Everyone Smiles Here.

Esh Church of England Primary School.

ESH
Church of England
(Aided)
Primary School.

Computing Policy

Updated – September 2019

These Guidelines are adopted subject to the over-riding requirements of relevant legislation, of the school Trust Deed and to the legal responsibilities and powers of the Governing Body as employer, admissions authority and owner of the school

Why is this area of learning important?

The use of Computing is an integral part of the National Curriculum and is a key skill for everyday life. A high-quality computing education equips pupils to use computational thinking and creativity to understand and change the world. 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.

Intent

Our aim is to provide a relevant, challenging and enjoyable Computing Curriculum for all pupils that responds to new developments in technology and enhances other areas of the curriculum.

We aim to ensure that all pupils:

- 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 throughout their later life.

Teaching and learning

As the aims of Computing are to equip children with the skills necessary to use technology to become independent learners, the teaching style that we adopt is as active and practical as possible. While at times we do give children direct instruction on how to use hardware or software, the main emphasis of our teaching in Computing is for individuals or groups of children to use computers to help them in whatever they are trying to study. So, for example, children might research a history topic by using a CD-ROM, or they might investigate a particular issue on the Internet. Children who are learning science might use the computer to model a problem or to analyse data. We encourage the children to explore ways in which the use of computing can improve their results, for example, how a piece of writing can be edited or how the presentation of a piece of work can be improved by moving text about etc.

We recognise that all classes have children with widely differing abilities in information technology. This is especially true when some children have access to IT equipment at home, while others do not. We provide suitable learning opportunities for all children by matching the challenge of the task to the ability and experience of the child.

We achieve this in a variety of ways, by:

-setting common tasks which are open-ended and can have a variety of responses;

-setting tasks of increasing difficulty (not all children complete all tasks);

- grouping children by ability in the room and setting different tasks for each ability group;

- providing resources of different complexity that are matched to the ability of the child;

- using classroom assistants to support the work of individual children or groups of children

Curriculum planning

The school uses the National curriculum scheme of work for Computing as the basis for its curriculum planning as well as suggested activities from the LA. We carry out the curriculum planning in Computing in two phases (long-term and medium term).

Our long-term Computing plan shows how teaching units are distributed across the year groups and how these fit together to ensure progression within the curriculum plan. These units are planned through our two year rolling program of work to ensure that every child has access to the same computing experiences. The computing subject leader is responsible for reviewing these plans.

Our medium-term plans give details of each unit of work for each term. They identify the key learning objectives which will be covered in that particular unit of work. The class teachers are responsible for writing the medium-term plans with the Computing component of each lesson. These daily plans list the specific learning objectives of each lesson. The class teacher keeps these individual plans and the computing subject leader may discuss them on an informal basis.

The topics studied in Computing are planned to build upon prior learning. While we offer opportunities for children of all abilities to develop their skills and knowledge in each unit, we also build planned progression into the scheme of work, so that the children are increasingly challenged as they move up through the school.

Implementation

Pupils will have the opportunity to develop their Computing capability in the core and foundation subjects. Opportunities provided by the class teacher will enable the children to work both individually and in small groups. For all Computing lessons the teacher will ensure

that interactive strategies are used; teacher modelling is used; introductions are included and plenary sessions are incorporated to meet the learning objectives.

In this school, pupils will have experience with networked PCs, printers, Bee-Bots, Crumble Control hardware, calculators, digital media, Interactive Whiteboards, laptops and iPads. They will also have experience with the Internet and a variety of software that allows teachers to provide for progression of skills, concepts and applications.

As an inclusive school, Computing is made accessible to children with Special Educational Needs, by providing them with suitable software and tasks, and with extra support in the use of software packages and peripherals available.

In Computing lessons, pupils with specific learning needs also have access to, where appropriate: • Visual prompts to engage and increase attention.

• Real objects to explore and manipulate.

• Symbols for key vocabulary.

• Opportunities for repetition, to consolidate and reassure.

• Opportunities to use special interests where appropriate.

• Support where necessary to develop new skills

Early Years and Foundation Stage

Computing is taught in the EYFS as an integral part of one of the seven areas of learning (Understanding the World: Technology). Children have free access to various forms of technology throughout the school day in a range of contexts.

