Kingshill Church School
Computing Policy

Introduction

At Kingshill Church School we believe that Computing and the use of ICT is central to the education of all children. We aim to give each pupil the opportunity to apply and develop their technological understanding and skills across a wide range of situations and tasks. Pupils are encouraged to develop a confident and safe approach to Computing and the use of ICT, with the understanding of the capabilities and flexibility of their resources. With the knowledge that Computing and ICT will undoubtedly continue to form a major part in the children's life at home, in further education and places of work, we ensure the Computing and ICT experiences and abilities that the children are equipped with at Kingshill, are effective and transferrable life skills.

Objectives

The new National Curriculum 2014 states that a high quality computing curriculum equips children to use computational thinking and creativity to understand and change the world. The core of computing is computer science and at Kingshill Church School, children will be taught the principles of information and computation, how digital systems work and how to put this knowledge to use through programming. Children will be equipped to use ICT to create programs, systems and a range of content. Computing at Kingshill, ensures that children become digitally literate, able to use and express themselves and develop their ideas through ICT, at a level suitable for their academic stage, that will develop them for the future workplace and as active participants in a digital world.

Aims

At Kingshill Church School we aim to develop children's knowledge, understand and skills so they can:

- Understand and apply the fundamental principles and concepts of computer science,
- Analyse problems in computational terms and have repeated practical experience of writing computer programs in order to solve such problems,
- Evaluate and apply IT, including new or unfamiliar technologies, analytically to solve problems,
- Be responsible, competent, confident and creative users of ICT,
- Use ICT safely.

The Curriculum

At Kingshill Church School, knowledge, understanding and skills in computing and ICT are built upon and developed in each year group, from Foundation Stage to Year 6.

The Foundation Stage
In the Foundation Year, children will:

- Know how to operate simple equipment, e.g. turn on a CD player and use a remote control.
- Show an interest in technological toys with knobs or pulleys, or real objects such as cameras or mobile phones.
- Show skill in making toys work by pressing parts or lifting flaps to achieve effects such as sound, movements or new images.
- Know that information can be retrieved from computers
- Complete a simple program on a computer.
- Use ICT hardware to interact with age-appropriate computer software.
- Recognise that a range of technology is used in places such as homes and schools.
- Select and use technology for particular purposes
- Use technology safely

Key Stage 1
Throughout years 1 and 2, children will:
- 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 ICT beyond school,
- Use technology safely and respectfully, keeping personal information private, identify where to go to for help and support when they have concerns about content or contact on the internet or other online technologies.

Key Stage 2
Throughout years 3, 4, 5 and 6, children will:
- Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems and solving 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 worldwide 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.

Planning
Early Years Foundation Stage

Teaching plans are drawn up by the class teacher in accordance with the Early
Years Foundation stage Curriculum – Understanding the World - Technology. EYFS
Medium Term Planning Sheets are used by the class teacher to identify the objectives for each half term. The short term planning outlines each week's activities, identifying the knowledge, concepts, skills, attitudes and values that will be developed, and details differentiation, deployment of staff/volunteer support and resources. The class teacher keeps these individual plans, and the subject leader monitors and reviews them regularly.

Key Stage 1 & 2
Computing is planned by each class teacher in accordance with the National Curriculum. Medium term plans are drawn up by class teachers at the beginning of each half term. They ensure an appropriate balance and distribution of work across each half term with ample opportunity to revisit and extend children's learning.
During each half term, specific learning objectives, tasks and activities may be recorded on short term weekly planning sheets. Sheets for weekly planning may specify organisational details, including teaching modes, differentiation, deployment of staff/volunteer support and resources. The class teacher keeps these individual plans, and the subject leader monitors and reviews them regularly.
E-safety is specifically planned for each term.

Progression and Continuity
At Kingshill Primary School we plan activities in Computing so that they build on the children's prior learning. While we give children of all abilities the opportunity to develop their skills, knowledge and understanding, we also plan progression into the scheme of work, so that there is an increasing challenge for the children as they move up through school. Individual learners are able to make progress in the acquisition of concepts, knowledge and skills at the rate most appropriate to their ability and stage of development.

As Computing has replaced ICT in the 2014 National Curriculum, some of the attainment targets in Upper Key Stage 2 may not be attainable immediately as the knowledge, understanding and skills needed have not previously been attained.
Therefore, the curriculum will be taught from the ability stage the children are at, rather than the expected age. After a few years, when children from Lower Key Stage 2 progress with the necessary knowledge, understanding and skills, the year 5 and 6 attainment targets will be met.

Curriculum Links including E-Safety

(Please see other subject policies and the e-safety policy)

Effective teaching of Computing and ICT involves making connections across other curriculum areas and through continuous provision in the EYFS and Key Stage 1. Computing has deep links with mathematics, science and design technology and provides insights into both natural and artificial systems. E-safety is also an important part of PSHE. Throughout all subjects, children at Kingshill Church School will have opportunities to gain skill, knowledge and understanding in the following areas:
- Finding things out, gathering information from a variety of sources, entering, storing, and retrieving information.
- Developing ideas and making things happen through text, tables, images and sound,
- selecting and adding to information by planning and giving instructions to make things happen,
- Exchanging and sharing information sharing ideas and presenting information in different forms, to best effect,
- Reviewing, modifying and evaluating work.

