

BORROW WOOD PRIMARY SCHOOL



Computing Policy

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Rationale

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, 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.

National Curriculum 2014

At Borrow Wood Primary School we believe that computing is a fundamental aspect of the modern world. As such, we aim to equip children with the skills and abilities necessary to thrive outside of school and throughout life. We believe that computing should:

- Motivate and enthuse pupils
- Encourage the development of problem solving skills
- Provide opportunities to encourage computational thinking
- Prepare children for their futures by being confident and competent to use a range of devices, programs and apps
- Have the flexibility to meet the needs of all pupils

Aims

- 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.
- To respond to new developments in technology.
- To equip pupils with the confidence and capability to use computing skills and various devices throughout their later life.
- To enhance learning in other areas of the curriculum using computing.
- To develop the understanding of how to use computing safely and responsibly.

The National Curriculum for Computing aims to ensure that all pupils:

- 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.

Objectives

Early years

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; it 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 a device or programme a toy. Recording devices can support children to develop their communication skills. This is particularly useful with children who have English as an additional language.

Key Stage 1

By the end of key stage 1 pupils should be taught to:

- Understand what algorithms are, how they are implemented as programs on digital devices, and that programs are executed by following a sequence of instructions
- Write and test simple programs
- Use logical reasoning to predict and compute the behaviours of simple programs
- Organise, store, manipulate and retrieve data in a range of digital formats
- Communicate safely and respectfully online, keeping personal information private,
- Recognise common uses of information technology beyond school.

Key Stage 2

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.

Resources and Access

Within school there is a variety of mobile devices to support the teaching of computing. There are also electronic toys such as Beebots, Bluebots, remote control trucks & bugs and iPads to support learning in FS and KS1.

Devices

32 ipads are available in two portable caddies

5 Asus Transformers are located in KS2

6 laptops located in Lower School staffroom

All classrooms have a computer

All classrooms have an interactive whiteboard

All staff will have an ipad

8 iPad minis in FS

Software and Apps

We want to encourage staff and children to confidently use a limited range of apps and software:

- Smart Notebook
- Explain Everything
- Puppet Pals
- Scratch
- Tynker

Security and Maintenance

It is the responsibility of all staff to maintain and secure the equipment in school.

Security

Mobile devices are stored in a locked room in Upper School

Use of computing equipment will be in line with the school's Acceptable Use Policy.

The E-Safety policy will be followed in order to keep children and adults safe online

The data protection policy will be followed.

Maintenance

Equipment should be handled with care

Faults or problems should be recorded in the technician's book located in the staff room

A technician will be on site once a week to manage network problems and issues

All equipment must be returned after use and properly put away

Planning

We are aiming to move away from delivery of ICT as a discrete subject. We will use the National Curriculum to ensure that we are teaching the three strands of computing: computer science, digital literacy and information technology. Underpinning all computing learning will be e-safety.

Teaching and learning of computing will be through:

- individual work
- paired work
- small group work
- class/large group work

In order to develop the teaching of computing within school there will be a bank of resources and plans to support teachers with the teaching of computing.

Time allocation

Each class from year 2 to year 6 will have a 1 hour session allocated to them for use of a class set of iPads each week. iPads will also be available for signing out for use during unallocated sessions. This is intended to enable the development of cross-curricular learning and to enhance children's experience and confidence. In year 1 and foundation there are a selection of devices such as Beebots and class devices to begin children on their coding journey, these resources are available at all times. Year 1 have access to the iPads in the morning.

Provision for equal opportunities/special needs

Teachers should ensure equal access to all pupils when using ICT equipment. Differentiated resources are available for children with special needs. Teachers should familiarise themselves with material to ensure the quality of provision within their own teaching situation.

Assessment and recording

Assessment systems are currently being updated in line with the curriculum and assessment systems in school.

Monitoring and review

The Head teacher and Computing Co-ordinators will:

- Review planning to monitor range of ICT opportunities
- Review hardware and software needs in light of planning

This policy will be reviewed as part of the ongoing SIP.

Staff Development

Regular CPD will be undertaken in order to ensure that computing is being taught effectively to support learning.