

Cavendish CE Primary School

Computing Long-Term Plan | Two-Year Mixed-Age Programme | 2026-2028

We Learn. We Love. We Belong.

Curriculum intent

Computing at Cavendish enables pupils to become responsible, confident, creative and increasingly independent users of technology. The curriculum is built from Oak National Academy units and organised as a two-year rolling programme for our mixed-age classes. Across each phase, pupils revisit and deepen knowledge in computer science, information technology and digital literacy. Online safety is taught explicitly within relevant units and reinforced through PSHE/RSE, safeguarding practice and everyday use of technology.

Mixed-age organisation

- Robins: EYFS, Year 1 and Year 2. Cycle A uses the Year 1 Oak sequence; Cycle B uses the Year 2 Oak sequence. Reception pupils access the shared context through developmentally appropriate, practical experiences rather than being expected to meet Key Stage 1 outcomes.
- Wrens: Year 3 and Year 4. Cycle A uses the Year 3 Oak sequence; Cycle B uses the Year 4 Oak sequence.
- Owls: Year 5 and Year 6. Cycle A uses the Year 5 Oak sequence; Cycle B uses the Year 6 Oak sequence.
- National Curriculum coverage is secured across the full two-year phase cycle. Each pupil experiences both cycles during their time in the mixed-age class.
- Teachers use the complete Oak lesson sequence and resources, adapting scaffolding, vocabulary, independence and expected outcomes to pupils' prior knowledge and needs.

Curriculum delivery

- KS1 units are planned for approximately one 40-minute lesson per fortnight; KS2 units are planned for approximately one hour each week.
- The named Oak unit is the taught sequence. Lessons may be adapted to the school's available devices and software without changing the intended knowledge.
- Retrieval, modelling, guided practice, purposeful independent practice, questioning and feedback reflect the Cavendish 5.
- Assessment uses Oak checks for understanding, lesson outcomes, saved digital work, pupil explanation and end-of-unit tasks.

EYFS computing foundations in Robins

Computing is not a separate statutory subject in the EYFS. Reception pupils develop foundations for later computing through purposeful play, adult-led modelling and carefully selected shared activities. Provision supports Communication and Language, Personal, Social and Emotional Development, Physical Development, Expressive Arts and Design and Understanding the World.

- Operate simple equipment and digital devices with increasing control.
- Follow and give simple sequences of instructions; notice mistakes and try a different approach.
- Create digital pictures, sounds, text or animations with adult support.
- Recognise that technology is used in school, at home and in the wider world.
- Develop safe habits: ask an adult for help, keep personal information private and use devices kindly and responsibly.

Whole-School Computing Overview

Cycle A: 2026/2027 | Cycle B: 2027/2028

Class / cycle	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2	NC coverage
Robins EYFS/Y1/Y2 Cycle A 2026/27	Digital painting	Digital writing	Creating animations in programs	Continue / consolidate	Cross-curricular application	Assessment and digital showcase	KS1 statements: KS1-IT1, KS1-IT2, KS1-CS2, KS1-CS3, KS1-CS4
Wrens Y3/4 Cycle A 2026/27	Computer networks	Stop-frame animation	Programming sequence using sound	Organising data using databases	Desktop publishing	Events and actions in programs	KS2 computing systems, networks, media, data, programming and safe use
Owls Y5/6 Cycle A 2026/27	Introduction to computer systems	Video production	Exploring selection in physical computing	Flat-file databases	Introduction to vector graphics	Using selection in programming to develop a quiz	KS2 systems, search, media, data, physical computing, selection and safe use
Robins EYFS/Y1/Y2 Cycle B 2027/28	Information technology in the world beyond school	Using IT to organise and present data	Building sequences in programs	Continue / consolidate	Cross-curricular application	Assessment and digital showcase	Full KS1 coverage, including online safety, algorithms, debugging, logical reasoning and purposeful use
Wrens Y3/4 Cycle B 2027/28	The internet	Audio production	Repetition in programs	Data logging	Photo editing	Using repetition in programming to create a game	KS2 internet, search, media, data, repetition, input/output and responsible use
Owls Y5/6 Cycle B 2027/28	Communication and the internet	Web page creation	Using variables in programming to develop a game	Introduction to spreadsheets	3D modelling	Sensing movement with physical computing	KS2 networks, search, media, data, variables, physical systems and safe use