Equal Opportunities
(See also Equal Opportunities Policy)
Ensuring equality of opportunity does not mean that all learners are treated the same. At Kingshill Church School children are considered as individuals with particular needs and potentialities. Each child is given encouragement and the opportunity to develop their full potential in Computing and ICT, with appropriate support provided as necessary, whatever their gender, race, religious belief, cultural background or disability.

Special Educational Needs
(See also Policy for Special Educational Needs)
It is important that learners should work at an appropriate level of difficulty across the curriculum. It is the responsibility of the class teacher to monitor and assess the ability and level of understanding of individual children regarding Computing and ICT, and to cater for their needs. Advice and support can be sought from the ICT Curriculum Leader, SENCo or Head teacher.
Conversely, learners of gifted ability in Computing and ICT need to be appropriately challenged in order to extend their knowledge and understanding and maintain motivation. Differentiated work and enrichment opportunities will be planned for those children by the class teacher.

Resources
At Kingshill Church School, children and staff have access to a range of I.C.T equipment, including computers which may be controlled by QWERTY keyboard and mouse control. The computers are linked to the school network and server and have facilities to connect to the Internet through Broadband connection. We currently have PC's in the library and in the IT Suite.

At Kingshill we are constantly evaluating our use of different resources and equipment as technology changes at a fast pace. With upgraded broadband we will be able to purchase and use new technologies throughout the school. We are in the process of providing i-pads for use across the school.

Key pieces of software are used throughout the school and use of these is developed as the children progress. Other software is used to support I.C.T work in a range of curriculum areas. Teaching resources are kept within each class and the internet is used regularly as a rich and varied provider of a variety of resources.

Interactive Whiteboards are installed in all classrooms.

Equipment other than computers is also available and is used throughout the National Curriculum. These include CD players, DVD players, Valiant Roamers, video camera, scanners, Digital cameras, Bee Bots and remote control toys.

All teaching staff have laptop computers which have facilities for network connection.

Through the use, experience and discussion of a varied range of equipment, children gain knowledge about the use of I.C.T. and its implications in day to day life.

Recognising Pupils' Achievements

Pupils' achievements in Computing and ICT are recognised and celebrated through:
- Display of learners' work in classrooms and public areas
- Showing work to the class, other classes, and to the whole school in assemblies and to the Head teacher
- The award of individual class awards e.g. rockets and crowns
- Head teacher Awards and certificates

Assessment, Recording and Reporting

Learners are formatively assessed continuously in Computing and ICT by teachers in the course of their teaching, through observation, questioning and analysis of work. It is the responsibility of the class teacher to assess the progress of individual learners. This involves identifying each child's progress, determining what each child has learned and what, therefore, should be the next stage in his/her learning, so informing future planning.

Feedback to pupils

Feedback to pupils is through discussion about their work and the marking of work. It is important that learners are involved in the assessment of their work as this helps them to understand their own strengths, needs and future targets for development.

We encourage children to make judgements about how they can improve their and their peers work.

Home School Partnership

Parents and carers have a vital role to play in their child's education, and homework is an important part of this process. Often children may be asked to carry out research, which may involve the use of the internet.

We ask parents and carers to encourage their child to complete the homework tasks that are set. We invite them to help their children as and when they feel it necessary and to provide them with the sort of environment that allows children to do their best.

The role of the ICT Subject Leader

The ICT Subject Leader is responsible for:
- co-ordinating all aspects of Computing and ICT provision for learners throughout the school
- developing the Computing Policy, in consultation with teachers, the Head teacher and the Governing Body
- modelling good practice in the teaching of Computing and the use of ICT
- advising and supporting teachers and support staff in relation to Computing and ICT, including contributing to in-service training
- monitoring Computing, in conjunction with the Head teacher, through discussion with staff, lesson observations and by checking the Medium Term Planning of individual teachers to ensure coverage and progression, and through analysis of learners' work
- purchasing and the organisation of Computing and ICT resources

- keeping up-to-date with developments in Computing teaching and learning, and disseminating information to colleagues as appropriate
- completing an annual review of Computing for the School Development Plan
- maintaining an organised Computing Curriculum Leader file

Wider Community Links

Kingshill Church School supports the use of technology throughout the wider community and with the use of the school website, we share up to date information, developments, newsletters and policies with parents and carers.

Conclusion

At Kingshill Church School we believe in the importance of equipping our children for life. Computing and ICT surrounds us all, and is an integral and therefore necessary part of all our lives. We aim to ensure that all children not only gain knowledge and skills in Computing and ICT, but an understanding of how it relates to their everyday life and will contribute to their future.