



Computing @ Wynndale

Progression from Year 1 to Year 6

Our Computing Curriculum Intent

At Wynndale Primary School, our Computing curriculum aims to equip all pupils with the knowledge, skills and confidence they need to thrive in an increasingly digital world.

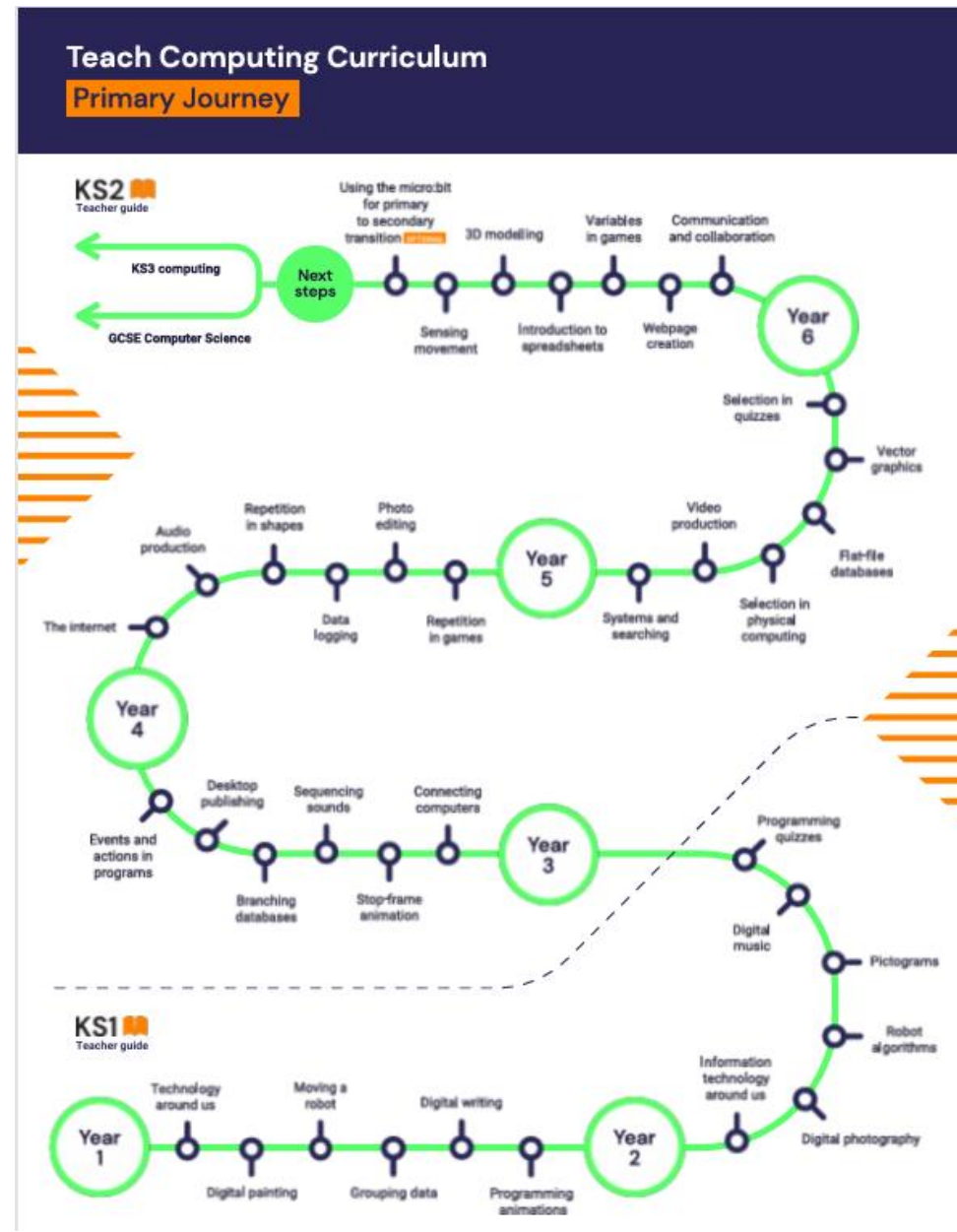
We intend to develop competent, creative and responsible users of technology who can think logically, solve problems and apply their learning across the wider curriculum and real-life contexts.

Through a carefully sequenced and progressive curriculum, pupils gain a strong understanding of computer systems, programming, data and digital media, while using technology purposefully to create, communicate and collaborate.

Online safety and digital citizenship are embedded throughout, ensuring children learn how to use technology safely, respectfully and responsibly.

By the time pupils leave Wynndale Primary School, they are well-prepared for the next stage of their education and to participate confidently in a modern, digital society.