Important sequencing note: In Robins, Oak's three KS1 units are deliberately spread and revisited across the year. This matches Oak's intended fortnightly KS1 delivery and allows Reception pupils to develop foundations through continuous provision and supported shared tasks.

Robins: EYFS, Year 1 and Year 2

Cycle A 2026/27 and Cycle B 2027/28

Cycle A - Year 1 Oak sequence

Half-term / unit	Oak focus	EYFS access	Y1/Y2 expectation	National Curriculum links
Autumn 1 Digital painting	Use digital painting tools; create lines, shapes and pictures; compare digital and non-digital art.	Explore mark making on a touchscreen; choose tools and colours; talk about what they created.	Create and manipulate digital content, choose appropriate tools and explain simple choices.	KS1-IT1
Autumn 2 Digital writing	Use keyboard and mouse; add, remove and format text; compare digital writing with writing by hand.	Recognise letters and keys; type own name or a short caption with support; use space and delete.	Create, edit and format text using a word processor; select tools purposefully.	KS1-IT1; KS1-IT2
Spring 1 Creating animations in programs	Use ScratchJr blocks; join commands; change values; design, test and improve an animation.	Follow directional instructions; sequence pictures or actions; control a sprite with adult support.	Understand that a program follows instructions; create and debug a simple sequence.	KS1-CS1; KS1-CS2
Spring 2 Consolidation	Revisit device control, digital creation and simple programmed sequences.	Independent access to selected creation tools within provision.	Apply skills with reduced scaffolding; correct simple errors and explain choices.	KS1-IT1; KS1-CS2
Summer 1 Curriculum application	Use digital tools to present learning from another curriculum area.	Capture a photograph, record a voice message or create a picture with support.	Create, organise and retrieve digital content for a clear purpose.	KS1-IT1
Summer 2 Assessment and showcase	Select, improve and share examples of digital work; revisit safe and respectful use.	Talk about safe use and ask an adult for help; share a digital creation.	Explain what technology was used, what it did and how to use it responsibly.	KS1-IT1; KS1-DL1

Cycle B - Year 2 Oak sequence

Half-term / unit	Oak focus	EYFS access	Y1/Y2 expectation	National Curriculum links
Autumn 1 IT in the world beyond school	Identify information technology in school and beyond; consider benefits and safe use.	Notice and name familiar technology; discuss what it helps people to do.	Recognise common uses of IT; use technology safely and know where to seek help.	KS1-IT2; KS1-DL1
Autumn 2 Using IT to organise and present data	Collect simple data; create and interpret pictograms; present information digitally.	Sort objects or pictures; help record a class tally; interpret a simple picture chart.	Use technology to organise, store, manipulate and retrieve data.	KS1-IT1; KS1-IT2; KS1-DL1
Spring 1 Building sequences in programs	Create algorithms and sequences; predict outcomes; test and debug simple programs.	Follow, give and reorder simple instructions; spot when a sequence does not work.	Create and debug programs; predict behaviour using logical reasoning.	KS1-CS1; KS1-CS2; KS1-CS3
Spring 2 Consolidation	Revisit sequencing, debugging, data and safe use.	Use programmable toys and sequencing cards in provision.	Apply algorithmic thinking and explain a correction.	KS1-CS1; KS1-CS2; KS1-CS3
Summer 1 Curriculum application	Choose digital tools to collect or present information from another subject.	Take photographs, record sound or sort digital images with support.	Select an appropriate tool and produce purposeful digital content.	KS1-IT1
Summer 2 Assessment and showcase	Review digital work and explain safe, respectful choices.	Say who can help and why personal information should not be shared.	Demonstrate the full KS1 expectations through practical tasks and pupil explanation.	KS1-IT1; KS1-IT2; KS1-DL1

