WOODMANSEY CE
PRIMARY SCHOOL

Building Strong Foundations • Unlocking Potential • Inspiring a Generation

Computing Policy

Written by: J. Williams

Approved by: Governing Body

Date: September 2025

Next Review: September 2028

1. Relationship Between Charter, Policy and Planning

At Woodmansey CE Primary School, our curriculum is shaped by our vision of "Building Strong Foundations, Unlocking Potential, Inspiring a Generation." Computing contributes to this vision by enabling pupils to understand, use and shape technology confidently, responsibly and creatively.

This policy sits within the wider curriculum framework and should be read alongside the Woodmansey Curriculum Statement, the Computing Charter, the Online Safety Policy, the long-term curriculum plan and the associated unit plans. Together, these documents create a clear line from whole-school vision to classroom practice.

2. Subject Overview

Computing is the subject through which pupils learn to understand digital systems, solve problems, create digital content and participate safely and responsibly in an increasingly connected world. It is not simply the use of devices; it is the study of how technology works, how information is represented and processed and how people can use computational ideas to solve problems.

At Woodmansey, Computing is taught as a discipline made up of three closely connected areas: Computer Science, Information Technology and Digital Literacy. Pupils learn how algorithms, programs, networks and data systems work; how digital tools can be used to create and communicate; and how to make safe, ethical and informed decisions when using technology.

Our aim is for pupils to become:

- computational thinkers who can break problems down, identify patterns and design logical solutions
- confident creators who can select and use digital tools purposefully
- critical users who can question the reliability, ownership and impact of digital information
- responsible citizens who understand online safety, digital reputation and respectful communication
- resilient learners who understand that debugging, testing and refinement are normal parts of the process

3. Intent

The intent of the Computing curriculum is to equip pupils with the knowledge, skills and habits of mind needed to understand and engage with a digital world. Pupils should leave Woodmansey as responsible, competent, confident and creative users of technology who can think critically about the digital systems that shape modern life.

Computing should help pupils move beyond being consumers of technology. They should learn that computers are systems designed by people, that programs are sets of precise instructions and that digital content is created, edited, shared and evaluated. Pupils should also understand that digital choices have consequences for themselves and others.

Our curriculum balances explicit teaching of computing knowledge with opportunities to apply that knowledge through practical work. Pupils learn programming, digital creation, data handling, computer systems, networks and online safety in a progressive way. They are also encouraged to use technology across the wider curriculum when it genuinely improves learning, communication or creativity.

4. What Pupils Learn in Art and Design

Computing learning at Woodmansey is organised through two connected forms of knowledge:

Type of knowledge	What this means in Computing
Substantive knowledge	Knowledge of algorithms, programs, data, digital systems, networks, media creation, online safety, privacy, security and digital communication.
Disciplinary knowledge	Knowledge of how computer scientists and digital creators work: decomposing problems, designing algorithms, testing, debugging, evaluating, selecting tools and making informed digital decisions.

Across the curriculum, pupils develop knowledge and skill through the following strands:

Curriculum strand	Progression focus
Computer Science	Algorithms, sequencing, selection, repetition, programming, debugging, logic, abstraction and computational thinking.
Information Technology	Creating, editing, organising, storing and presenting digital content using appropriate tools.

Digital Literacy and Online Safety	Safe, responsible and respectful participation in digital life, including privacy, reputation, communication, copyright and critical evaluation.
Computer Systems and Networks	Understanding hardware, software, inputs, outputs, networks, the internet and how digital systems connect.
Data and Information	Collecting, sorting, representing, interpreting and questioning data in age-appropriate ways.
Creating Media	Using digital tools to create text, images, animation, video, sound, presentations and other digital artefacts.

5. Implementation

i. Curriculum Structure and Sequencing

Computing is taught through carefully planned units in the long-term curriculum plan. These units are sequenced so that pupils revisit and deepen the key concepts of Computer Science, Information Technology and Digital Literacy over time. Unit plans identify what comes before, what comes next and why each unit is placed where it is in the curriculum.

The mixed-age structure of the school means that progression is secured through a two-year cycle. Subject leaders and teachers ensure that pupils encounter the full range of computing knowledge across their primary journey and that essential concepts are revisited with increasing complexity.

