Primary Computing Progression

Note: Computing is statutory from Key Stages 1-2 (Years 1-6). Nursery and Reception content below reflects EYFS foundations that support later computing learning, not statutory computing requirements.

Year Group	Knowledge & Skills Progression	Tier 1 Vocabulary	Tier 2 Vocabulary	Tier 3 Vocabulary
Nursery 1	Explore cause and effect with technology; recognise technology in daily life.	device, button, screen	technology, digital, control	input, output, instruction
Nursery 2	Use simple digital devices with support; follow simple sequences.	click, photograph, sound	sequence, program, robot	instruction, predict, digital technology
Year 1	Understand algorithms; create/debug simple programs; use technology purposefully; keep personal information private.	computer, algorithm, program	debug, sequence, device	instruction, technology, information
Year 2	Create and debug programs; use logical reasoning; organise/store digital content; use technology safely.	data, code, internet	logic, digital content, search	network, predict, evaluate
Year 3	Design/write/debug programs that begin to work with variables; use repetition; understand networks and internet services; collect and present data, including graphs; make effective use of search engines.	network, internet, repetition	input, output, website	variable, connection, data
Year 4	Design programs using decomposition; Use sequence, selection and repetition; understand networks including internet; use data and media safely; evaluate websites, recognise bias / misinformation, understand rankings in search engines.	selection, repetition, search	router, audio, evaluate, decomposition	logical reasoning, world wide web, digital footprint
Year 5	Design increasingly complex programs that work with variables, using decomposition; select digital content.	variable, system, media	search engine, database	refine, efficiency, communicate
Year 6	Solve problems by decomposing; use variables and inputs/outputs; evaluate digital solutions; understand online safety and networks.	input, output, process	decompose, refine, accuracy	algorithmic thinking, cybersecurity, evaluate

Area	Possible adaptations / equipment
Hardware access	Larger keyboards; alternative keyboards; keyguards; trackballs; adapted mice; larger mice; touchscreens; styluses; wrist rests; adjustable stands
Keyboard skills	Keyboard overlays; colour-coded keys; enlarged keyboard displays; key guides; reduced-key keyboards where appropriate; visual prompts for common shortcuts
Mouse / cursor control	Trackball mouse; larger mouse; touchpad; touchscreen; stylus; adjusted cursor size; reduced mouse sensitivity; single-click settings where appropriate
Screen access	Enlarged display; increased text size; zoom; high-contrast settings; reduced screen clutter; screen magnification; appropriate screen positioning
Visual supports	Visual step-by-step instructions; screenshots; icons; labelled diagrams; symbol-supported instructions; “where to click” prompts; worked examples
Following instructions	Instructions broken into small steps; numbered steps; one instruction at a time; visual task cards; “first/then” prompts; screenshots showing each stage
Coding	Unplugged coding cards; physical sequencing cards; large coding blocks; colour-coded commands; block-based programming; partially completed code; worked examples
Algorithms & sequencing	Arrow cards; flowcharts; sequencing cards; physical movement activities; visual algorithms; drag-and-drop sequencing activities
Debugging	Error cards; visual debugging checklists; “What did you expect? What happened?” prompts; examples of common errors; paired debugging
Data	Physical sorting objects; pictograms; concrete resources; colour-coded data; pre-prepared datasets; simplified tables; graph templates; digital graphing tools
Digital literacy	Visual guides for logging in, saving, opening files, navigating software and using menus; labelled screenshots; keyboard shortcut cards
Online safety	Visual scenarios; symbols; social stories; scenario cards; simple decision trees; visual reminders of key safety rules
Managing equipment	Visual instructions for connecting/disconnecting equipment; colour-coded cables/ports; cable guides; labelled charging points; equipment checklists
Robotics / physical computing	Larger components; colour-coded components; visual connection diagrams; larger buttons/switches; pre-prepared components; physical models
Sensory needs	Headphones/ear defenders where appropriate; screen brightness adjustments; reduced visual clutter; alternative input methods; consideration of noise and screen demands