Robins mixed-age teaching expectations

- Shared input may introduce the same context, vocabulary or device, but Reception outcomes remain rooted in the EYFS.
- Year 1 and Year 2 pupils complete the National Curriculum task with age-appropriate scaffolding and independence.
- Adults model safe device handling and precise vocabulary. Reception pupils may work with an adult or partner; KS1 pupils increasingly work independently.
- Where a pupil has already encountered a tool, challenge comes through improved design choices, explanation, debugging, independence and application rather than unnecessary acceleration.

Wrens: Year 3 and Year 4

Complete Oak units across a two-year rolling programme

Cycle / half-term	Oak unit	Core learning	NC links
Cycle A 2026/27 Autumn 1	Computer networks	How digital devices connect and communicate; benefits of networks.	KS2-N1
Cycle A 2026/27 Autumn 2	Stop-frame animation	Plan, capture, edit and evaluate a digital animation.	KS2-IT2; KS2-IT3; KS2-DL1
Cycle A 2026/27 Spring 1	Programming sequence using sound	Design and debug programs using sequence, events, input and output.	KS2-CS1; KS2-CS2; KS2-CS3
Cycle A 2026/27 Spring 2	Organising data using databases	Structure, organise, search and present data using a database.	KS2-IT3
Cycle A 2026/27 Summer 1	Desktop publishing	Combine text and images for a purpose and audience.	KS2-IT2; KS2-IT3; KS2-DL1
Cycle A 2026/27 Summer 2	Events and actions in programs	Use events and actions to create, test and improve a program.	KS2-CS1; KS2-CS2; KS2-CS3; KS2-IT2
Cycle B 2027/28 Autumn 1	The internet	Understand networks and the internet, services, search and how content is selected.	KS2-N1; KS2-IT1
Cycle B 2027/28 Autumn 2	Audio production	Record, edit, combine and evaluate digital audio responsibly.	KS2-IT2; KS2-IT3; KS2-DL1
Cycle B 2027/28 Spring 1	Repetition in programs	Use count-controlled repetition; design, test and debug programs.	KS2-CS1; KS2-CS2; KS2-CS3
Cycle B 2027/28 Spring 2	Data logging	Collect data using sensors; analyse and present findings.	KS2-CS2; KS2-IT2; KS2-IT3
Cycle B 2027/28 Summer 1	Photo editing	Edit and combine images; evaluate authenticity, purpose and responsible use.	KS2-IT2; KS2-DL1
Cycle B 2027/28 Summer 2	Using repetition in programming to create a game	Design a game using repetition; test, debug and improve.	KS2-CS1; KS2-CS2; KS2-CS3

Wrens mixed-age adaptation

- All pupils study the named phase unit. Teachers assess prior knowledge before beginning and revisit prerequisite vocabulary or device skills where needed.
- Younger or less experienced pupils receive chunked instructions, guided templates, worked examples and paired practice.
- Older or more secure pupils are expected to plan with greater independence, justify tool choices, identify and correct errors, and evaluate against explicit criteria.
- Programming challenge is increased through complexity, efficiency, debugging and explanation rather than by changing the core unit.

