



Broadhempston Primary School

Computing Curriculum Statement

At Broadhempston Primary School, we believe that computing is an essential part of modern education, preparing children to participate successfully and safely in an increasingly digital world. We aim to equip pupils with the knowledge, skills and understanding needed to become confident users, creators and evaluators of technology.

As a small rural school, we recognise the importance of ensuring that all pupils develop the digital knowledge and skills they need to access opportunities beyond their immediate environment. We provide meaningful opportunities for children to become confident and capable users of technology, preparing them for life in an increasingly connected world.

Our computing curriculum encourages pupils to think logically, work creatively and approach challenges with resilience and curiosity. By exploring computer systems, programming, data and digital media, pupils develop computational thinking skills that support learning across the curriculum and beyond.

We aim to nurture responsible digital citizens who understand how to use technology safely, respectfully and effectively. Through the study of computing, pupils develop the confidence to embrace new technologies while understanding their responsibilities within a rapidly evolving digital society.

National Curriculum

At Broadhempston Primary School, our computing curriculum enables pupils to:

- Understand and apply the fundamental principles of computer science.
- Analyse problems in computational terms and develop practical solutions.
- Write, test and debug programs.
- Use technology purposefully to create, organise, store, manipulate and retrieve digital content.
- Collect, analyse and present data in meaningful ways.
- Communicate and collaborate responsibly using digital technologies.
- Understand how technology affects individuals, communities and society.
- Use technology safely, respectfully and responsibly.
- Recognise acceptable and unacceptable online behaviour.
- Become confident, creative and thoughtful users of technology.

To achieve these aims, the curriculum is organised around three interconnected strands:

- Computer Science - understanding how computers and digital systems work, including programming, algorithms and computational thinking.
- Information Technology - using technology purposefully to create, organise, store and present information and digital content.
- Digital Literacy - understanding how to use technology safely, responsibly and effectively as active participants in the digital world.

These strands are revisited throughout the curriculum to ensure pupils build secure knowledge, strengthen key skills and develop increasing confidence in their use of technology.

Curriculum design and delivery

As a small rural school, pupils learn within mixed-age classes. The curriculum has been carefully designed to ensure full coverage, clear progression and appropriate challenge for all learners through a two-year rolling programme in KS1 and a four-year rolling programme in KS2.

We have chosen the Kapow scheme as the foundation for our computing curriculum because it provides a coherent progression of knowledge and skills while enabling teachers to respond to the needs and experiences of our pupils. We believe it is important that pupils understand that technology is not simply something to consume but something they can create, adapt and use to solve problems.

Our curriculum is structured around a spiral model which allows pupils to revisit and deepen their understanding of key computing concepts throughout their primary education. This approach enables children to build upon previous learning, strengthen retention and apply knowledge in increasingly challenging contexts.

Through this approach, pupils:

- Develop computational thinking skills.
- Build confidence in programming and debugging.
- Apply digital skills across a range of contexts.
- Learn to evaluate technology critically.
- Deepen their understanding of online safety and digital citizenship.

We believe it is important that pupils understand not only how to use technology, but also how it works. Through practical experiences, children learn how digital systems operate, how programs are created and how technology can be used to solve problems and improve lives.

Our curriculum develops three interconnected forms of knowledge:

- Substantive knowledge - understanding key concepts, facts and vocabulary within computing.
- Disciplinary knowledge - understanding how computer scientists and digital creators solve problems, test solutions and evaluate outcomes.
- Procedural knowledge - developing the practical skills needed to use technology effectively, safely and creatively.

These forms of knowledge are developed through purposeful learning experiences that encourage pupils to create, investigate, evaluate and innovate using technology.

Progression

Our computing curriculum is carefully sequenced to ensure that pupils develop increasing knowledge, skills and understanding as they move through the school. Through a spiral curriculum, children revisit key concepts and skills while developing greater confidence, competence and independence.

In the Early Years, children begin to explore technology through play and first-hand experiences. They develop an awareness of digital devices and begin to understand how technology is used in everyday life.

In Key Stage 1, pupils develop foundational computing skills. They learn how to use devices safely, create simple digital content, follow and create basic algorithms and understand the importance of online safety.

In Lower Key Stage 2, pupils build on these foundations by developing their programming skills, understanding computer networks and using a wider range of digital tools. They begin to debug programs, use data more effectively and evaluate digital content critically.

In Upper Key Stage 2, pupils become increasingly confident and independent users of technology. They create more sophisticated programs, understand how digital systems communicate, use data purposefully and demonstrate a secure understanding of online safety and responsible digital citizenship.

Throughout their time at Broadhempston Primary School, pupils develop computational thinking, creativity and problem-solving skills. They learn to use technology confidently and responsibly while developing an understanding of its role within modern society. This progression enables pupils to become digitally literate young people who can use, create and evaluate technology safely, responsibly and effectively.

Personal development and wider curriculum links

Digital Literacy - Digital literacy is at the heart of our computing curriculum. Pupils learn how to navigate digital environments safely, critically evaluate online information and use technology responsibly and effectively.

Oracy - Computing provides opportunities for pupils to develop their communication skills through:

- Explaining algorithms and programming solutions.
- Discussing digital content and online experiences.
- Presenting digital projects.
- Collaborating on shared tasks.
- Evaluating technological solutions.
- Using subject-specific vocabulary accurately.

These experiences help pupils develop confidence in articulating ideas and explaining their thinking.

Sustainability - Our curriculum encourages pupils to consider the environmental impact of technology. Children explore issues such as electronic waste, responsible use of devices and how technology can be used to support more sustainable ways of living.

