COMPUTING: PROGRESSION OF VOCABULARY

Bredbury Green Primary School | Nursery-Year 6 curriculum companion

Purpose and principles

This document sits alongside the school's Progression of Computing. It identifies a carefully selected set of Tier 2 academic vocabulary and Tier 3 computing-specific vocabulary for explicit teaching, use and retrieval. The Year 1-Year 6 terminology is grounded in the school's progression and the attached National Centre for Computing Education / Teach Computing vocabulary banks; Nursery and Reception provide developmentally appropriate foundations.

Tier 2 vocabulary comprises high-utility words that support explanation, reasoning and evaluation across subjects, such as compare, organise, predict, refine and evaluate. Tier 3 vocabulary names computing concepts, tools and processes, such as algorithm, network, database, loop and variable. Some words move from everyday meanings to more precise computing meanings as pupils progress.

Progression should be seen in pupils' increasing precision and independence: from naming and operating familiar technology, to explaining systems, designing digital content, reasoning about algorithms, analysing data and evaluating digital solutions. Vocabulary should be taught in meaningful practical contexts and deliberately retrieved across units and year groups.

Whole-school conceptual vocabulary

Concept	Early language (EYFS-Y2)	Developing language (Y3-Y6)	Retrieval thread
Technology and systems	device, computer, screen, keyboard, mouse, technology	system, input, process, output, network, server, protocol	Move from naming familiar devices to explaining how components, systems and networks work together.
Creating digital content	picture, sound, text, create, change	media, edit, format, layout, audience, purpose, evaluate	Retrieve create/change language while increasing precision about tools, design choices, audience and purpose.

Programming and computational thinking	instruction, order, direction, plan	command, sequence, algorithm, program, debug, repetition, selection, variable	Build from following and giving instructions to designing, testing and refining increasingly complex programs.
Data and information	group, sort, count, same, different	data, attribute, database, field, record, spreadsheet, formula	Move from sorting physical/digital objects to structuring, analysing and presenting data.
Digital literacy and safety	safe, share, private, ask, choice	permission, ownership, copyright, credibility, collaboration, responsible	Revisit safe use throughout; deepen towards critical evaluation, ethical use, copyright and responsible communication.
Evaluation and improvement	try, check, change, better	test, debug, modify, refine, feedback, evaluate	Make improvement language routine across programming, media and data work.

Vocabulary progression by year group and unit

The lists below are suggested priority vocabulary rather than exhaustive glossaries. They deliberately draw from the attached Teach Computing / NCCE vocabulary banks while matching the units in Bredbury Green's computing progression. Tier allocation is a teaching aid: some terms become increasingly transferable as pupils use them across multiple computing contexts.

Nursery | WellComm-informed foundations for computing

Curriculum strand: Foundations across all four strands

Tier 2: academic / transferable	Tier 3: computing / unit-specific
same, different, first, next, last, choose, change, match, find	button, screen, computer, tablet, camera, picture, sound, on, off

Retrieval and progression: Use real devices, role play and adult modelling. Follow one-step instructions; use positional and sequencing language; sort familiar objects; talk about what devices do. Retrieve safety language such as ask, stop and tell. These foundations prepare children for Reception without expecting formal computing terminology.

Reception | Exploring technology and computational thinking

Curriculum strand: Foundations across all four strands

Tier 2: academic / transferable	Tier 3: computing / unit-specific

order, sequence, compare, organise, predict, create, change, explain	device, keyboard, mouse, touchscreen, program, instruction, direction, data, digital

Retrieval and progression: Build on Nursery language through purposeful technology use. Follow and give simple sequences, explore programmable toys, create digital pictures/text, sort information and discuss safe choices. Bridge deliberately to Year 1 technology, grouping and robot programming.

Year 1 | Technology Around Us

Curriculum strand: Computing Systems and Networks

Tier 2: academic / transferable	Tier 3: computing / unit-specific
identify, component, sensible, use, compare	technology, computer, mouse, trackpad, keyboard, screen, double-click, typing

Retrieval and progression: Retrieve EYFS device and safe-use vocabulary. Move from naming devices to identifying computer components and explaining their use. Revisit computer/device language in Year 2 IT and Year 3 digital devices.

