



*Opening up the world for our
children and families*



Computing Policy

Date: December 2020

Review: December 2022

Opening up the world for our children and families

Intent

At Burrowmoor Primary school we recognize the importance of Computing and its importance in an ever-changing technological world. We strongly believe Computing is a key skill that all children should master, as it is integral to prepare children to live in a world where technology is continuously evolving. We want all pupils to develop a love for Computing and strive to reach their full potential with the vast array of technology available to them. Computers, tablet devices, programmable robots, digital and video cameras are but a few of the tools that can be used to acquire, organise, store, manipulate, interpret, communicate and present information. We strive to develop technological curiosity by providing pupils with fun, inspiring computing links within our curriculum. Underpinning this is a commitment to ensuring that online safety is at the very heart of our vision.

The teaching of Computing at Burrowmoor Primary School intends to provide opportunities for the children to:

- Provide a relevant, challenging and enjoyable curriculum for Computing for all pupils.
- Meet the requirements of the national curriculum programmes of study for Computing.
- Use Computing as a tool to enhance learning throughout the curriculum.
- Respond to new developments in technology.
- Equip pupils with the confidence and capability to use Computing throughout their later life.
- Enhance learning in other areas of the curriculum using ICT and Computing.
- Develop the understanding of how to use ICT and Computing safely and responsibly.
- To broaden children's horizons by encouraging an investigative mind set online, in a safe and controlled environment.
- To open up the world beyond their immediate community by enabling them to interact with others outside of their community in a safe and controlled environment.
- To inspire children to want to further explore the wider world through the lens of online activity.

Implementation

At Burrowmoor Primary School we:

- Can understand and apply the fundamental principles of computer science, including logic, algorithms, data representation, and communication.
- 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.

Foundation Stage

It is important in the foundation stage to give children a broad, play-based experience of computing in a range of contexts, including outdoor play. Computing is not just about computers. Early years learning environments should feature computing 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 program a toy. Recording devices can support children to develop their communication skills. This is particular useful with children who have English as an additional language.

Key stage 1 Pupils should be taught to:

- Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions.
- Create and debug a simple program.
- Use logical reasoning to predict the behaviour of simple programs.
- Use technology purposefully to create, organise, store, manipulate and retrieve content.
- Use technology safely and respectfully, keeping personal information private; know where to go for help and support when they have concerns about content or contact on the internet or other online technologies.

By the end of key stage 2 pupils should be taught 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.
- Use logical reasoning to explain how a simple algorithm works and to detect and correct errors in algorithms and programs.
- Understand computer networks including the internet; how they can provide multiple services, such as the world-wide web; and the opportunities they offer for communication and collaboration.
- 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.

- 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.

As the school develops its resources and expertise to deliver the Computing curriculum, units will be planned in line with the national curriculum and will allow for clear progression. The Knowsley Computing scheme of work covers all aspects of the curriculum from Foundation up to Year 6. The units of work can be easily adapted by teachers and used to enhance the teaching and learning in other areas of the curriculum.

Teachers' planning is differentiated to meet the range of needs in any class including those children who may need extra support, those who are in line with age related expectations and those working above age related expectations.

A wide range of styles are employed to ensure all children are sufficiently challenged:

- Children may be required to work individually, in pairs or in small groups according to the nature or activity of the task.
- Different pace of working for individuals and groups of children.
- Different groupings of children - groupings may be either same ability or mixed ability.
- Different levels of input and support from School staff. □ Different outcomes expected.

Pupils will have the opportunity to develop their Computing capability in the core and foundation subjects. Opportunities provided by the class teacher will enable the children to work both individually and in small groups. For all Computing lessons the teacher will ensure that interactive strategies are used; teacher modelling is used; introductions are included and plenary sessions are used to consolidate learning.

As an inclusive school, Computing is made accessible to children with Special Educational Needs, by providing them with suitable software and tasks, and with extra support where required.

In computing lessons, pupils with specific learning needs also have access to, where appropriate:

- Visual prompts to engage their attention.
- Real objects to explore and manipulate.
- Symbols for key vocabulary.

- Opportunities for repetition, to consolidate and reassure. Opportunities to use special interests where appropriate. Support where required to develop new skills.

Impact

We use monitoring throughout the year to gauge the impact of the Computing curriculum design. Children will be assessed against the set objectives to gauge knowledge and understanding of the Computing curriculum. Children will leave Burrowmoor Primary School being confident and safe users of computing technology.