

Broad Oak Primary School – Computing Curriculum

Intent, Implementation, and Impact

Intent

At Broad Oak Primary School, we recognise Computing as an essential subject within our modern curriculum and a vital life skill in an increasingly digital world. Our intent is to provide a high-quality computing education that equips pupils with the knowledge, creativity, and understanding required to use technology confidently, responsibly, and effectively. We aim to nurture curiosity, encourage problem-solving, and inspire innovation through the meaningful use of technology in all areas of learning.

We view Computing not as an isolated subject, but as a powerful, cross-curricular tool that enhances teaching and learning across all subjects. From developing mathematical reasoning and literacy skills to supporting creative expression in art and design, technology is woven through our curriculum to enrich learning opportunities and build essential, transferable skills.

Our curriculum is built upon three key strands of computing:

1. Computer Science – developing pupils' understanding of algorithms, logical reasoning, and programming.
2. Digital Literacy – ensuring pupils can use technology effectively to communicate, create, and collaborate.
3. Information Technology – enabling pupils to use a range of software and devices to collect, analyse, and present data meaningfully.

We also place a strong emphasis on online safety and digital citizenship, ensuring that all pupils understand how to navigate the online world safely, respectfully, and responsibly. Our overarching aim is for every pupil to leave Broad Oak as a confident, resilient, and ethical digital learner who can participate fully in an ever-changing technological landscape.

Implementation

Computing at Broad Oak is taught in line with the National Curriculum and follows a carefully sequenced programme of study that builds progressively from the Early Years Foundation Stage (EYFS) through to the end of Key Stage 2. Each phase of learning builds upon prior knowledge and skills, ensuring a coherent and well-structured progression of learning.

Early Years Foundation Stage (EYFS):

In the Early Years, computing is introduced through exploration and play. Children engage with technology in meaningful contexts, such as using tablets, interactive whiteboards, and programmable toys. These experiences help to develop their early understanding of cause and effect, problem-solving, communication, and how technology can help them to make sense of the world around them.

Key Stage 1:

In Key Stage 1, pupils begin to develop an understanding of algorithms and simple programming. They learn to create and debug basic programmes using tools such as Beebots and introductory coding software. Pupils also explore how to use digital devices purposefully—for example, creating, saving, and retrieving digital content such as images, text, and short videos. A strong emphasis is placed on safe and responsible use of technology. Pupils are introduced to key concepts of online safety, learning how to keep personal information private, behave respectfully online, and recognise when to seek adult support.

Key Stage 2:

By Key Stage 2, pupils extend their understanding of computational thinking and programming. They design, write, and debug increasingly complex programmes using platforms such as Scratch, Crumble, and Micro:bits. Logical reasoning and problem-solving become central to learning, helping pupils to understand how algorithms are implemented as code and how to detect and correct errors.

Pupils also explore how computer networks and the internet function, gaining insight into how information is transmitted, stored, and shared securely. They develop proficiency in using a variety of software applications for word processing, data handling, image editing, animation, and presentation, supporting work across the curriculum.

As pupils' confidence grows, they are introduced to emerging technologies, including 3D design and 3D printing. Pupils use design software to create 3D models, which are then printed using a school 3D printer. This allows them to see their digital creations brought to life, linking computing with design technology, mathematics, and art. Through this, pupils develop spatial reasoning, precision, and creativity, as well as an appreciation for how technology shapes the physical world around them.

Online safety remains a core strand of the curriculum. Pupils learn to critically evaluate digital content, understand the impact of their online behaviour, and reflect on their digital footprint.

Enrichment and Cross-Curricular Integration:

Technology is integrated across all subject areas to enhance creativity, collaboration, and engagement. Pupils use laptops, iPads, cameras, and programmable devices such as Beebots, Crumbles, and Micro:bits to explore and consolidate their understanding of computing concepts. The use of 3D printing further strengthens cross-curricular learning by connecting computing with Design and Technology. Pupils design and prototype products, applying both creative and technical skills, while understanding the real-world applications of modern technology in industry and innovation.

Leadership and Digital Ambassadors:

Miss Chambers leads the Digital Leaders Programme, which empowers pupils to take on leadership roles in promoting safe, responsible, and innovative technology use across the school. Digital Leaders assist in lessons, support peers and staff with technical tasks, and act as ambassadors for online safety. This programme fosters confidence, leadership,

and digital responsibility among participating pupils.

Impact

By the end of their time at Broad Oak, pupils will have developed the knowledge, skills, and confidence to use technology creatively, critically, and safely. They will leave primary school as digitally literate individuals, well-prepared for the next stage of their education and for life in an increasingly digital society.

Our pupils will:

- Demonstrate confidence and independence in selecting and using a range of digital tools.
- Apply logical reasoning and problem-solving to real-world challenges.
- Understand how technology can be used positively and ethically, both in learning and everyday life.
- Show resilience and adaptability when exploring new technologies and software.
- Display an awareness of digital safety, privacy, and wellbeing in online and offline contexts.
- Recognise the power and responsibility that comes with digital participation.
- Use creative technologies such as 3D design and printing to transform ideas into tangible products.

We regularly assess pupils' progress through observation, discussion, and review of digital work. Pupil voice, teacher assessment, and digital portfolios are used to monitor understanding, progression, and engagement. Feedback from staff and pupils informs continuous improvement in planning and delivery.

Ultimately, our goal is for every pupil to see themselves as confident, capable, and responsible digital citizens. They will understand both the opportunities and challenges that technology presents and will be equipped to use their computing knowledge thoughtfully and creatively in all areas of their learning and future lives.