Year 1 | Digital Painting and Writing

Curriculum strand: Creating Media

Tier 2: academic / transferable	Tier 3: computing / unit-specific
create, change, select, compare, format	paint program, paintbrush, erase, fill, shape tool, word processor, text cursor, toolbar, font, undo, redo

Retrieval and progression: Retrieve EYFS picture/text/create/change. Contrast physical and digital tools. Revisit edit, select, undo and format in later media units, especially desktop publishing and photo editing.

Year 1 | Moving a Robot

Curriculum strand: Programming

Tier 2: academic / transferable	Tier 3: computing / unit-specific
direction, order, plan, predict, solution	Bee-Bot, command, instruction, route, algorithm, program, debug

Retrieval and progression: Retrieve EYFS first/next/last and directions. Link instruction -> command -> sequence -> algorithm. Revisit algorithm/program/debug every year.

Year 1 | Grouping Data

Curriculum strand: Data and Information

Tier 2: academic / transferable	Tier 3: computing / unit-specific
group, compare, same, different, organise	object, label, property, value, data set, search

Retrieval and progression: Retrieve EYFS sorting and matching. Explain grouping choices using properties. Revisit property/attribute and value in Y2 pictograms and Y3 branching databases.

Year 2 | Information Technology Around Us

Curriculum strand: Computing Systems and Networks

Tier 2: academic / transferable	Tier 3: computing / unit-specific
purpose, identify, safe, responsible, explain	information technology (IT), computer, barcode, scanner, scan

Retrieval and progression: Retrieve Y1 technology/components. Identify IT beyond computers and explain its purpose and safe use. Prepare for Y3 digital devices and networks.

Year 2 | Digital Music

Curriculum strand: Creating Media

Tier 2: academic / transferable	Tier 3: computing / unit-specific
pattern, create, edit, compose, emotion	rhythm, pulse, pitch, tempo, beat, instrument, digital music

Retrieval and progression: Retrieve create/change from Y1. Use precise musical and digital editing vocabulary; revisit audio, edit and evaluate in Y4 audio production.

Year 2 | Robot Algorithms

Curriculum strand: Programming

Tier 2: academic / transferable	Tier 3: computing / unit-specific
clear, order, prediction, design, decompose	instruction, sequence, unambiguous, algorithm, program, debugging, route

Retrieval and progression: Retrieve Y1 command/algorithm/debug. Emphasise that algorithms are precise ordered instructions; introduce decomposition as breaking a problem into parts.

Year 2 | Pictograms

Curriculum strand: Data and Information

Tier 2: academic / transferable	Tier 3: computing / unit-specific

compare, count, explain, conclusion, share	data, tally chart, pictogram, attribute, block diagram

Retrieval and progression: Retrieve Y1 group/property/value. Collect and present data and explain when information should or should not be shared. Prepare for databases and data logging.

Year 3 | Connecting Computers

Curriculum strand: Computing Systems and Networks

Tier 2: academic / transferable	Tier 3: computing / unit-specific
connect, process, communicate, benefit, describe	digital device, input, process, output, network, switch, server, wireless access point

Retrieval and progression: Retrieve Y1-2 device/IT. Develop input-process-output as a conceptual model and explain how devices connect in a network. Revisit network/server in Y4 internet and Y6 communication.

Year 3 | Desktop Publishing

Curriculum strand: Creating Media

Tier 2: academic / transferable	Tier 3: computing / unit-specific
purpose, advantage, disadvantage, communicate, evaluate	desktop publishing, template, layout, placeholder, orientation, copy, paste, content

Retrieval and progression: Retrieve Y1 digital writing and formatting. Deepen from using tools to designing for purpose and communicating effectively; revisit layout/audience in Y6 webpages.

Year 3 | Sequencing Sounds

Curriculum strand: Programming

Tier 2: academic / transferable	Tier 3: computing / unit-specific
sequence, task, design, order, test	Scratch, block, command, code, sprite, costume, stage, event, algorithm, bug, debug

Retrieval and progression: Retrieve algorithm/program/debug. Transfer sequencing from robots to block-based code. Establish Scratch vocabulary that recurs through Y4-Y6.

Year 3 | Branching Databases

Curriculum strand: Data and Information

Tier 2: academic / transferable	Tier 3: computing / unit-specific
question, compare, order, organise, select	attribute, value, table, branching database, structure, decision tree

Retrieval and progression: Retrieve Y1 grouping and Y2 attributes. Use yes/no questions and attributes to structure information. Prepare for Y5 flat-file databases.

