St Ippolyts C.E. Primary School

Computing Policy

Updated March 2017

Computing Policy.

Introduction.

The aim of this document is to provide an overview of how computing is used within teaching and learning at St Ippolyts C of E Primary School. It should also serve as a glossary of new terms which are referenced in the new computing curriculum, to ensure clear understanding of these.

The policy should be read in conjunction with the Hertfordshire Computing Scheme 2014, which sets out in detail the computing skills and expectations for each specific year group and how computing can facilitate and enhance work in other curriculum areas.

Aims and Values

The school aims to provide:

- A curriculum which will enable all children to develop their skills and confidence in the use of computing.
- An appreciation of computing in our society and an understanding of its significant impact on our everyday lives.
- A curriculum which meets the statutory requirements for computing as a core subject in the National Curriculum.
- Opportunities for pupils to develop their logical thinking, problem solving skills and research techniques, through computing.

To achieve this the school will ensure that:

- Every pupil regardless of gender, race, cultural background or ability, will receive equal access to develop their computing capability.
- A whole school approach to computing is followed, to ensure clear continuity and progression for all pupils.
- All pupils understand the relevance of computing in our society. They can see it as an essential tool for learning, for communication, for finding and presenting information, modelling, measuring and controlling external events.
- Pupils use computing as a tool to enhance learning throughout the curriculum.
- Pupils foster positive attitudes towards computing and show confidence and enjoyment in its application.
- All pupils understand e-safety implications and know how to how to use computing safely and responsibly.

Objectives.

The National Curriculum for computing (2014), requires that all 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.

Through the Hertfordshire scheme of work, children will be taught the following:

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 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.

Key stage 2

Pupils should 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.

Assessment, Recording and Reporting.

Children's work and progress are continually assessed in the following ways:

- by observation of teaching and learning in the classroom .
- coverage through completion of medium term planning, in accordance with the Hertfordshire scheme of work.
- Each child is assessed termly against age related statements of attainment. This progress is tracked throughout the year
- All children are also assessed for E-Safety skills, the statements of which are recommended by HFL.
- Regular scrutiny of children's work. This may be in the form of physical evidence, saved work or videos.

These assessments are recorded and reported in the following ways:

- achievement levels matched against year group statements, set by the Hertfordshire scheme of work.
- annual written reports to parents and parental consultations

Planning.

As a whole school we will plan through:

- The school development plan.
- The Hertfordshire computing scheme of work (2014).
- Yearly and termly planning for each class with consideration for previous achievement levels, having referred to appropriate records
- Cross curricular planning and opportunities for computing skills.

Management and Co-ordination.

We will manage and evaluate computing by:

- Using the computing co-ordinator to ensure an overview throughout the school with regard to resourcing and practice and with reference to the school development plan and the National Curriculum.
- Staff review of the computing policy, to reflect changes in technology and most recent guidance.
- Use of inset/ and or subject leader time, to manage and review computing throughout the school.

Devices

- Through the use of our school laptop trolley and school IPad trolley, children are given opportunities to work individually, in groups and as a whole class.
- The school laptop/ IPad timetable allows all teachers equal access to the devices and to plan computing lessons when it will have the most impact/ support for the children's learning.
- Other computing technology such as data logging devices (microphones, thermometers), cameras, torches and timers are also widely available throughout the school for shared access.
- In Reception, children also have access to desk-top computers in the classroom to encourage early computing skills within the EYFS curriculum.

Software and Apps.

- Software and apps are organised clearly on devices, to develop children's independence. CD-ROM's are stored in school under their curriculum headings.
- All teachers ensure software is used across all areas of the curriculum and make references to specific software packages and apps, within planning.
- All apps and downloads require an adult log-in, in accordance with the school safeguarding/ e-safety practises

Internet and e-mail

All children have access to the Internet through school devices, through Hertfordshire's intranet, 'thegrid'. This is used to support the teaching and learning across the curriculum in school. Opportunities to explore information through the internet are regularly used within lessons, to enhance learning across the curriculum.

Home-School Links through Computing.

- The school website clearly enables parents and the wider community will have the opportunity to share life at establish links with St Ippolyts C of E Primary School.
- The website is updated regularly through the use of posts, blogs, online letters, curriculum information and photo galleries.
- Parental permission for the use of children's learning and pictures on the website is obtained.

Glossary of Terms used in this policy/ National Curriculum

Abstraction

Only focussing on the details relevant to the task, in computing this may be by using a database to handle data. In doing this the data can be looked at in specific groups. An example is using iTrack, to show the progress of pupils on Pupil Premium.

Logic

The non-arithmetic operations performed by a computer, such as sorting, comparing, and matching, that involve yes-no decisions. This might be completed using programs such as Excel or 2count (Purple Mash)

Algorithms

The step-by-step procedure for a machine to complete a task, for example the instructions given to a bee-bot to guide it round a maze or those on programming software such as Scratch.

Data Representation

The way in which information is presented. In its simplest form this could be representing a data set as a graph. However it is also using the appropriate software for the task. Not everything has to be done in Word or PowerPoint.