Policy Version 1
Last updated January 2024

# Brookfield Primary School Policies – Computing Policy

# Brookfield Primary School

**Record of Policy Amendment / History**

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BROOKFIELD PRIMARY SCHOOL

# Computing Policy

## Intent

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 technology and provides insights into both natural and artificial systems. 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.

Aims

The national curriculum for computing aims to ensure that all pupils:

- Can understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation.
- Can analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems.
- Can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems.
- Are responsible, competent, confident and creative users of information and communication technology.

## Implementation

Our curriculum goes beyond a plan of what will be taught and when it will be taught. It covers all the experiences a child receives under our guidance. As educationalists we take our responsibility for the future of our young learners very seriously. Our curriculum will ensure that our children become confident, independent, resilient, curious learners with self -belief and our school ethos fully supports this. Our aim is for every child “To Be The Best They Can Be”.

Early Years

Children in EYFS have some experience using technology.

Key Stage 1

In Key Stage 1, pupils will use a range of technology in school and learn how to stay safe whilst using this. They will explore why different technology is used for different purposes and recognise common uses of information technology beyond school. Pupils will develop their understanding of basic subject-specific vocabulary relating to specific technology, coding and online safety. Pupils will learn how to become digitally literate by using a range of

technology safely and understand the need to keep information private. They will learn what is meant by the term online safety and know who to speak to if they are concerned about something they have seen or heard online. Children will learn about what algorithms are and know how these can be implemented whilst using technology and also through unplugged devices to develop their computer science skills. Children will learn the importance of following step by step instructions to achieve a required outcome and will be able create and debug simple programs. The children will learn about the purposes of a range of technology and why some technology is used for certain tasks to develop their understanding of information technology. The children will have opportunities to browse appropriate websites safely, create digital media and understand how technology is used for data and information. Through this, the children will learn how technology can be used to find out information. The children will also have the opportunity to explore ways of organising their work and findings using a range of programs such as Microsoft Office and Scratch.

Key Stage 2

During Key Stage 2, the children develop their confidence and abilities when using a range of technology and will have the opportunities to design, write and debug programs to achieve specific goals. The children will understand how to keep themselves and others safe online, understand the need to keep personal information private and know ways to report concerns about content and contact. The pupils will work on their understand of subject-specific vocabulary taught in Key Stage 1 and learn new terminology.

During Key Stage 2, pupils will continue to develop their knowledge and skills to become more digitally literate by learning about behaviours that are acceptable and unacceptable online and the risks associated with these. The children will spend time exploring what could be classed as a risk to them and others online and understand that they have choices to make when it comes to these. Throughout the key stage the children will have opportunities to discuss what they have seen on the internet and evaluate how accurate and authentic the information is that they find online.

Pupils will extend their knowledge of computer science skills by using their knowledge and understand of algorithms to create their own by making predications, repetition and experiment with different variables. The children have opportunities to write their own and explain how it works along with solving any problems that occur along the way.

The pupils will continue to explore a range of software and technology and use the most appropriate based on a specific purpose for this. The children will learn how to collect a range of data and will learn the skills needed to organise and present the data using different programs. Throughout the key stage children will also explore animation and learn how to produce films/ animation and edit it.

Computing Curriculum Planning

At Brookfield, computing is taught around a set of key concepts and second order concepts. A range of key concepts are explored through each computing unit. These concepts include:

1. Computing systems and networks: (systems, networks and how they are used, the internet, hardware and software)

2. Programming: (interpreting, creating and evaluating algorithms, programming to accomplish specific goals, detecting and correcting errors)

3. Data and information: (collecting, analysing, evaluating, presenting data and information)

4. Creating media: (design and development, communicating and collaborating online, evaluating online content, respectful and responsible communication, presenting, creating content)

As part of the work on each key concept, children also explore and learn about:

- The effective use of tools
- The impact of technology
- Safety and security

The curriculum is implemented through the use of the NCCE's Teach Computing scheme of work. A subject progression document is integral to the teaching and learning of computing across the whole school, and ensures that children are given the opportunity to build upon prior knowledge. The Teach Computing scheme of work was used to write the subject progression document and create progressive Key Performance Indicators (KPIs). Long term plans, medium term plans and pacing sheets provide an appropriate balance and distribution of work throughout the year. By following the progression document alongside the Teach Computing scheme of work, it ensures a sequence of lessons where knowledge and skills are practised, acquired and progressively built upon. Key vocabulary within the classroom is displayed and this is consistently referred to during lessons.

Assessment and Recording

At Brookfield assessment is an integral part of the teaching process. Children will record their learning in topic books. The assessment of children's work is on-going to ensure that understanding is achieved and that progress is being made.
The computing lead regularly audits provision and staff training and plans training based on the needs of the staff.

Online Safety

Due to the increasing importance and ever-changing nature of online safety, a separate online safety policy has been created, detailing filtering and monitoring procedures along with other information about how we support staff, pupils and parents to stay safe online. Using the Teach Computing scheme of work, our school provides a progressive computing curriculum, which also teaches children about saying safe online and this is also supported throughout Project EVOLVE.

Equal Opportunities

All pupils regardless of race or gender shall have the opportunity to develop skills using computers and other related technology. The school will promote equal opportunities for computer usage and fairness of distribution of ICT resources. The class teacher differentiates work by task, resource or support, to ensure the individual needs of More Able and SEN pupils are met. The school is aware that not all pupils have the same access to computers at home and this is considered by staff in the planning and delivery of the curriculum.

Roles and Responsibilities

The Headteacher will:

- Actively support and encourage staff, praising good practice and supporting staff development, in-service training (particularly for the Computing Lead) and acquiring resources

The Computing Lead will:

- Advise and support staff in planning, teaching and learning of computing;
- Monitor teachers' planning as part of ongoing subject monitoring and evaluation of practice;
- Use feedback from monitoring to develop an action plan for computing with realistic and developmental targets;
- Keep up to date on new developments in the use of computing in the curriculum and inform staff

The Class Teacher will:

- Be responsible for the planning and teaching of computing as set out in this policy;
- Follow the subject's long-term plan and develop termly year group medium term plans and pacing sheets;
- Embed the computing knowledge and skills progression document within planning and quality first teaching;

Resources

The school has a range of resources to support the delivery of the Computing curriculum, the Early Years Framework and learning across all areas of the National curriculum. Each class (Year 1- Year 6), have some computers which the pupils can access and there are shared iPads across all year groups. Also, we have purchased Crumbles and Micro:Bits.

Impact

We encourage our children to enjoy and value the curriculum we deliver. We will constantly ask the WHY behind their learning and not just the HOW. We want learners to discuss, reflect and appreciate the impact computing has on their learning, development and well-being. Finding the right balance with technology is key to an effective education and a healthy life-style. We feel the way we implement computing helps children realise the need for the right balance and one they can continue to build on in their next stage of education and beyond. We encourage regular discussions between staff and pupils to best embed and understand this. The way pupils showcase, share, celebrate and publish their work will best show the impact of our curriculum.

School Website and Social Media

Our school website is located at https://www.brookfield-pri.com/. The school uses 'ClassDojo' which enables the school to keep in touch with the parents via text.

Copyright and Licensing

All software used will be in strict accordance with the licence agreement. RM support the school with technical issues as well as ensuring that software on the computers is up to date and in accordance to licences. Personal software should not be loaded onto school computers.