Year 4 | The Internet

Curriculum strand: Computing Systems and Networks

Tier 2: academic / transferable	Tier 3: computing / unit-specific
accurate, honest, permission, ownership, credible	internet, router, server, website, web page, web address, web browser, World Wide Web, routing, download

Retrieval and progression: Retrieve Y3 network/server. Distinguish internet from World Wide Web and deepen safe/responsible use through ownership, permission and source credibility, including AI-generated content.

Year 4 | Audio Production

Curriculum strand: Creating Media

Tier 2: academic / transferable	Tier 3: computing / unit-specific
plan, record, edit, feedback, evaluate	audio, microphone, speaker, input device, output device, podcast, trim, layer, playback, export, MP3

Retrieval and progression: Retrieve Y2 digital music and Y3 input/output. Progress from creating sound to planning, editing and evaluating a podcast; connect publication with copyright and permission.

Year 4 | Repetition in Games

Curriculum strand: Programming

Tier 2: academic / transferable	Tier 3: computing / unit-specific
pattern, repeat, modify, refine, evaluate	loop, repetition, count-controlled loop, infinite loop, event block, algorithm, debug

Retrieval and progression: Retrieve Y3 sequence/event/debug. Contrast finite/count-controlled repetition with infinite loops. Prepare for Y5 selection and Y6 variables.

Year 4 | Data Logging using Excel

Curriculum strand: Data and Information

Tier 2: academic / transferable	Tier 3: computing / unit-specific
collect, analyse, review, conclusion, interpret	data logger, sensor, data point, interval, dataset, import, export, spreadsheet

Retrieval and progression: Retrieve Y2 data collection and Y3 tables. Introduce automated collection over time and draw conclusions. Revisit spreadsheet/data analysis in Y6.

Year 5 | Systems and Searching

Curriculum strand: Computing Systems and Networks

Tier 2: academic / transferable	Tier 3: computing / unit-specific
refine, influence, optimise, rank, select	system, search engine, index, bot, web crawler, search engine optimisation (SEO), ranking

Retrieval and progression: Retrieve Y4 internet/web vocabulary. Explain how search engines find and order results and how searches can be refined; connect to credibility and safe searching.

Year 5 | Video Production

Curriculum strand: Creating Media

Tier 2: academic / transferable	Tier 3: computing / unit-specific
purpose, effect, review, reorder, evaluate	video, audio, panning, close-up, mid-range, long shot, angle, storyboard, clip, trim, reshoot, export

Retrieval and progression: Retrieve media/edit/evaluate vocabulary. Progress to deliberate filming and editing choices for purpose and effect; connect to audience and responsible sharing.

Year 5 | Selection in Quizzes

Curriculum strand: Programming

Tier 2: academic / transferable	Tier 3: computing / unit-specific
condition, outcome, implement, refine, operator	selection, true, false, conditional statement, count-controlled loop, algorithm, program, debug

Retrieval and progression: Retrieve Y4 repetition. Introduce selection as decisions based on conditions; test and refine outcomes. Prepare for Y6 variables and if-then-else structures.

Year 5 | Flat-File Databases

Curriculum strand: Data and Information

Tier 2: academic / transferable	Tier 3: computing / unit-specific
criteria, filter, compare, present, pattern	database, record, field, sort, search, value, graph, chart

Retrieval and progression: Retrieve Y3 branching database and Y4 datasets. Distinguish records and fields, apply criteria and filters, and present information to answer questions.

Year 6 | Communication and Collaboration

Curriculum strand: Computing Systems and Networks

Tier 2: academic / transferable	Tier 3: computing / unit-specific
collaborate, communicate, responsible, public, private	protocol, Internet Protocol (IP), Domain Name Server (DNS), packet, header, data payload, one-way, two-way

Retrieval and progression: Retrieve networks, internet and responsible communication. Explain agreed communication methods and how data is transferred; connect public/private choices to online safety.

Year 6 | Webpage Creation

Curriculum strand: Creating Media

Tier 2: academic / transferable	Tier 3: computing / unit-specific
purpose, navigate, accessible, ethical, evaluate	website, web page, HTML, copyright, fair use, home page, breadcrumb trail, hyperlink, subpage, embed

Retrieval and progression: Retrieve Y3 publishing and Y4 web/ownership vocabulary. Design for audience and navigation while applying copyright-respecting and ethical content choices.

