

## Knowledge and Vocabulary Year Group Progression Grid for Computing

Nursery/Reception		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<p><b>Information Technology</b> computer, keyboard, mouse, screen, click, technology, save, ipad, laptop</p>	<b>COMPUTING SYSTEMS AND NETWORK</b>	<p><b>Technology all around us</b> technology, computer, mouse, trackpad, keyboard, screen, double-click, typing.</p>	<p><b>Information Technology all around us</b> Information technology (IT), computer, barcode, scanner/scan</p>	<p><b>Connecting Computers</b> digital device, input, process, output, program, digital, non-digital, connection, network, switch, server, wireless access point, cables, sockets</p>	<p><b>Connecting Computers – The Internet</b> internet, network, router, security, switch, server, wireless access point (WAP), website, web page, web address, routing, web browser, World Wide Web, content, links, files, use, download, sharing, ownership, permission, information, accurate, honest, content, adverts</p>	<p><b>Systems and Searching</b> system, connection, digital, input, process, storage, output, search, search engine, refine, index, bot, ordering, links, algorithm, search engine optimisation (SEO), web crawler, content creator, selection, ranking.</p>	<p><b>Communication and Collaboration</b> communication, protocol, data, address, Internet Protocol (IP), Domain Name Server (DNS), packet, header, data payload, chat, explore, slide deck, reuse, remix, collaboration, internet, public, private, oneway, two-way, one-to-one, one-to-many.</p>
<p><b>Continuous Provision – available throughout the day for both focused and self-chosen learning</b></p> <p>Tablets/cameras for recording learning.</p> <p>A range of technology will be explored continuously throughout the year for the children to access, both independently and with an adult.</p> <ul style="list-style-type: none"> <li>- Tablets</li> <li>- Computers – games / activities linked to the topic or maths being covered each week.</li> <li>Keyboard and mouse skills using desktop computers</li> <li>- Remote control toys – cars.</li> <li>- Battery operated toys</li> <li>- Beebots</li> <li>- CD players</li> <li>- Interactive white boards – Busy Things/Top marks / Espresso /Google Earth / Digi map.</li> <li>- iPads</li> <li>- Sound buttons – children can listen to a pre-recorded challenge or record their own answers.</li> </ul>	<b>CREATING MEDIA</b>	<p><b>Digital painting</b> paint program, tool, paintbrush, erase, fill, undo, shape tools, line tool, fill tool, undo tool, colour, brush style, brush size, pictures, painting, computers</p> <p><b>Digital Writing</b> word processor, keyboard, keys, letters, type, numbers, space, backspace, text cursor, capital letters, toolbar, bold, italic, underline, mouse, select, font, undo, redo, format, compare, typing, writing.</p>	<p><b>Digital Photography</b> device, camera, photograph, capture, image, digital, landscape, portrait, framing, subject, compose, light sources, flash, focus, background, editing, filter, format, framing, lighting,</p> <p><b>Digital Music</b> music, quiet, loud, feelings, emotions, pattern, rhythm, pulse, pitch, tempo, rhythm, notes, create, emotion, beat, instrument, open, edit.</p>	<p><b>Desktop Publishing</b> text, images, advantages, disadvantages, communicate, font, style, landscape, portrait, orientation, placeholder, template, layout, content, desktop publishing, copy, paste, purpose, benefits.</p>	<p><b>Audio Production</b> audio, microphone, speaker, headphones, input device, output device, sound, podcast, edit, trim, align, layer, import, record, playback, selection, load, save, export, MP3, evaluate, feedback.</p> <p><b>Photo Editing</b> image, edit, digital, crop, rotate, undo, save, adjustments, effects, colours, hue, saturation, sepia, vignette, image, retouch, clone, select, combine, made up, real, composite, cut, copy, paste, alter, background, foreground, zoom, undo, font.</p>	<p><b>Vector Graphics</b> vector, drawing tools, object, toolbar, vector drawing, move, resize, colour, rotate, duplicate/copy, zoom, select, align, modify, layers, order, copy, paste, group, ungroup, reuse, reflection</p> <p><b>Video Production/Editing</b> video, audio, camera, talking head, panning, close up, video camera, microphone, lens, mid-range, long shot, moving subject, side by side, angle (high, low, normal), static, zoom, pan, tilt, storyboard, filming, review, import, split, trim, clip, edit, reshoot, delete, reorder, export, evaluate, share.</p>	<p><b>3D Modelling</b> TinkerCAD, 2D, 3D, shapes, select, move, perspective, view, handles, resize, lift, lower, recolour, rotate, duplicate, group, cylinder, cube, cuboid, sphere, cone, prism, pyramid, placeholder, hollow, choose, combine, construct, evaluate, modify</p> <p><b>Web Creation</b> website, web page, browser, media, Hypertext Markup Language (HTML), logo, layout, header, media, purpose, copyright, fair use, home page, preview, evaluate, device, Google Sites, breadcrumb trail, navigation, hyperlink, subpage, evaluate, implication, external link, embed.</p>