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.

Entitlement

All of our children are entitled to a continuous and progressive computing curriculum, which meets their individual needs.

The computing curriculum has been planned using national curriculum guidance and in conjunction with LA advice. Teachers will be encouraged to make cross-curricular links especially in the teaching of IT. However, many aspects of computer science will need to be taught discretely.

Inclusion and SEN

At Esh C.E. Primary School, we teach computing to all children, whatever their ability and individual needs. This is in line with the school's curriculum policy of providing a broad and

balanced education to all children. Through our computing teaching, we provide learning opportunities that enable all pupils to make good progress.

We strive to meet the needs of those pupils with special educational needs, those with disabilities, those with special gifts and talents, and those learning English as an additional language, and we take all reasonable steps to achieve this. For further details, see the relevant SEN and Pupil Premium Policies.

Opportunities for wider development are provided wherever possible, for example, extra-curricular clubs and links with local high schools.

Assessment, Recording and Reporting

Our Assessment procedures provide an all-round picture of individual children's attainment and achievement and a review of how the curriculum is implemented. The outcomes of our assessment procedures are effectively recorded and determines future planning. Children are assessed on the 'I can…' statements which are organised into the different areas of the computing curriculum. At the end of each unit of work, the class teacher will assess the children on the particular part of computing they have been focusing on for example, programming, communication, handling data and e-safety. They will make a note of who in the class is working at, above or below age related expectations. These assessments will be passed on to the Computing Co-ordinator and the next class teacher at the end of the year.

Evidence of Computing in school is saved in a folder in the children's documents. In EYFS and Year 1, a range of evidence is also seen in individual topic books. Year groups 2-6 also have class evidence folders containing a range of pupils' work and evaluations from lessons.

Information about each pupil's achievements and experiences in Computing are reported to parents on the end of year report.

Maintenance

Maintenance is carried out by the school's technician who visits the school once a fortnight to give technical support and maintain the network to its optimum capability. In addition, he completes network tasks as designated by the Computing Co-ordinator. Any issues arising from use of Computing equipment/software need to be recorded on the school gateway. The Computing Co-ordinators will decide on whether issues can be dealt with using co-ordinator knowledge or by the technician.

Health and Safety

When working with tools, equipment and materials, in practical activities and in different environments, including those that are unfamiliar, pupils should be taught:

- to never look into the projector lens

- the appropriate and safe use of all equipment, especially scanners and photocopiers due to the bright lights.
- the importance of good posture when using a computer

All teachers are responsible for making sure the hardware and software are used correctly and safely on a day-to-day basis. Any problem should be reported to the computing technician and the computing coordinator. All equipment is regularly PAT tested and any problems are swiftly dealt with.

Subject Leader's role

The subject leader has overall responsibility for the management of computing and for purchasing hardware and software. Staff meetings will be planned for and delivered to all staff to update them on changes to the curriculum or planning. They will also be used to model how to use new equipment. The subject leader will monitor teachers long term plans to ensure that all of the computing skills are being covered. Portfolios of evidence will also be scrutinised to see evidence of computing that is practical and differentiated. Each class has an online folder where they will save work that has been completed on the computer. This will also be monitored to look for evidence of computing.

The Computing Co-ordinator is not responsible for the schools compliance with the Data Protection Act and the role of Head Teacher is that of Senior Information Risk Officer (SIRO), dealing with management of information and the schools data protection policy.

Staff Development

To implement our school's vision effectively, all staff need to be confident in all areas of the computing curriculum. Staff who have identified areas of development in computing will be identified and through communication between the Computing co-ordinator and the Headteacher, relevant course will be located or training brought into/held at school.

Training will also be offered on new hardware and software purchased. In addition, the Computing co-ordinator and/or other staff will be able to support staff members in using various programmes.

The Computing Co-ordinator keeps up to date with the latest technological advancements and curriculum developments by attending conferences, network and school cluster meetings. Information is then fed back to the rest of the school during staff meetings.

The school also has policies on :-

- *e-safety*
- *Data Protection*

- *Anti – Bullying*
- *Acceptable use Policies*

Computing Leader: Miss G. Dismore

Policy review date: September 2021

Mr A Park

(Headteacher)