Year 6 | Variables in Games

Curriculum strand: Programming

Tier 2: academic / transferable	Tier 3: computing / unit-specific
assign, declare, improve, evaluate, change	variable, name, value, set, event, algorithm, code, program, debug

Retrieval and progression: Retrieve sequence, repetition and selection. Explain a variable as a named value that can change; combine concepts to create and improve interactive programs.

Year 6 | Introduction to Spreadsheets

Curriculum strand: Data and Information

Tier 2: academic / transferable	Tier 3: computing / unit-specific
organise, calculate, propose, compare, results	spreadsheet, cell, cell reference, formula, operation, range, data set, chart, sum

Retrieval and progression: Retrieve Y4 data logging and Y5 database analysis. Progress to formulas, calculations, modelling and choosing appropriate representations to answer questions.

UNCRC connections

Computing provides natural opportunities to reinforce children's rights where these links are meaningful rather than attaching an article to every lesson.

- **Article 12 - respect for children's views:** Creating and evaluating digital content; collaboration; giving and responding to feedback; making choices about how work is presented.
- **Article 13 - freedom of expression:** Creating media and communicating ideas through text, audio, video, webpages and other digital forms, alongside responsibilities for safe and respectful communication.
- **Article 16 - privacy:** Personal information, public/private communication, responsible sharing, online safety, data handling and understanding when information should not be shared.
- **Article 17 - access to information:** Using the internet and search engines to access information while learning to judge credibility, accuracy and suitability.
- **Article 19 - protection from harm:** Safe and responsible technology use, reporting concerns, protecting personal information and recognising potentially harmful online situations.
- **Article 28 - right to education:** Developing digital competence so pupils can access, create, communicate and participate effectively in learning.
- **Article 31 - leisure, play and culture:** Creative digital media, programming, animation, music and games as forms of play, creativity and cultural participation.

Suggested retrieval routines

- **Every lesson: 2-minute retrieval:** Recall 2-3 previously taught terms, identify a tool/concept from an image or example, and use one term accurately while explaining what it does.
- **Beginning of a new unit:** Retrieve vocabulary from the previous unit or earlier year that the new learning depends on, especially recurring concepts such as algorithm, data, edit, network and evaluate.
- **Within a unit:** Return to vocabulary after a delay and require pupils to apply it practically: predict an outcome, identify an error, explain a choice, classify data or improve digital work.
- **Across year groups:** Use the retrieval links above to make progression explicit. Re-teach meanings when necessary rather than assuming that previous exposure equals secure understanding.

- **End of unit:** Check whether pupils can recognise the term, explain it in context, use it accurately while completing a task, and connect it to earlier computing learning.

What progression should look like

- **Nursery:** Use functional language to operate familiar technology, follow simple instructions, sequence actions and sort or match objects. Vocabulary is developed orally through first-hand experiences and adult modelling.
- **Reception:** Use increasingly precise language for devices, instructions, directions, digital creations and simple data; begin to predict what will happen and explain choices.
- **Years 1-2:** Name common technology and tools; create and edit simple digital content; group and present data; give precise instructions; create, test and debug simple algorithms.
- **Years 3-4:** Explain connected systems, use subject-specific media tools, structure and interpret data, and apply sequencing and repetition while evaluating and improving digital outcomes.
- **Years 5-6:** Use precise technical vocabulary to explain systems and online communication, analyse and present data, design for audience and purpose, and combine programming concepts such as selection and variables.

Implementation notes

- Prioritise essential vocabulary for secure understanding; the attached NCCE vocabulary banks contain more words than pupils need to memorise as isolated definitions.
- Teach terminology alongside practical experience: pupils should see, say, use and explain a term while operating the relevant tool or applying the relevant concept.
- Keep recurring conceptual vocabulary visible across year groups, especially algorithm, program, debug, data, network, input, output, edit, evaluate and responsible.
- Explicitly distinguish near-related terms where misconceptions are likely, for example internet / World Wide Web, instruction / command / algorithm / program, data / information, and record / field.
- Use formative assessment to check whether pupils can apply vocabulary to explain what is happening, justify choices and diagnose problems rather than merely recall definitions.
- Nursery and Reception are complementary foundations added to the school's Year 1-Year 6 progression; they are not presented as Teach Computing units.
- The Year 1-Year 6 vocabulary selections acknowledge the attached National Centre for Computing Education resources, created by Raspberry Pi Foundation and updated by STEM Learning, which are available under the Open Government Licence v3.