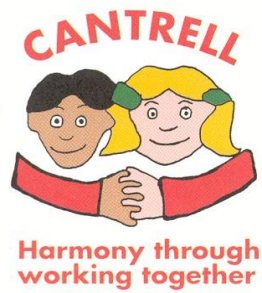


CANTRELL PRIMARY AND NURSERY SCHOOL



COMPUTING POLICY

May 2024

Introduction

This policy document sets out the school's aims, principles and strategies for the delivery of Computing.

A high-quality computing education equips pupils to use computational thinking and creativity to understand and change the world. Computing has deep links with mathematics, science, and design and technology

The core of computing is computer science, in which pupils are taught the principles of information and computation, how digital systems work, and how to put this knowledge to use through programming.

Building on this knowledge and understanding, pupils are equipped to use information technology to create programs, systems and a range of content. Computing also ensures that pupils become digitally literate – able to use, and express themselves and develop their ideas through, information and communication technology – at a level suitable for the future workplace and as active participants in a digital world.

Computing Impact statement

Our mission is to offer a modern, ambitious and relevant computing education which prepares our children to be 'thinkers of the future' who can use computational thinking and creativity to understand and change our world. Our computing curriculum has computer science at its core, teaching the principles of information and computing, digital systems and how this can then be applied through programming.

We want children to be digitally literate and have the knowledge and skills to confidently and creatively express themselves, develop ideas, show resilience and critical thinking to solve problems as active participants in the rapidly changing digital world. We intend that our curriculum prepares pupils to live in an increasingly digital society, build their cultural capital to have the ability to apply their knowledge throughout their future lives and careers.

In order to achieve this, we aim for our children to:

- Understand and apply principles of computer science including abstraction, logic, algorithms and data representation
- Analyse in computational terms with repeated practical experiences
- To develop a whole school approach to ICT ensuring continuity and progression in all strands of the ICT National Curriculum and the Technology aspect within the Revised Early Years Foundation Stage Framework.
- Be safe, responsible, competent, confident creative users of information technology
- Be engaged in teaching and learning that is based on a cognitive science pedagogy, including adaptive teaching strategies, which ensures our curriculum is accessible to all and effectively supports the wide-ranging needs of our children.
- Possess the knowledge required for their next year group to be successful in their future learning

We use Purple Mash as platform to support our learning both in computing and across other areas of the curriculum.

The Computing Curriculum

Each class is allocated time in the ICT suite to accomplish their computing objectives. We ensure that delivery of computing is linked to subjects and takes on board the statutory requirements of other curriculum subjects. We also have iPads which can be moved into any classroom which encourages research and allows for the creative use of computing in all subjects.

Early Years

It is important in the Early Years Foundation Stage to give children a broad, play-based experience of ICT in a range of contexts, including outdoor play. ICT is not just about computers. Early Years learning environments should feature ICT scenarios based on experience in the real world, such as in role-play. Children gain confidence, control and language skills through opportunities to 'paint' on the whiteboard or drive a remote-controlled toy. The Computing Subject Lead works with the EYFS Subject Leader to ensure that resources are appropriate to the needs of the pupils in order to enhance their life skills and support the areas of learning and development.

Key Stage One

In line with the statutory requirements of the National Curriculum and The National Centre for Computing Education.

Children should understand what algorithms are, how they are implemented as programs on digital devices, and that programs execute by following a sequence of instructions. In addition, they should be able to write and test simple programs. Children should use logical reasoning to predict the behaviour of simple programs in computing. They should organise, store, manipulate and retrieve data in a range of digital formats. It is important that children should communicate safely and respectfully online, keeping personal information private, and recognise common uses of information technology beyond School.

Key Stage Two

Children should be able to design and write programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts; use sequence, selection, and repetition in programs; work with variables and various forms of input and output; generate appropriate inputs and predicted outputs to test programs. They should use logical reasoning to explain how a simple algorithm works and to detect and correct errors in algorithms and programs. Children will understand computer networks including the Internet; how they can provide multiple services, such as the worldwide web; and the opportunities they offer for communication and collaboration. Children are able to describe how Internet search engines find and store data; use search engines effectively; be discerning in evaluating digital content; respect individuals and intellectual property; use technology responsibly, securely and safely. They select, use and combine a variety of software (including Internet services) on a range of digital devices to accomplish given goals, including collecting, analysing, evaluating and presenting data and information.

Teaching and Learning

Pupils are taught within the whole class, regardless of ability or SEND. Opportunities for embedding computing to support learning and teaching across the curriculum are identified in the school's planning format. Across Key Stage One and Two, computing is taught from the Purple Mash scheme of work for at least one hour per week.

The class teacher will use the statements from 'Purple Mash' for their learning objectives and will record those children working above and below expectations. This information will inform the end of

year report as well as any information passed onto the next year group. The Computing Lead will analyse data for each year group annually.

Monitoring

Monitoring is the responsibility of the Computing Lead. Monitoring of computing includes (in accordance with whole school monitoring schedule): learning walks, teacher planning, pupil’s work looks, pupil voice and staff voice.

Feedback and areas for development identified because of monitoring are fed back to staff and senior leaders as soon as possible.