Owls: Year 5 and Year 6

Complete Oak units across a two-year rolling programme

Cycle / half-term	Oak unit	Core learning	NC links
Cycle A 2026/27 Autumn 1	Introduction to computer systems	Systems, inputs, processes and outputs; networks, search and digital responsibility.	KS2-N1; KS2-IT1; KS2-IT2
Cycle A 2026/27 Autumn 2	Video production	Plan, capture, edit and evaluate video for a purpose and audience.	KS2-IT2; KS2-IT3; KS2-DL1
Cycle A 2026/27 Spring 1	Exploring selection in physical computing	Use selection, inputs and outputs to control a physical system.	KS2-CS1; KS2-CS2; KS2-CS3
Cycle A 2026/27 Spring 2	Flat-file databases	Structure, search, compare and analyse records in a database.	KS2-CS2; KS2-IT3
Cycle A 2026/27 Summer 1	Introduction to vector graphics	Create and manipulate vector graphics using layers, objects and precise tools.	KS2-IT2; KS2-IT3; KS2-DL1
Cycle A 2026/27 Summer 2	Using selection in programming to develop a quiz	Design a quiz using selection; test, debug and evaluate.	KS2-CS1; KS2-CS2; KS2-CS3
Cycle B 2027/28 Autumn 1	Communication and the internet	Internet communication, networks and collaboration.	KS2-N1
Cycle B 2027/28 Autumn 2	Web page creation	Plan and create a website; use search effectively; consider copyright and responsible publishing.	KS2-IT1; KS2-IT2; KS2-IT3; KS2-DL1
Cycle B 2027/28 Spring 1	Using variables in programming to develop a game	Use variables, sequence and selection; decompose, test and debug.	KS2-CS1; KS2-CS2; KS2-CS3
Cycle B 2027/28 Spring 2	Introduction to spreadsheets	Use formulae, cells and data to model, analyse and present information.	KS2-CS2; KS2-IT2; KS2-IT3
Cycle B 2027/28 Summer 1	3D modelling	Create and evaluate 3D digital models for a specified purpose.	KS2-IT2; KS2-IT3
Cycle B 2027/28 Summer 2	Sensing movement with physical computing	Use sensors, inputs, outputs and programs to control a physical system.	KS2-CS1; KS2-CS2; KS2-IT2; KS2-IT3

Owls mixed-age adaptation

- All pupils study the same phase unit, with explicit retrieval of prior learning from Wrens and the previous cycle.
- Scaffolds may include partially completed code, vocabulary prompts, planning frames, worked examples and targeted adult modelling.
- Greater depth is demonstrated through independent decomposition, efficient solutions, systematic testing, reasoned evaluation, responsible choices and transfer to unfamiliar contexts.
- Year 6 pupils should leave able to articulate how the two-year Owls sequence covers computer science, information technology and digital literacy.

National Curriculum Coverage Matrix

Evidence of full coverage across each mixed-age phase

Key Stage 1: Robins across Cycles A and B

Code and statutory statement	Where taught	Coverage judgement
KS1-CS1 Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions.	Creating animations in programs; Building sequences in programs; Spring consolidation	Fully covered across the two-year Robins cycle
KS1-CS2 Create and debug simple programs.	Creating animations in programs; Building sequences in programs; debugging and consolidation	Fully covered across the two-year Robins cycle
KS1-CS3 Use logical reasoning to predict the behaviour of simple programs.	Building sequences in programs; prediction and debugging tasks	Fully covered across the two-year Robins cycle
KS1-IT1 Use technology purposefully to create, organise, store, manipulate and retrieve digital content.	Digital painting; Digital writing; Using IT to organise and present data; curriculum application	Fully covered across the two-year Robins cycle
KS1-IT2 Recognise common uses of information technology beyond school.	Digital writing; Information technology in the world beyond school; data unit	Fully covered across the two-year Robins cycle
KS1-DL1 Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when concerned about content or contact online.	IT in the world beyond school; data unit; assessment/showcase; embedded safe use	Fully covered across the two-year Robins cycle