Computing is taught explicitly as a subject. Technology may also be used across the curriculum, but using a device in another subject is not automatically computing. Cross-curricular technology use should strengthen learning while explicit computing lessons secure the subject knowledge pupils need.

ii. Teaching Process

Computing lessons should make the intended computing knowledge clear. Teachers identify the concept or process pupils are learning, model the thinking involved and provide opportunities for guided and independent practice. Lessons should manage cognitive load carefully because computing tasks can place high demands on working memory.

Effective teaching may include:

- unplugged activities to introduce abstract ideas before pupils use devices
- teacher modelling, worked examples and guided practice
- reading and explaining existing code before modifying or creating new code
- clear debugging routines that help pupils test, identify problems and improve solutions
- paired or collaborative work where discussion supports reasoning
- purposeful projects that allow pupils to create, evaluate and refine digital products
- planned opportunities for pupils to explain their thinking using accurate computing vocabulary

iii. Mastery Principles

Teaching in Computing reflects the school's commitment to mastery approaches.

- Coherence - concepts are taught in a logical sequence so pupils can build from simple instructions and digital choices towards more complex systems and projects.
- Variation - pupils encounter concepts through different contexts, tools and examples so they understand the underlying idea rather than only one program or app.
- Structure - lessons move from clear modelling and practice towards independent creation, testing and evaluation.
- Fluency - repeated opportunities to practise sequencing, debugging, tool selection and digital creation help pupils become more confident and efficient.
- Making Connections - pupils connect computing knowledge to real-world technology, wider curriculum learning, digital citizenship and future learning.

iv. Vocabulary

Computing vocabulary is explicitly taught because precise language helps pupils reason about abstract ideas. Vocabulary is identified in individual unit plans and should be modelled accurately by adults. Pupils should be encouraged to use terms such as algorithm, sequence, command, input, output, debug, variable, network, data, search, privacy and copyright in context.

v. Misconceptions

Teachers actively address misconceptions that commonly arise in Computing. These may include pupils thinking that computers "just know" what to do, that debugging means they have failed, that the internet and the World Wide Web are the same thing, that online information is automatically reliable or that digital images and text can be copied freely without considering ownership.

Pupils are taught that technology is designed by people, that programs need precise instructions, that errors are useful information and that digital content should be questioned, credited and used responsibly.

vi. Inclusion and Adaptive Teaching

All pupils are entitled to access the Computing curriculum. Pupils should not be disadvantaged because they do not have access to devices, software or reliable internet outside school. Teachers plan from pupils' starting points and use adaptive approaches to remove barriers without reducing ambition.

Support may include:

- clear modelling and step-by-step demonstrations
- visual prompts, vocabulary mats and worked examples
- unplugged activities to secure concepts before screen-based work
- pairing or adult support for pupils who need help with access or organisation
- adapted input methods, accessibility settings or assistive technology where required
- additional practice or pre-teaching where pupils need more time to secure key concepts

vii. Challenge and High Attainment

Pupils who demonstrate strong understanding in Computing are challenged through deeper reasoning, greater independence and more complex problem-solving. Challenge should not simply mean completing more tasks. It should require pupils to explain, generalise, adapt, debug, evaluate and improve.

Challenge may include designing alternative algorithms, comparing approaches, creating more efficient programs, using unfamiliar tools, supporting others through explanation or evaluating the suitability of digital products for a specific audience or purpose.

viii. EYFS Foundations

Computing foundations begin in the Early Years through play, talk, problem-solving and exploration. Children develop early understanding of cause and effect, sequencing, patterns, instructions and safe use of technology. These experiences sit within the wider EYFS curriculum, including Personal, Social and Emotional Development, Physical Development, Understanding the World and Expressive Arts and Design.

Children may explore programmable toys, digital drawing, photography, sound, simple instructions, role play involving technology and discussion about using devices safely and sensibly. These experiences prepare pupils for the Key Stage 1 Computing curriculum.

ix. Online Safety and Digital Citizenship

Online safety is taught through Computing and reinforced through PSHE, safeguarding practice, assemblies and day-to-day digital routines. Pupils learn how to behave responsibly online, protect personal information, communicate respectfully, report concerns and evaluate digital information.

