



# **Computing**

# <u>Intent</u>

All pupils at **Bank End Primary Academy** have the right to rich, deep learning experiences that balance all aspects of computing. With technology playing such a significant role in society today, we believe 'Computational thinking' is a skill children must be taught if they are to participate effectively and safely in this digital world.

A high-quality computing education equips pupils to use creativity to understand and change the world. Computing has deep links with mathematics, science, and design and technology, and provides insights into both natural and artificial systems.

At **Bank End Primary Academy**, we teach a curriculum that enables children to become effective users of technology who can:

- Understand and apply the essential principles and concepts of Computer Science, including logic, algorithms, and data representation.
- Analyse problems in computational terms and have repeated practical experience of writing computer programs to solve such problems.
- Evaluate and apply information technology analytically to solve problems.
- Communicate ideas well by utilising appliances and devices throughout all areas of the curriculum.

### **Internet Safety**

**Bank End Primary Academy** takes internet safety extremely seriously. We have an E-Safety Policy that provides guidance for teachers and children about how to use the internet safely. Our Computing and PSHE lessons enable children to learn the safe use of technology and the internet, encouraging them to think about how they can keep themselves and others safe, while being mindful of how their behaviour, words and actions can affect others.

### **Implementation**

We follow a broad and balanced Computing curriculum (based on the National Curriculum) that builds on previous learning and provides both support and challenge for learners. We use a Computing scheme from the National Centre for Computing Education (NCCE) that ensures progression of skills and covers all aspects of the Computing curriculum.

**Early Years** is the first opportunity to develop our children's digital understanding. We implement our Computing curriculum by following the interests of the children through the Early Years Foundation Stage Statutory Framework, which aims to guide children to make sense of their physical world and their community. Children are exposed to a variety of technologies throughout continuous provision, such as having access to phones, ovens and laptops. Children also begin programming in EYFS with Beebot machines.



In KS1 and KS2, the Computing key areas:



- Creating Media
- Programming
- Computer Systems and Networks
- Data and Information

These disciplinary skills are built upon year after year to prepare children for KS3 and the wider world. In an ever-expanding digital world, we want to ensure children understand how to keep themselves safe online and why it is important to do so. Working alongside the PSHE curriculum, we ensure that e-safety is taught discretely using credited schemes and is also embedded across all Computing units.

Teachers plan knowledge organisers which outline key knowledge and substantive vocabulary that all children must master. Low-stakes guizzes are used regularly to support learners' ability to know and remember more and to increase working memory capacity.

All classes have a scheduled Computing lesson each week, and there is an expectation that technology will also be utilised throughout other curriculum subjects. Cross-curricular links are planned in advance so that children have opportunities to apply their computing knowledge in different subject areas.

Children's work is recorded using a class PowerPoint presentation, which is used for reference and assessment to provide a clear picture of the children's learning journey throughout the year.

### Impact:

Our Computing curriculum is high-quality, well-thought-out, and planned to demonstrate progression. If children are keeping up with the curriculum, they are deemed to be making good or better progress. We also measure the impact of our curriculum through the following methods:

- Reflection on standards achieved against the planned outcomes
- Children understand and apply the fundamental principles and concepts of computer • science, including abstraction, logic, algorithms and data representation
- Children can analyse problems in computational terms and have repeated practical experience of writing computer programs to solve such problems
- Children can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems
- Children become responsible, competent, confident and creative users of information and communication technology
- Tracking progress through gains in each guiz
- Pupil discussions about their learning

Our Computing curriculum is also designed to promote the **cultural capital** of all our children. We enhance the curriculum—especially for the most disadvantaged—by organising guest speakers (e.g., game developers, music producers, ICT professionals), and events that focus on real-world applications of computing. We develop skills that prepare children for a wide range of future vocations.

Additionally, we provide opportunities for children to apply these skills in local community contexts, including digital photography and art.