Key Stage 2: Wrens and Owls across both cycles

Code and statutory statement	Where taught	Coverage judgement
KS2-CS1 Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts.	Wrens: sound programming, events/actions, repetition and game creation. Owls: physical computing, selection, variables and sensing movement.	Progressively covered and revisited across Wrens and Owls
KS2-CS2 Use sequence, selection and repetition in programs; work with variables and various forms of input and output.	Wrens: sequence, repetition, inputs/outputs and data logging. Owls: selection, variables, spreadsheet modelling and physical computing.	Progressively covered and revisited across Wrens and Owls
KS2-CS3 Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.	Programming units in both Wrens and Owls require prediction, testing, logical explanation and debugging.	Progressively covered and revisited across Wrens and Owls
KS2-N1 Understand computer networks, including the internet; how they can provide multiple services, such as the World Wide Web; and the opportunities they offer for communication and collaboration.	Wrens: Computer networks and The internet. Owls: Introduction to computer systems and Communication and the internet.	Progressively covered and revisited across Wrens and Owls
KS2-IT1 Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content.	Wrens: The internet. Owls: computer systems and web page creation, including search and evaluation.	Progressively covered and revisited across Wrens and Owls
KS2-IT2 Select, use and combine a variety of software, including internet services, on a range of digital devices to design and create programs, systems and content that accomplish given goals.	Media, publishing, databases, graphics, web, spreadsheets, modelling and physical computing units across both phases.	Progressively covered and revisited across Wrens and Owls
KS2-IT3 Collect, analyse, evaluate and present data and information.	Databases, data logging, media production, spreadsheets, modelling and presentation tasks.	Progressively covered and revisited across Wrens and Owls
KS2-DL1 Use technology safely, respectfully and responsibly; recognise acceptable and unacceptable behaviour; identify ways to report concerns about content and contact.	Embedded in network, internet, media, publishing and online creation units; reinforced through PSHE/RSE and safeguarding.	Progressively covered and revisited across Wrens and Owls

Implementation, Assessment and Monitoring

Cavendish expectations

The Cavendish 5 in Computing

Non-negotiable	What this looks like in Computing
Retrieval	Begin lessons with brief retrieval of vocabulary, prior concepts, tool use or previous code.
I Do, We Do, You Do	Model the process explicitly; practise together; then move pupils towards independent application.
Purposeful practice	Provide repeated opportunities to manipulate tools, test code, debug and apply knowledge.
High-quality questioning	Ask pupils to predict, explain, compare, justify and evaluate rather than simply follow steps.
Feedback	Use live feedback, peer testing and success criteria so pupils improve digital products and programs during the lesson.

Assessment expectations

- Use Oak lesson checks and end-of-unit tasks alongside teacher observation and questioning.
- Retain representative evidence: saved files, screenshots, printed outcomes, photographs of physical computing and brief pupil reflections.
- Assess what pupils know and can explain, not only whether a final product looks polished.
- Record whether pupils are working towards, meeting or exceeding the phase expectation at appropriate assessment points.
- Use assessment to identify prerequisite knowledge that must be revisited before the next unit or cycle.

Inclusion and accessibility

- Pre-teach key vocabulary and reduce unnecessary cognitive load.
- Use enlarged text, high contrast, alternative input devices, partner work and additional rehearsal where appropriate.
- Provide scaffolds that preserve the intended computing knowledge rather than replacing the task with a lower-value activity.
- Offer unplugged rehearsal before on-screen programming and allow pupils to explain orally where written recording creates a barrier.

Subject leadership and monitoring

- Check that the correct cycle and named Oak unit are being followed.
- Review planning and evidence for all three strands: computer science, information technology and digital literacy.
- Use pupil voice to test whether pupils can recall vocabulary, explain processes, identify safe choices and connect current learning with previous units.
- Sample digital work across groups, including pupils with SEND and disadvantaged pupils.
- Review hardware and software requirements before each term and identify alternatives early.
- Maintain the NC coverage matrix and note any unit interruption or pupil mobility so that gaps can be addressed.

Resources and source documents

Teachers should use the Oak National Academy KS1 and KS2 Computing curriculum plan, individual Oak unit resources and the Oak National Curriculum alignment document. The Oak sequence is based on the Teach Computing Curriculum developed by the National Centre for Computing Education and is designed to be adaptable to school context.