

St Saviour's C of E Academy

Computing Policy

September 2021

Introduction

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. 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.

Aims

The aim of Computing at St. Saviours is to

- Equip children with the skills and understanding to live in an ever-increasing technological world.
- Provide a relevant, challenging and enjoyable curriculum for ICT and computing for all pupils.
- Meet the requirements of the national curriculum programmes of study for computing.
- Enable children to find, explore, analyse, exchange and present information in a variety of ways across and engaging and inspiring curriculum.
- Allow children the opportunity to apply their computing skills in different contexts and areas of the curriculum.
- Respond to new developments in technology.
- Equip pupils with the confidence and capability to use computing throughout their later life.
- Develop the understanding of how to use computing safely and responsibly.

The national curriculum for computing aims to ensure that all pupils:

- Can understand and apply the fundamental principles of computer science, including logic, algorithms, data representation, and communication

- 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.

Early Years

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. Computing is not just about computers. The children have the opportunity to use the computers, digital cameras, programmable toys and iPads. During the year they gain confidence and start using computers to find information, publish work and use it to communicate in a variety of ways. Teachers use iPads, specifically the 'Tapestry' app and software to record information which is then used to provide evidence of children's learning.

By the end of 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 a sequence of instructions
- Write and test simple programs
 - Use logical reasoning to predict and computing the behaviour of simple programs
- Organise, store, manipulate and retrieve data in a range of digital formats
- Communicate safely and respectfully online, keeping personal information private, and recognise common uses of information technology beyond school.

By the end of key stage 2 pupils should be taught to:

- Design and write 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; generate appropriate inputs and predicted outputs to test programs
- Use logical reasoning to explain how a simple algorithm works 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
- Describe how internet search engines find and store data; use search engines effectively; be discerning in evaluating digital content; respect individuals and intellectual property; use technology responsibly, securely and safely
- Select, use and combine a variety of software (including internet services) on a range of digital devices to accomplish given goals, including collecting, analysing, evaluating and presenting data and information.

Computing and Inclusion

All children should have access to the use of ICT regardless of gender, race, cultural background or physical or sensory disability. Where use of a school computer proves difficult for a child because of a disability, the school will endeavour to provide specialist equipment and software to enable access) Children with learning difficulties can also be given greater access to the whole curriculum through extended use of ICT. Their motivation can be heightened and they are able to improve the accuracy and presentation of their work, in turn raising attainment and self-esteem.

Resources

Our school has the appropriate computer-to-pupil ratio and internet access where needed and suitable software is installed on computers. The school employs a technician to keep systems in working order and problems with equipment are logged by staff. In order to maintain a virus-free network, no software from home should be installed on school computers and work brought in on portable storage devices should be scanned. Teachers should maintain up to date virus protection on home computers where data is transferred between them and the school network. The school has 60 iPads that are used throughout the Key Stages and curriculum.

Health and Safety

- Children should not be responsible for moving heavy equipment around the school. They may turn machines on but should not be given the responsibility of plugging in and switching machines on from the main socket.
- Food and drink should not be consumed near ICT equipment.
- It is the responsibility of staff to ensure that classroom ICT equipment is stored securely, cleaned regularly and that their class or themselves leave the ICT Suite clean and tidy after use.
- Staff should ensure that the children are seated at the computers comfortably and be aware of the dangers of continuous use (e.g. eye/wrist strain etc).

- An adult should always supervise children when they are accessing information via the Internet. The service provider does filter information but staff are ultimately responsible for information accessed by pupils.
- Staff and children should be aware of the dangers associated with looking into the projector light.

Assessment and record keeping

On-going formative assessment is an integral part of good practice. Its main purpose is to enable the teacher to match work to the abilities and needs of the children and ensure progression in learning.

Computing capability should be monitored regularly in relation to the age-related expectations outlined in the national curriculum. Teachers should assess each module requirements with reference to children's knowledge, understanding and skills. Other opportunities for assessment will arise from cross-curricular work. Children are given verbal feedback where appropriate to help guide their progress and are encouraged to make their own judgements about how they can improve their work.

Each teacher will be responsible for recording children's work in a computing evidence book which illustrates the objectives taught each lesson. Alongside this, teachers will be responsible for assessing all children at the end of each topic using a RAG assessment sheet.

Monitoring and review

The monitoring of the standards of the children's work and of the quality of teaching in computing is the responsibility of the computing subject leaders. The computing subject leaders are also responsible for supporting colleagues in the teaching of computing, for keeping informed about current developments in the subject and for providing a strategic lead and direction for the subject in the school. The computing subject leaders give the principle an annual summary report in which they evaluate the strengths and weaknesses in the subject and indicate areas for further improvement.

Staff training needs will be met by:

- Auditing staff skills and confidence in the use of ICT regularly
- Arranging training for individuals as required
- The computing coordinators should attend courses and support and train staff as far as possible
- Monitoring computing evidence books termly
- Monitoring RAG assessment sheets termly