



Computing Policy

Berkeley Primary School

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Vision for Computing

"A high-quality computing education equips pupils to understand and change the world through logical thinking and creativity, including by making 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, and how digital systems work. Computing equips pupils to use information technology to create programs, systems and a range of media. It 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 in England 2014

Aims

At Berkeley Primary School, we begin teaching a computing curriculum in our Foundation Stage to ensure that pupils are ready for the Key Stage One Curriculum. The previous Early Learning Goal for Technology was removed in the September 2021 curriculum update, it is still recognised as important to incorporate technology as part of a rounded curriculum in order for children to safely and sensibly use technology to enhance their own play and learning, develop computational thinking skills and be ready to access the national curriculum in year 1. These skills are predominantly taught through a cross-curricular approach to embrace the opportunities to incorporate computing within each area of the framework.

In Key Stage One and Two, we teach to the National Curriculum and strive to ensure that children reach the highest possible standards in computing. We therefore aim to ensure that all pupils progress towards being able to:

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

We do this by progressing children through the key stage one and two content of the National Curriculum programme of study, ensuring that children move towards achieving the specified attainment targets by the end of year two:

In Key Stage One, pupils are therefore 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 simple programs
- use logical reasoning to predict the behaviour of simple programs
- use technology purposefully to create, organise, store, manipulate and retrieve digital content
- use technology safely and respectfully, keeping personal information private; know where to go for help and support when they have concerns about material on the internet
- recognise common uses of information technology beyond school.



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In Key Stage Two, children are taught to:

- design, write and debug 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
- use logical reasoning to explain how some simple algorithms work 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
- use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content
- select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information
- use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.

Organisation

We recognise that there are three distinct strands to the computing curriculum:

- online safety/e safety (see separate e safety policy)
- programming/computer science
- information technology/using technology purposefully

We teach these three strands of the computing curriculum through a mixture of skill specific sessions, as well as through cross curricular thematic work, which gives children the opportunity to consolidate and extend the skills they have been taught in different situations and to support their learning in other curriculum areas.

The school has a range of technology resources throughout the school to enable the curriculum to be taught effectively: laptops and desktop computers; tablets; cameras; remote control toys; programmable toys including Clever Cats, Beebots, Bluebots and Probots; Physical Computing resources including Microbits and Crumbles. The teaching of computing and other subjects is supported by central servers and a wireless network across the school.

The school uses Google Workspace for Education which allows teachers to use Google Classroom and a wide range of Google apps to support teaching and learning. Pupils are provided with a Google account that is required to meet the expectations of our computing curriculum. Restrictions on pupils' accounts are put in place to protect children whilst enabling them to develop their understanding of Online Safety.

We recognise that all children are different and progress at different rates. Some children with specific needs may not be working at the same level as their peers. We carefully plan lessons in order to support children with these differing needs. We also recognise the role that technology has for supporting children who may have significant needs in other areas (for example, children with physical disabilities, children with underdeveloped muscle control, children with sight or hearing problems). We liaise with other agencies when appropriate, for example the Educational Psychologist, and ensure that technology is



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available for use by these children in order to enhance and support their learning across the curriculum.

Long and medium term plans have been developed to ensure that variety, progression and consolidation of skills runs throughout the school. Class teachers use long and medium term planning to inform their short term planning and to ensure that all needs are catered for.

The school has a separate Online Safety Policy, which is regularly reviewed with all staff and governors. Responsible internet use for both staff and pupils is outlined in the Online Safety Policy and the attached Acceptable Use Policy. A copy of the Acceptable Use Policy is shared and signed by parents when their child starts school and the content of this is referred to with children as they are using technology in their lessons. The Acceptable Use Policy is explained to pupils when they are in Year 3 as part of their online safety lessons. They agree to this through Google Classroom. The Acceptable Use Policy is also included in packs for volunteers and students on placement in our school. Staff and Governors sign the Acceptable Use Policy when they start at the school and also when the policy is reviewed and updated as per the Online Safety Policy.

We may use social networking, blogs, email and websites to allow children to develop their computing skills in communicating with others beyond the school environment, helping them to put some of the skills they have acquired in the classroom into practice. The use of Social Networking and Websites, and the risks involved, are covered in the Online Safety policy and Acceptable Use Agreement.

Where necessary, the school will create online accounts for pupils to enable them to access resources or tools required by our Computing Curriculum. For example, pupils need to use Canva for education to support their learning about desktop publishing and BandLab when learning about audio production.

Decisions about which websites are used are made in collaboration with the Computing Subject Leader and the Headteacher. Data security is always considered.

Assessment

In our school, assessment of children's computing capability is achieved through:

- evaluation of children's achievements against learning objectives and success criteria (teachers' formative assessment)
- summative assessment of individual achievements against the programme of study (entered onto Insight during the summer term)
- progress is reported to parents as part of the annual report
- work is saved on the school servers, Google Drive and Google Classroom and / or may be printed and filed within the books relating to the subject it has been used to enhance
- in the Foundation Stage, observations of children's emerging computing skills are captured and saved within the Tapestry online learning journal.
- Whilst there is no specific technology ELG in the Foundation Stage, children's use of and interaction with technology and the development of their computational thinking skills may support the end of year judgements that are made as to whether or not children have achieved the Early Learning Goals.

Monitoring and Review

The Computing leader monitors teaching and learning through:

- classroom observation and discussion with pupils
- scrutiny of children's work stored on the school server



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- monitoring and analysis of data
- discussion with the school technicians
- discussion with the head teacher
- evaluation of feedback from school staff regarding training, hardware or software needs
- development, implementation, evaluation and review of action plans.

Safeguarding, Welfare, Health and Safety Issues

The following issues have been considered in order to keep children and staff safe when using computing equipment in our school:

- annual electrical safety check
- maintenance of hardware
- the Data Protection Act/ UKGDPR
- internet and Email – Shielded and filtered systems (see the Online Safety policy)
- class blog / school website – not to use surnames and not to include photographs of children who have not given consent (see the Online Safety policy).