



Computing Vision & Intent

Overall Vision

At Elm Tree, we are committed to fostering a climate of high expectations where every pupil can thrive in Computing. We believe that success in Computing is the foundation for developing digital confidence, creativity, and problem-solving skills; essential for the modern world. Our curriculum is carefully designed to build digital literacy and computational thinking through a clear, well-sequenced progression of knowledge and skills, ensuring pupils make meaningful connections across all areas of technology, digital learning and the curriculum.

We aim to create an environment where pupils experience success regularly, empowering them to explore, take risks, and become resilient and safe digital learners. Our teaching approach prioritises a balance of practical exploration and conceptual understanding. From early coding experiences to more advanced programming and digital design, we ensure pupils develop the skills to use technology confidently and responsibly.

Each year, pupils revisit and build upon the same key areas of learning- computer systems and networks, online safety, programming, data and information, and creating media- allowing them to deepen their understanding and strengthen their knowledge over time. Alongside this, we provide many opportunities for unplugged activities that develop logical thinking, teamwork, and problem-solving away from screens, helping pupils to understand the principles of computing in a hands-on and engaging way.

We encourage pupils to see Computing not only as a vital life skill but also as a pathway to innovative careers and active participation in an increasingly digital society. Beyond the classroom, we enrich pupils' experiences through real-world applications and cross-curricular projects that highlight the creativity and relevance of computing in everyday life. We work closely with parents and carers to help them understand how to support safe and effective technology use at home, building a community where computing is valued and digital achievement is celebrated.

At Elm Tree, every pupil is given the opportunity to thrive in computing, developing confidence, creativity, and a lifelong curiosity about the digital world.

By the end of Early years & Key Stage 1

National Curriculum

Pupils develop fundamental digital skills, become increasingly competent and confident, and access a broad range of opportunities to extend their understanding of technology, computing concepts, and safe digital behaviours, both independently and with others. They engage in creative, exploratory and problem-solving computing activities in a range of increasingly challenging situations.

Pupils are taught to:

- understand and use basic computing skills, including operating digital devices, exploring simple software, and developing early keyboard, mouse, and touch-based control
- create and debug simple programs, understanding that algorithms are sets of instructions and that programs work when those instructions are followed correctly
- use logical reasoning to predict the behaviour of simple programs and digital devices
- participate in collaborative digital activities, developing simple strategies for taking turns, sharing devices, and solving problems together
- use technology purposefully to create, store, retrieve, and present digital content such as text, images, audio, and simple data
- recognise common uses of information technology beyond school
- use technology safely and respectfully, keeping personal information private and knowing where to go for help when concerned about content or contact online

At Elm Tree we prioritise:

Digital Skills and Technological Understanding

Develop fundamental digital skills including using a mouse, touchpad, keyboard, and touchscreen with increasing accuracy and control.

Refine early computing behaviours established in the Early Years Foundation Stage (EYFS), gaining fluency in navigating apps, websites, and simple software.

Develop strong digital awareness, understanding how to operate devices safely and purposefully in both independent and collaborative contexts.

Understanding Instructions, Algorithms, and Problem-Solving

Begin to understand that algorithms are sets of instructions used to achieve a goal.

Create and debug simple programs using age-appropriate tools (e.g., Bee-Bots, simple coding apps).

Recognise simple computing concepts such as sequencing and predicting what will happen when instructions are followed.

Learn the importance of working collaboratively, taking turns, and sharing devices to solve problems together.

Digital Safety and Well-being

Understand how to use technology safely and respectfully.

Learn the importance of keeping personal information private.

Begin to recognise what to do if they see something online that makes them uncomfortable.

Understand the benefits and risks of technology for learning, communication, and play.

Creative Digital Expression

Use technology to create and present simple digital content such as images, audio recordings, text, and basic animations.

Explore how digital tools can be used to represent ideas, tell stories, and express creativity.

Begin to describe and comment on digital work, their own and others', using simple computing vocabulary.

By the end of Key Stage 1, pupils will have experienced:

Programming and Computational Thinking

- Giving and following simple instructions (algorithms).
- Using directional language and simple code to program floor robots.
- Debugging simple errors in a sequence.
- Creating simple digital sequences (e.g., pressing commands in order).