Progression Document: Computing





Substantive Knowledge Progression

Breadth of Study	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Computing Systems and Networks	- Technology is used at home and school - Devices have different purposes - Logging in keeps work private Vocab: technology, computer, keyboard, mouse, screen, laptop, tablet, trackpad, device, login, user	- IT systems follow input → process → output - Devices are connected - Information can be shared digitally Vocab: information technology (IT), barcode, scanner, scan, network, connected, digital, system	- Devices connect through networks - Hardware and software have distinct roles Vocab: digital device, input, process, output, network, switch, server, wireless	- The internet is a network of networks - Web pages are accessed through browsers - Search engines locate indexed information Vocab: internet, router, browser, website, search engine, web page	- Search engines rank results using algorithms - Keywords affect search outcomes Vocab: search ranking, keyword, algorithm, results	- Data is transferred in packets - IP addresses identify devices - Encryption protects information Vocab: packet, IP address, protocol, encryption, security
Programming	- An algorithm is a set of instructions - Programs follow sequences - Errors can be fixed (debugging) Vocab: algorithm, program, instruction,	- Programs can include repetition (loops) - Programs produce predictable outcomes - Instructions must be precise	- Programs use sequence, repetition and events - Code controls sprites and outputs Vocab: Scratch, blocks, sprite, sequence, event, algorithm, debug	- Variables store values - Selection (if statements) control outcomes - Programs can be interactive	- Selection controls program flow - Variables can track scores and states - Boolean logic supports conditions Vocab: Boolean, true, false, operator, variable, score	- Functions/procedures simplify programs - Decomposition and abstraction improve efficiency - Programs can solve real-world problems Vocab: function, procedure, abstraction, decomposition, logic, efficiency



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	command, sequence, forwards, backwards, left, right, clear, run, debug	Vocab: algorithm, program, sequence, command, debug, predict, outcome, block, code, sprite, event		Vocab: variable, selection, condition, repetition, loop		
Data and Information	- Objects can be sorted by properties - Data can answer questions Vocab: object, label, group, sort, data, property, colour, size, shape	- Data can be collected and represented - Charts and pictograms display information Vocab: data, tally, pictogram, chart, compare, count, more than, less than, most, least	- Branching databases organise information - Attributes determine classification Vocab: attribute, value, table, branching database, structure	- Data can be collected using sensors - Data patterns can be analysed Vocab: data collection, sensor, pattern, analyse	- Spreadsheets use formulae to calculate - Data models simulate real situations Vocab: spreadsheet, cell, formula, model	- Databases store structured data - Queries filter and sort information Vocab: database, record, field, query, sort, filter
Creating media	- Digital tools create images - Work can be saved and retrieved Vocab: paint, tool, brush, colour, shape, erase, undo, save, picture, digital	- Images can be composed intentionally - Audio can be recorded and edited Vocab: photograph, image, camera, framing, portrait, landscape, edit, filter, audio	- Animation is created through sequencing frames - Planning improves digital outcomes Vocab: animation, frame, sequence, stop-frame	- Audio can be edited using timelines - Media elements can be combined Vocab: audio editing, timeline, layer, import	- Video editing enhances communication - Transitions and overlays improve presentation Vocab: video, transition, overlay, storyboard	- Web pages use HTML structure (conceptual understanding) - User interface design affects usability Vocab: HTML, web page, navigation, user interface, usability



Wynndale Primary School: Whole School Curriculum Progression Document: Computing

Online safety	- Personal information must be kept private - Trusted adults help keep us safe Vocab: safe, unsafe, private, personal information, trusted adult, permission, online, report	- Online behaviour affects others - Problems online should be reported Vocab: safe, unsafe, private, personal information, trusted adult, permission, online, report	- Digital footprints are permanent - Online information varies in reliability - Copyright protects digital work Vocab: digital footprint, online identity, copyright, privacy, consent, phishing, scam, secure	- Online reputation has long-term impact - Phishing and scams exploit users - Privacy and consent protect data Vocab: digital footprint, online identity, copyright, privacy, consent, phishing, scam, secure
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Disciplinary Knowledge Progression

By the end of KS1 pupils can:	By the end of lower KS2 pupils can:	By the end of upper KS2 pupils can:
- Follow and create simple algorithms - Predict program outcomes - Debug simple errors - Organise and classify data - Make purposeful choices when creating digital media - Apply basic online safety rules - Explain their thinking using simple computing vocabulary	- Decompose problems into manageable steps - Use repetition and selection in algorithms - Debug systematically - Evaluate digital content for reliability - Analyse data for patterns and trends - Make design decisions when creating media - Justify choices using accurate computing vocabulary	- Design, write and refine increasingly complex programs - Apply decomposition and abstraction independently - Debug logical and syntax errors methodically - Analyse large data sets and justify conclusions - Evaluate digital systems critically - Make informed decisions about online safety and privacy - Use technical vocabulary precisely and confidently