Shelley First School

Computing Policy

Policy shared with LGB January 2019: review January 2022

SFS Computing Policy

Definition

Computing education is essential for pupils to understand modern information and communication technologies (ICT), and for them to use these skills to become responsible, competent, confident and creative participants of an increasingly digital world.

Mission Statement

The use of information and communication technology is an integral part of the national curriculum and is a key skill for everyday life. Computers, tablets, programmable robots, digital and video cameras are a few of the tools that can be used to acquire, organise, store, manipulate, interpret, communicate and present information. At Shelley First School, we recognise that pupils are entitled to quality hardware and software and a structured and progressive approach to the learning of the skills needed to enable them to use it effectively. The purpose of this policy is to state how the school intends to make this provision.

Aims

We aim to enable all our children to reach their true potential within and through the arts by:-

- Provide a relevant, challenging and enjoyable curriculum for Computing for all pupils.
- Meet the requirements of the national curriculum programmes of study for computing.
- U se computing as a tool to enhance learning throughout the curriculum.
- To respond to new developments in technology.
- To equip pupils with the confidence and capability to use computing throughout their later life.
- To enhance learning in other areas of the curriculum using computing.
- To develop the understanding of how to use computing safely and responsibly.

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Computing in the National Curriculum

Purpose of Study

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, 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.

Aims

The national curriculum for computing aims 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.

Subject Content

Early years (see also early year's policy)

- It is important in the foundation stage to give children a broad, play-based experience of ICT in a range of contexts, including outdoor play.
- ICT is not just about computers. Early years learning environments should feature ICT scenarios based on experience in the real world, such as in role play. Children gain confidence, control and language skills through opportunities to 'paint' on the whiteboard or drive a remote-controlled toy.
- Outdoor exploration is an important aspect, supported by ICT toys such as bee-bots and walkie-talkie sets.
- Recording devices can support children to develop their communication skills. This is particular useful with children who have English as an additional language.

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.

Planning

Teachers support teaching of ICT with additional skills during lessons. See appendix for non-negotiables skills to be taught for each year group.

Teaching and learning requirements which go beyond the provision for that age range and if not addressed, could create barriers to learning. This could include G&T children, those with SEN or those who have EAL. Teachers must take account of these requirements and plan, where necessary, to support individuals or groups of pupils to enable them to participate effectively in the curriculum and assessment activities. During any teaching activities teachers should bear in mind that special arrangements could be made available to support individual pupils. This is in line with the school inclusion policy.

We ensure the following areas are covered equally (as appropriate based on year group):

- Multimedia and Word processing
- Digital media
- Programming ~ animation and coding
- Communication and Collaboration
- Data
- E-Safety

ICT and computing forms part of the National Curriculum to provide a broad and balanced education for all children. Through the teaching of ICT and computing we provide learning opportunities that enable all pupils to make progress. We do this by setting suitable learning challenges and responding to each child's different needs.

Where appropriate ICT and computing can be used to support SEN children on a one to one basis where children receive additional support.

Cross curricular links

As a staff we are all aware that ICT and computing capability should be achieved through core and foundation subjects. Where appropriate, ICT and computing should be incorporated into schemes of work for all subjects. ICT and computing should be used to support learning in other subjects as well as develop ICT and computing skills.

Resources and access

The school acknowledges the need to continually maintain, update and develop its resources and to make progress towards a consistent, compatible pc system by investing in resources that will effectively deliver the strands of the national curriculum and support the use of ICT and computing across the school. Teachers are required to inform the ICT and computing coordinator of any faults as soon as they are noticed. ICT and computing network infrastructure and equipment has been sited so that:

- Every classroom has a PC connected to the school network and an interactive whiteboard with sound and DVD facilities. Each KS1 classroom has 2 additional pupil computers.
- There is a bank of eighteen computers in the ICT suite plus 15 laptops/netbooks in a charging trolley.
- 15 iPads available from a charging trolley.
- There are a further 2 computers in the KS1 shared area for use as part of the continuous provision.
- Each class has an allocated 2-session slot per week for teaching of specific ICT and computing skills.
- The computing equipment is available throughout the school day as part of ICT and computing lessons and for cross curricular use. These are generally timetabled for each class.
- Pupils may use ICT and computing independently, in pairs, alongside an ETA or in a group with a teacher.
- The school has an ICT and computing technician who is in school one afternoon every week.

Equal opportunities

Shelley First School will ensure that all children are provided with the same learning opportunities regardless of social class, gender, culture, race, and disability or learning difficulties. As a result we hope to enable all children to develop positive attitudes towards others. All pupils have equal access to ICT and computing. Resources for SEN children and gifted & talented will be made available to support and challenge appropriately.