Christ Church School, Hampstead
Curriculum statement: Computing

The Governing Body of Christ Church Primary School, Hampstead adopted this statement for Computing in May 2015 and it should be read in conjunction with our Teaching and Learning Policy, the school's published curriculum overview and our E-safety policy.

The contribution of Computing to the primary curriculum

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, express themselves through 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 and Objectives of teaching computing at Christ Church

Computers are now part of everyday life. For most of us, technology is essential to our lives, at home and at work. 'Computational thinking' is a skill children must be taught if they are to be ready for the workplace and able to participate effectively in this digital world.
There are three distinct aspects: Computer science, Information technology and Digital Literacy with a strong focus on E-safety. Computer science and information technology will be taught in discrete computing lessons using a range of resources including floor robots, ipads, PCs and a range of different software. Opportunities for teaching the Digital Literacy aspects of the curriculum will be cross-curricular.

Through our teaching of Computing at Christ Church School we aim to ensure children:

- 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.

The Curriculum

EYFS

Elements of Computing are delivered in EYFS through the Early Years Foundation Stage Curriculum. In the Reception class the children will have the opportunity to explore and use technology to further their understanding of the world. Opportunities will be sought to use technology to support other areas of the foundation stage curriculum such as maths and topic work. Children are encouraged to develop their practical skills such as using the mouse and locating software.

KS1

In KS1 children will 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 simple programs
- use logical reasoning to predict the behaviour of simple programs
- use technology purposefully to create, organise, store, manipulate and retrieve digital content
- recognise common uses of information technology beyond school
- use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.

KS2

In KS2 children will be 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.

Review

This statement should be reviewed every three years to ensure that it is a reflection of current best practice.

Revised by the school's Computing Subject Leader in May 2015.