Teaching should include self-image and identity, online relationships, online reputation, online bullying, managing online information, health and wellbeing, privacy and security, copyright and ownership. Pupils are taught that being a good digital citizen involves both staying safe and making a positive contribution online.

x. Cross-Curricular Technology Use

Technology should be used across the curriculum where it strengthens learning. Pupils may use digital tools to research, record, create, present, analyse, compose, film, photograph or communicate. However, teachers should be clear whether the main learning objective is computing or whether technology is being used as a tool to support another subject.

Where pupils use technology in other subjects, adults continue to reinforce digital literacy, online safety, copyright, search skills and appropriate use of devices.

xi. Enrichment and Wider Opportunities

Computing may be enriched through clubs, coding opportunities, digital projects, links with secondary schools, STEM events and pupil leadership. Wider opportunities should help pupils see technology as creative, collaborative and purposeful rather than only functional.

6. Impact

By the end of primary school, pupils should:

- understand key concepts in Computer Science, Information Technology and Digital Literacy
- design, write, test and debug age-appropriate programs
- select and use digital tools to create and communicate effectively
- understand how digital systems, networks and data are used in everyday life
- use technology safely, respectfully and responsibly
- question the reliability and ownership of digital content
- approach computing problems with resilience, logic and creativity

Pupils should leave Woodmansey ready to access the Key Stage 3 Computing curriculum with confidence, curiosity and a secure understanding that technology can be understood, questioned, created and improved.

7. Assessment

FLiC (Framing Learning in Classrooms) is used to record and track pupils' attainment and progress against the curriculum objectives. Teachers update FLiC at appropriate points using practical evidence and their professional judgement. This information helps to identify next steps, inform future teaching and monitor the progress of individual pupils and groups over time.

Teachers assess pupils' progress through:

- pupil explanations and use of vocabulary
- practical work, saved digital outcomes and project files
- programs, algorithms and debugging processes
- responses to questions and problem-solving tasks
- unit outcomes identified in curriculum unit plans

Assessment information is used to identify misconceptions, plan next steps and ensure pupils are ready for later learning. It should also help subject leaders evaluate whether the curriculum is being implemented as intended.

8. Leadership, Monitoring and Review

The subject leader supports the development of Computing across the school through curriculum review, monitoring and staff support. The role is not to know every technical answer, but to understand how the subject is best taught, how progression is secured and how colleagues can be supported to deliver the curriculum well.

Monitoring may include:

- reviewing unit plans, saved work and digital outcomes
- looking at pupils' programming, multimedia and data work
- observing or dropping into computing lessons
- discussing learning with pupils and staff
- checking coverage across Computer Science, Information Technology and Digital Literacy
- reviewing online safety provision and links with safeguarding
- identifying staff development needs and relevant CPD

The policy is reviewed regularly to ensure Computing provision remains effective, ambitious and aligned with curriculum priorities.

9. Subject Specific Pedagogy and Non-Negotiables

Computing is more than device use
Every computing lesson should have a clear computing objective. The focus should be the concept, process or digital skill being taught rather than simply using a device.

Teachers should distinguish between learning computing and using technology to support another subject.
Pupils should know why a tool has been chosen and, as they become older, should increasingly make informed choices about which digital tool is appropriate for a task.

Programming and debugging

- Pupils should experience a progression from physical instructions and unplugged activities to block-based programming and, where appropriate, text-based ideas.
- Debugging should be presented as a normal and positive part of computing. Pupils should be taught to predict, run, test, identify errors, amend and retest.
- Pupils should have opportunities to read and explain code before being expected to create independently.

Digital creation and content

- Pupils should be taught to plan, create, edit, save, retrieve, improve and evaluate digital work.
- Digital products should be judged by how well they communicate for a purpose and audience, not just by visual appearance.
- Pupils should understand copyright, ownership and appropriate use of images, sound, text and other digital material.

Online safety routines

- Online safety should be revisited whenever pupils use connected technology, not only during standalone lessons.
- Pupils should know how to report a concern to a trusted adult and should understand that online behaviour has real consequences.
- Staff should reinforce the school's expectations for respectful communication, privacy and responsible digital choices.

Access, infrastructure and ambition

- Technical barriers should not unnecessarily limit the ambition of the Computing curriculum. Where software, hardware or network access is needed, staff should liaise with the subject leader and IT support in advance.
- Apps, websites and online tools should be checked for safeguarding, privacy and curriculum suitability before use.
- Where pupils encounter emerging technologies, including AI-generated content, teaching should emphasise critical evaluation, reliability, ownership and responsible use.