Computing Rationale

Intent

Computing at Askwith Primary School equips pupils with the knowledge, skills and understanding needed to thrive in a digital world. Our curriculum enables pupils to become confident, responsible and creative users of technology. It develops computational thinking, problem-solving and digital literacy, preparing pupils for the future workplace and for life as active participants in a digital society. As the National Curriculum states, computing enables pupils to "use computational thinking and creativity to understand and change the world."

Our curriculum is structured around the three core strands of computing:

Computer Science – understanding algorithms, programming and how digital systems work

Information Technology – using technology to create, organise, store and present content

Digital Literacy – using technology safely, respectfully and responsibly

Digital literacy is embedded throughout all units to ensure pupils become safe, responsible users of technology.

The curriculum begins in Early Years, where children explore technology through play, early programming toys and foundational online safety concepts. Although technology is no longer explicitly listed in the EYFS Framework, we believe early experiences are essential because "children develop quickly in the early years and a child's experiences between birth and age five have a major impact on their future life chances."

Our curriculum is ambitious and inclusive for all pupils, including SEND, EAL, disadvantaged and vulnerable children. It aligns with the whole-school intent for pupils to know more, remember more and do more, and ensures that all pupils develop the digital competence needed for the modern world.

Implementation

Our computing curriculum is informed by Teach Computing, ensuring high-quality, research-based pedagogy. Units are carefully selected to meet the needs of our pupils and provide a broad range of opportunities to develop programming, media creation and data handling skills.

Computing is taught in blocks across the year, allowing pupils to immerse themselves in new concepts and build secure understanding. The long-term plan is designed for both single-year and mixed-age classes.

Curriculum Sequencing

The curriculum is deliberately sequenced so that knowledge and skills build progressively:

KS1: basic computer skills, mouse and keyboard control, simple algorithms, early programming, understanding what computers are and how they are used

Lower KS2: developing programming through repetition, sequencing and debugging; understanding networks; creating digital content

Upper KS2: more complex programming (count-controlled loops, infinite loops, parallel loops), data handling, digital media, understanding how the internet works and how to stay safe online

Examples from your curriculum include:

Year 1 – IT Around Us: identifying computer components, using a mouse and keyboard, saving and editing work

Year 2 – IT Around Us: deepening understanding of computer uses, navigating webpages, creating digital content

Year 3 – Programming A: using Scratch Jr to create algorithms and modify loops

Year 5 – Programming B: developing loops, including infinite and simultaneous loops

Digital Literacy & Online Safety

Digital literacy is informed by the Education for a Connected World framework. The computing curriculum explicitly teaches:

- online reputation
- managing online information
- privacy and security
- copyright and ownership

Other aspects of online safety are integrated into PSHE, ensuring a whole-school approach.

Pedagogy

Teaching includes:

- explicit instruction and modelling
- deliberate practice
- retrieval practice and spaced revisiting
- vocabulary instruction
- opportunities to create, debug and evaluate programs

- small-step teaching to avoid cognitive overload

Daily lesson planning considers working memory limitations, ensuring pupils handle only manageable amounts of new information at once.

Impact

Assessment in computing is both formative and summative. Teachers use questioning, observation, discussion and retrieval practice to identify misconceptions and adapt teaching. Summative assessments evaluate pupils' acquisition of vocabulary, programming skills and digital literacy.

Progress is tracked using the school's progression document, ensuring pupils build on prior learning and that gaps are identified and addressed promptly. Leaders evaluate the impact of adaptations and interventions to ensure they remove barriers and support progress for SEND and disadvantaged pupils.

By the end of KS2, pupils:

- design, write and debug programs
- use logical reasoning to explain and correct errors
- use technology purposefully to collect, analyse and present data
- understand how networks and the internet function
- use technology safely, respectfully and responsibly
- make informed choices about online behaviour and digital wellbeing

Pupils leave Askwith prepared to use technology confidently and responsibly in secondary school and beyond.

Inclusion

Computing is inclusive and accessible to all pupils. Lessons are adapted to ensure every child can participate meaningfully, including those with SEND, EAL or additional needs.
Adaptations may include:

- visual supports
- simplified vocabulary
- scaffolded tasks
- modified equipment (e.g., larger keyboards, touch devices)
- additional adult support

The curriculum is designed to be accessible from the outset, reducing the need for extensive individualisation. High expectations remain consistent—adaptations support access without lowering challenge.

Leaders monitor the effectiveness of adaptations to ensure they lead to improved outcomes.

Personal Development & SMSC

Computing contributes to pupils' personal development and SMSC in meaningful ways.

Spiritual Development

Pupils reflect on how technology shapes their lives and the wider world. They explore the power and limitations of the internet and consider the reliability of online information.

Moral Development

Pupils learn about respectful online behaviour, copyright, plagiarism and the ethical use of digital content.

Social Development

Pupils learn how to communicate safely online, collaborate digitally and understand the impact of technology on relationships and society.

Cultural Development

Pupils explore how technology connects people globally and supports cultural understanding. They use digital tools to research, present and share information.

Reading underpins the curriculum. Key texts and information sources are carefully selected to support comprehension and digital literacy.

Leadership & Professional Development

The computing subject leader monitors curriculum delivery through lesson visits, planning scrutiny, pupil voice and staff feedback. This ensures consistency and high standards across year groups.

Staff receive ongoing CPD, including:

- vocabulary instruction
- cognitive science principles
- Teach Computing training
- online safety updates
- programming pedagogy

Leaders ensure all adults understand the computing curriculum and implement it consistently. Safeguarding, attendance and online safety are monitored closely, with computing contributing to early identification of need.

Enhancements

Enhancements enrich the computing curriculum and build cultural capital. Pupils engage in:

- digital media projects
- coding challenges
- cross-curricular digital presentations
- online safety workshops
- opportunities to explore real-world applications of technology

These experiences deepen understanding and inspire ambition in a rapidly evolving digital world.

Reviewed February 2026