and present information clearly.</p> <p>They then explore 3D modelling, creating and manipulating digital objects with increasing precision.</p> <p>Later in the year, they learn how digital communication works across systems and networks, considering how information is shared safely and effectively.</p> <p>They also refine their creative skills through photo editing, enhancing and adjusting images for a specific purpose.</p> <p>Across these units, pupils strengthen their ability to manage data, understand digital communication, and create high-quality digital content across a range of media.</p>
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<u>Digital Literacy</u> Using technology safely, responsibly, and respectfully		<p>E-safety lessons Pupils learn to recognise when online behaviour or content might make them feel upset and understand the importance of telling a trusted adult.</p> <p>They explore asking permission online, being kind and respectful to others, and recognising that online content can be real, pretend, liked or disliked.</p> <p>They also learn how to seek help if they see something worrying.</p>	<p>E-safety lessons Children learn about consent online, including when to say no and who to ask before sharing information.</p> <p>They explore how online information can be seen by others and what to do if something is shared without permission.</p> <p>They also learn about passwords, privacy, and keeping personal information safe.</p>	<p>E-safety lessons Pupils focus on positive online behaviour and recognising online bullying.</p> <p>They learn about healthy and unhealthy levels of screen time and why age restrictions exist.</p> <p>Later in the year, they explore what it means to “know” or “trust” someone online and why online relationships differ from offline ones.</p>	<p>E-safety lessons Children learn how to show respect online and recognise healthy and unhealthy interactions.</p> <p>They explore how online content can affect people differently and learn to question online information, including understanding fake news.</p> <p>They also consider how their online behaviour shapes how others perceive them and why people may pretend to be someone else online.</p>	<p>E-safety lessons Pupils learn that some people online may have harmful intentions and that this is never their fault.</p> <p>They explore how to seek help, understand the differences between online and offline bullying, and learn how to report concerns.</p> <p>They also develop strategies for healthy technology use and learn about in-app purchases and the importance of seeking permission.</p>	<p>E-safety lessons Children learn how to capture evidence of online bullying and how to report it in different contexts.</p> <p>They explore password safety, including what to do if a password is compromised.</p> <p>They critically evaluate online content related to identity and representation and learn how to seek help for worrying online experiences, understanding the importance of asking until support is received.</p>
<u>Key Vocabulary</u>		<p>Computer Science Algorithm Program Command Sequence Debug Input Output Robot Predict Information Technology Technology</p>	<p>Computer Science Algorithm Program Command Sequence Debug Input Output Robot Event Button Instruction</p>	<p>Computer Science Algorithm Sequence Program Command Debug Input Output Event Condition Animation Probot Instruction</p>	<p>Computer Science Logo Command Procedure Repeat Variable Value Sequence Event Sprite Block Debug Algorithm</p>	<p>Computer Science – Speed Direction Coordinates X-axis Y-axis Variable Value Flowchart Process Decision Input Output</p>	<p>Computer Science Variable Complex variable Value Sequence Selection Event Input Output Algorithm Debug Sprite Broadcast</p>

		Device Digital Media Edit Save Data Group Online safety Digital Literacy	Information Technology Pictogram Data Grouping Category Device Digital Technology Media Edit Save Online safety Digital Literacy Consent Share Personal information Online information Seen by others Incorrect Password Private Privacy Device Account	Information Technology Network Connection Device Digital Data Branching database Question Category Desktop publishing Layout Text box Digital Literacy behaviour Online bullying Support Screen time Age restrictions Pressure Know someone online Trust Online relationship Offline Comfortable / uncomfortable	Information Technology Internet Network Web page Website Search Edit Crop Filter Adjust Audio Record Timeline Digital Literacy Respect Healthy behaviour Unhealthy behaviour Opinions Beliefs Fake news Altered images Positive interactions Perception Pretend identity Online persona	HTML Tag Website Debug Information Technology Database Record Field Table Search Sort System Network Index Ranking Vector Layer Shape Anchor point Digital Literacy Harm Trusted adult Online bullying Report Support Wellbeing Strategies In-app purchases Loot boxes Permission Technology use	Loop Condition Interaction Information Technology Spreadsheet Cell Formula Function Chart Data set 3D model Rotate Extrude Render Communication Network Protocol Online safety Edit Filter Digital Literacy Evidence Screenshot URL Profile Report Password safety Secure storage Representation Stereotypes Identity Worrying content Help-seeking
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