

# Computing 8 Year Overview

*Intent: For pupils to embrace the opportunities of technology and to use it purposefully, creatively and responsibly.*

Strands:			
Computer Science	Information Technology	Digital Literacy	e-Safety

Purpose									
Networks	Creating Media	Data and Information	Design and Development	Computing systems	Impact of Technology	Algorithms	Programming	Effective use of tools	Safety and Security
NW	CM	DI	DD	CS	IT	AL	PG	ET	SS

	E-Safety (across the year)	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Pre-School	Recognise how to use technology safely at home and in school.	Use digital technology to store and access content with some support. Create content using digital technology. Begin to use a mouse to navigate around a computer screen.	Identify algorithms used in everyday life. Begin to sequence instructions. Recognise, use and understand directional language. Perform a simple program on the floor robot. Recognise that a string of instructions or commands placed together can create a simple program. Record the program used using symbols.	Describe what personal information is. Understand the importance of asking for help from an adult when on the internet. Identify some ways technology is used at home and in school.			
Reception							
<b>Key Stage 1:</b>							
Year 1	Use technology safely and respectfully, keeping personal information private	<b>Unit name: Technology around us</b> Purpose: CS, AL Software: <a href="https://paintz.app/">https://paintz.app/</a> or Paint	<b>Unit name: Digital painting</b> Purpose: ET, CM Software: <a href="https://paintz.app/">https://paintz.app/</a> or Paint	<b>Unit name: Moving a robot</b> Purpose: AL, PG Hardware: Bee-Bot	<b>Unit name: Grouping data</b> Purpose: DI, AL Software: Powerpoint	<b>Unit name: Digital writing</b> Purpose: ET, CM Software: Microsoft Word	<b>Unit name: Programming animations</b> Purpose: PG, DD Software: Scratch Jr
Year 2	Identify where to go for help and support when they have concerns about content or contact	<b>Unit name: IT around us</b> Purpose: NW, CS Software: Powerpoint	<b>Unit name: Digital photography</b> Purpose: ET, CM Software: PixLR App	<b>Unit name: Robot algorithms</b> Purpose: AL, PG Hardware: Bee-Bots/Bee-Bot App	<b>Unit name: Pictograms</b> Purpose: DI, ET Software: <a href="https://www.j2e.com/jit#pictogram">https://www.j2e.com/jit#pictogram</a>	<b>Unit name: Digital music</b> Purpose: CM, DD Software: <a href="https://musiclab.chromeexperiments.com/">https://musiclab.chromeexperiments.com/</a>	<b>Unit name: Programming quizzes</b> Purpose: PG, DD Software: Scratch Jr Logins
<b>Key Stage 2:</b>							
Year 3	Give examples of the risks posed by online communications.  Understand that comments made online that are hurtful or offensive are the same as bullying	<b>Unit name: Connecting Computers</b> Purpose: NW, CS Software: <a href="https://paintz.app/">https://paintz.app/</a>	<b>Unit name: Stop-frame animation</b> Purpose: ET, CM Software: iMotion App	<b>Unit name: Sequencing sounds</b> Purpose: PG, DD Software: Scratch logins	<b>Unit name: Branching databases</b> Purpose: DI, ET Software: <a href="https://www.j2e.com/jit5?fileId=FDrqUQoSY1jKiBHN#branch">https://www.j2e.com/jit5?fileId=FDrqUQoSY1jKiBHN#branch</a>	<b>Unit name: Desktop publishing</b> Purpose: ET, CM Software: Adobe Spark or Publisher	<b>Unit name: Events and actions in programs</b> Purpose: PG, DD Software: Scratch logins
Year 4	Use features of applications and devices in order to communicate ideas, work or messages professionally	<b>Unit name: The Internet</b> Purpose: NW, SS Software: <a href="https://scratch.mit.edu/projects/63473366/editor/">https://scratch.mit.edu/projects/63473366/editor/</a>	<b>Unit name: Audio Production</b> Purpose: ET, CM Software/ Hardware: Audacity/ headphones	<b>Unit name: Repetition in shapes</b> Purpose: AL, PG URL: <a href="https://turtleacademy.com/playground">https://turtleacademy.com/playground</a> <a href="https://fmslogo.sourceforge.io/">https://fmslogo.sourceforge.io/</a>	<b>Unit name: Data logging</b> Purpose: CS, DI Hardware: Data Loggers/ temperature sensor	<b>Unit name: Photo editing</b> Purpose: ET, CM URL: <a href="https://paint.net/">https://paint.net/</a>	<b>Unit name: Repetition in games</b> Purpose: PG, DD Software: Scratch logins

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<p>Year 5</p> <p>PCs iPads Either Unplugged</p>	<p>Give examples of the risks of online communities and demonstrate knowledge of how to minimise risk and report problems.</p> <p>Understand the effect of online comments and show responsibility and sensitivity when online.</p>	<p><b>Unit name: Systems and Searching</b> Purpose: NW, ET Software: Powerpoint</p>	<p><b>Unit name: Video production</b> Purpose: CM, DD Software: iMovie/ Green screen App Microsoft Photos</p>	<p><b>Unit name: Selection in physical computing</b> Purpose: PG, CS Hardware: Crumble controller+starter kit+ motor</p>	<p><b>Unit name: Flat-file databases</b> Purpose: DI, ET Software: <a href="https://www.j2e.com/data/examples/countries">https://www.j2e.com/data/examples/countries</a> j2e logins Lessons:</p>	<p><b>Unit name: Introduction to vector graphics</b> Purpose: ET, CM Software: Google Drawings App/ Logins</p>	<p><b>Unit name: Selection in quizzes</b> Purpose: AL, PG Software: Scratch logins</p>
<p>Year 6</p> <p>PCs iPads Either Unplugged</p>	<p>Choose the most suitable applications and devices for the purposes of communication</p>	<p><b>Unit name: Communication and Collaboration</b> Purpose: NW, ET Software: Google Drive/ Slides (Work collaboratively)</p>	<p><b>Unit name: Webpage creation</b> Purpose: CM, DD Software: Google Sites</p>	<p><b>Unit name: Variables in games</b> Purpose: PG, DD nccce.io/scorechange or /scoreboard nccce.io/pongstarter or fruit catcher or catchertemplate or chatbocode/ bananas</p>	<p><b>Unit name: Introduction to spreadsheets</b> Purpose: ET, DI Software: Microsoft Excel</p>	<p><b>Unit name: 3D modelling</b> Purpose: ET, CM Software: Tinkercad login</p>	<p><b>Unit name: Sensing movement</b> Purpose: PG, CS Hardware: Micro:bit Software: Microsoft Make Code</p>