Critical Thinking - Computing develops logical reasoning and problem-solving skills. Pupils learn to analyse problems, test solutions, identify errors and refine their approaches, helping them become resilient and reflective learners.

Cultural Capital - Pupils learn about significant innovators from a range of backgrounds and explore how technological developments have transformed communication, education, healthcare and everyday life. This helps pupils understand the significant role technology plays in shaping modern life and future careers.

Inclusion and Diversity - We believe that computing should be accessible and inspiring for all pupils. Learning encourages children to:

- Challenge stereotypes associated with technology careers.
- Explore the contributions of a diverse range of individuals within computing.
- Understand how technology can support accessibility and inclusion.

- Develop respect for different perspectives and online experiences.

We are committed to ensuring that all pupils, including those with SEND, can access and succeed within the computing curriculum through appropriate scaffolding, adaptive teaching and practical support.

Assessment

Assessment is an integral part of teaching and learning in computing at Broadhempston Primary School. Teachers use ongoing assessment to identify what pupils know, understand and can do, and to inform future teaching. Assessment considers both the final digital outcome and the processes pupils use to develop, test and refine their solutions.

Formative assessment takes place throughout lessons through:

- Skilled questioning and discussion.
- Observation of practical computing tasks.
- Review of digital outcomes and coding projects.
- Pupil reflection and self-assessment.
- Peer feedback.
- Retrieval activities that revisit previously taught knowledge and skills.

These approaches allow teachers to identify misconceptions, celebrate successes and provide appropriate support and challenge.

Knowledge assessments provide opportunities for pupils to demonstrate their understanding of key concepts, vocabulary and technical knowledge. Assessment information is used to identify strengths, address gaps in learning and inform future curriculum planning.

Leaders and staff monitor the quality and impact of the curriculum through:

- Reviewing pupils' digital work.
- Pupil voice activities and discussions.
- Lesson visits and curriculum monitoring.
- Analysis of assessment information.

Through these approaches, we ensure that pupils build secure knowledge, develop technical competence and make strong progress throughout the computing curriculum.

CPD

High-quality teaching is essential to the successful delivery of our computing curriculum. We recognise that strong subject knowledge and confidence enable teachers to support pupils in developing computational thinking, digital literacy and technical skills.

Teachers are supported through a range of professional development opportunities, including:

- Access to high-quality curriculum resources and lesson guidance.
- Clear progression documents showing how knowledge and skills develop across the school.
- Subject-specific knowledge and technical support.

- Professional development materials and training resources.
- Collaboration with colleagues to share effective practice.
- Ongoing support and professional dialogue with subject leaders.

Our chosen curriculum resources support teachers in understanding how computing knowledge builds over time and how pupils develop increasing confidence and competence as users and creators of technology.

Leaders continually evaluate the effectiveness of the curriculum through monitoring, pupil voice, staff feedback and professional development needs to ensure all pupils receive a high-quality computing education.

Impact

By the time pupils leave Broadhempston Primary School, they will have developed a secure foundation of computing knowledge, skills and understanding. They will be able to use technology confidently, create digital content purposefully and apply computational thinking to solve problems.

Pupils will understand how digital technologies work, how information is communicated and how technology influences the world around them. They will be able to programme, debug and evaluate digital solutions using appropriate vocabulary and technical understanding.

The impact of our curriculum is evident in the quality of pupils' digital work, discussions and problem-solving. As they progress through the school, pupils demonstrate increasing confidence, creativity and independence when using technology.

They understand the opportunities and challenges that technology presents and are able to make informed decisions when using digital tools and online services.

Our pupils leave Broadhempston as responsible, reflective and digitally literate young people who are well prepared for the next stage of their education and able to participate safely, confidently and effectively in an increasingly connected world.

Curriculum Progression Overview

Computing systems and networks

Year 1/2	Use devices, save files, browse websites and use passwords.	Know hardware, inputs/outputs, networks, files, folders and password security.
Year 3/4	Use peripherals, networks, cloud storage and strong passwords.	Know servers, routers, internet, storage types, permissions and network structure.
Year 5/6	Troubleshoot hardware, explain networks, manage storage and understand cyber security.	Know search ranking, data packets, servers, cloud reliability, hackers and network security.

Programming

Year 1/2	Create simple algorithms, code programs and debug errors.	Know algorithms, programs, coding languages and debugging.
Year 3/4	Use decomposition, loops, variables and conditionals.	Know HTML, abstraction, variables, loops and coding structures.
Year 5/6	Program physical systems and create complex code with nested loops.	Know sensors, syntax, coordinates, text-based coding and advanced debugging.

Creating media

Year 1/2	Create digital content with text and images.	Know word processing, layout, formatting and audience.
Year 3/4	Create websites, edit photos and videos and use design principles.	Know web design, digital media editing, timelines and AI-assisted media.
Year 5/6	Produce multimedia projects using audio, video and animation.	Know project planning, multimedia design, AI content generation and evaluation criteria.

Data handling

Year 1/2	Collect, sort and present simple data.	Know pictograms, tally charts and data grouping.
Year 3/4	Use spreadsheets, organise data and create charts.	Know cells, rows, columns, sorting and data presentation.

Year 5/6	Analyse datasets, use formulas, filters and graphs.	Know formulas, functions, reliability, refinement and data analysis.
Online safety		
Year 1/2	Stay safe online, use passwords and report concerns.	Know accounts, respectful behaviour and trusted adults.
Year 3/4	Recognise online risks, bullying and unsafe behaviour.	Know usernames, online identity, reporting and safe communication.
Year 5/6	Manage digital identity, social media risks and reporting tools.	Know permanence of online content, age restrictions, blocking and reporting tools.