Using Technology Purposefully

- Handling digital devices confidently (tablets, computers, microphones, cameras).
- Typing simple words and sentences.
- Opening, saving, and retrieving work.
- Using drawing, photo, or audio apps to create digital content.

Understanding Digital Systems

- Recognising common uses of technology at school and in the wider world.
- Exploring how digital devices behave (e.g., buttons, apps, inputs, outputs).
- Understanding how information can be stored and represented digitally.

Online Safety

- Knowing what personal information is and why it should be protected.
- Understanding who trusted adults are and when to ask for help.
- Beginning to recognise safe and unsafe online behaviours.

Data and Information

- Collecting simple data (e.g., tallying colours, favourite fruit) using digital tools.
- Creating simple charts or pictograms using software.
- Exploring how information can be organised and displayed on a computer.

By the end of Key Stage 2

National Curriculum

Pupils develop fundamental digital skills, become increasingly competent and confident, and access a broad range of opportunities to extend their understanding of technology, computing concepts, and safe digital behaviours, both independently and with others. They engage in creative, exploratory, and problem-solving computing activities in a range of increasingly challenging situations.

Pupils are taught to:

- understand and use basic computing skills, including operating digital devices, exploring simple software, and developing early keyboard, mouse, and touch-based control
- create and debug simple programs, understanding that algorithms are sets of instructions and that programs work when those instructions are followed correctly
- use logical reasoning to predict the behaviour of simple programs and digital devices
- participate in collaborative digital activities, developing simple strategies for taking turns, sharing devices, and solving problems together
- use technology purposefully to create, store, retrieve, and present digital content such as text, images, audio, and simple data
- recognise common uses of information technology beyond school
- use technology safely and respectfully, keeping personal information private and knowing where to go for help when concerned about content or contact online

At Elm Tree we prioritise:

Digital Skills and Technological Understanding

Pupils develop fundamental digital skills, including using a mouse, touchpad, keyboard, and touchscreen with increasing accuracy and control.

Refine computing behaviours established in Key Stage 1, gaining fluency in navigating apps, websites, and software.

Develop strong digital awareness, understanding how to operate devices safely and purposefully in both independent and collaborative contexts.

Understanding Instructions, Algorithms, and Problem-Solving

Understand that algorithms are sets of instructions used to achieve a goal.

Create and debug programs using age-appropriate tools (e.g., coding apps, programmable robots).

Recognise computing concepts such as sequencing, repetition, and predicting outcomes when instructions are followed.

Learn the importance of working collaboratively, taking turns, and sharing devices to solve problems together.

Digital Safety and Well-being

Understand how to use technology safely and respectfully.

Learn the importance of keeping personal information private.

Recognise what to do if they encounter inappropriate or unsafe content online.

Understand the benefits and risks of technology for learning, communication, and play.

Creative Digital Expression

Use technology to create and present digital content such as images, audio recordings, text, and basic animations.

Explore how digital tools can be used to represent ideas, tell stories, and express creativity. Describe and comment on digital work, their own and others', using appropriate computing vocabulary.

By the end of Key Stage 2, pupils will have experienced:

Programming and Computational Thinking

- Designing, writing, and debugging more complex programs
- Using sequences, repetition, and conditional statements to control devices and simulations
- Predicting outcomes and testing solutions systematically
- Creating digital sequences and programs for a purpose

Using Technology Purposefully

- Selecting and combining appropriate software and devices for a range of creative, research, and data-handling tasks
- Handling digital devices confidently, including computers, tablets, cameras, and microphones
- Typing with increasing accuracy and efficiency
- Creating, storing, retrieving, and presenting digital content such as text, images, audio, and simple animations

Understanding Digital Systems

- Understanding how hardware and software interact in digital systems
- Exploring inputs, outputs, and how data is processed
- Recognising how computing systems are used in school and beyond

Online Safety

- Evaluating digital content critically
- Understanding the importance of online privacy and security
- Recognising safe and unsafe online behaviours
- Knowing how to seek help when encountering inappropriate content or contact

Data and Information

- Collecting, organising, and interpreting data using digital tools
- Creating charts, graphs, and other visual representations of information
- Using digital systems to model problems and present solutions