<p><b>Digital Literacy</b> Technology, personal, information, private, website, internet</p>	<p><b>DATA AND INFORMATION</b></p>	<p><b>Grouping</b> object, label, group, search, image, property, colour, size, shape, value, data set, more, less, most, fewest, least, the same</p>	<p><b>Pictograms</b> more than, less than, most, least, common, popular, organise, data, object, tally chart, votes, total, pictogram, enter, data, compare, objects, count, explain, attribute, group, same, different, conclusion, block diagram, sharing</p>	<p><b>Branching Databases</b> attribute, value, questions, table, objects, branching, database, objects, equal, even, separate, structure, compare, order, organise, selecting, information, decision tree.</p>	<p><b>Data Logging</b> data, table, layout, input device, sensor, logger, logging, data point, interval, analyse, dataset, import, export, logged, collection, review, conclusion.</p>	<p><b>Flat file Databases</b> database, data, information, record, field, sort, order, group, search, value, criteria, graph, chart, axis, compare, filter, presentation.</p>	<p><b>Introduction to Spreadsheets</b> data, collecting, table, structure, spreadsheet, cell, cell reference, data item, format, formula, calculation, spreadsheet, input, output, operation, range, duplicate, sigma, propose, question, data set, organised, chart, evaluate, results, sum, comparison, software, tools.</p>
<p><b>Computer Science</b> Sequence, move, position, create</p>	<p><b>PROGRAMMING A</b></p>	<p><b>Moving a Robot</b> Bee-Bot, forwards, backwards, turn, clear, go, commands, instructions, directions, left, right, route, plan, algorithm, program.</p>	<p><b>Robot Algorithms</b> instruction, sequence, clear, unambiguous, algorithm, program, order, prediction, artwork, design, route, mat, debugging, decomposition</p>	<p><b>Sequencing Sounds</b> Scratch, programming, blocks, commands, code, sprite, costume, stage, backdrop, motion, turn, point in direction, go to, glide, sequence, event, task, design, run the code, order, note, chord, algorithm, bug, debug, code</p>	<p><b>Repetition in Shapes</b> Logo (programming environment), program, turtle, commands, code snippet, algorithm, design, debug, pattern, repeat, repetition, count-controlled loop, value, trace, decompose, procedure.</p>	<p><b>Selection in physical computing</b> microcontroller, USB, components, connection, infinite loop, output component, motor, repetition, count-controlled loop, Crumble controller, switch, LED, Sparkle, crocodile clips, connect, battery box, program, condition, Input, output, selection, action, debug, circuit, power, cell, buzzer</p>	<p><b>Variable in games</b> variable, change, name, value, set, design, event, algorithm, code, task, artwork, program, project, code, test, debug, improve, evaluate, share, assign, declare</p>
	<p><b>PROGRAMMING B</b></p>	<p><b>Introduction to animation</b> ScratchJr, command, sprite, compare, programming, area, block, joining, start, run, program, background, delete, reset, algorithm, predict, effect, change, value, instructions, design.</p>	<p><b>Programming quizzes</b> sequence, command, program, run, start, outcome, predict, blocks, design, actions, sprite, project, modify, change, algorithm, build, match, compare, debug, features, evaluate, decomposition, code.</p>	<p><b>Events and actions</b> motion, event, sprite, algorithm, logic, move, resize, extension block, pen up, set up, pen, design, action, debugging, errors, setup, code, test, debug, actions.</p>	<p><b>Repetition in games</b> Scratch, programming, sprite, blocks, code, loop, repeat, value, infinite loop, count-controlled loop, costume, repetition, forever, animate, event block, duplicate, modify, design, algorithm, debug, refine, evaluate.</p>	<p><b>Selection in quizzes</b> Selection, condition, true, false, count-controlled loop, outcomes, conditional statement, algorithm, program, debug, question, answer, task, design, input, implement, test, run, setup, operator</p>	<p><b>Sensing movement</b> Micro:bit, MakeCode, input, process, output, flashing, USB, trace, selection, condition, if then else, variable, random, sensing, accelerometer, value, compass, direction, navigation, design, task, algorithm, step counter, plan, create, code, test, debug</p>

**Online Safety/Digital Literacy is taught across the school and based on the 8 topics outlined in the UKCIS Education for a Connected World Framework**

Self-image & identity

Online relationships

Online reputation

Online bullying

Managing online information

Health, wellbeing & lifestyle

Privacy & security

Copyright & ownership