



St John's C of E Primary Academy

Computing Policy

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ST John's Primary Academy

COMPUTING POLICY

RATIONALE

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.

Computers are the most obvious tool used but computing also includes programmable robots, tape recorders, calculators, telephones, cameras, videos and other forms of media.

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.
- To raise pupil standards of achievement in all subjects and particularly Literacy and Numeracy.
- To provide a comprehensive high quality computing curriculum, which is coherent and progressive

ATTAINMENT TARGETS

By the end of each key stage, pupils are expected to know, apply and understand the matters, skills and processes specified in the relevant programme of study.

SUBJECT CONTENT

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.

PROCEDURES

EQUAL OPPORTUNITIES

We aim to create equality of opportunity for all our children, whatever their gender, abilities or background and give them chance to demonstrate what they know, understand and can do.

SPECIAL EDUCATIONAL NEEDS

The School's Policy document for Special Educational Needs explains in full the procedures which are in place for providing for pupils with Special Educational Needs. This is in line with the Code of Practice for all L.A. Schools. Within the area, tasks are differentiated to ensure access to the National Curriculum and to offer activities which are relevant to the conceptual development of the child.

These pupils benefit from the use of programs in which skills practice is set in the context of a motivating game. Two computers are cited in the library where associated software is available.

Pupils with above average ability are to use programs which offer challenge and opportunity for investigation in order to extend their learning.

CURRICULUM MANAGEMENT

The framework for the teaching of computing in our school is outlined in the National Curriculum.

The Programmes of Study are divided into four areas outlined with yearly guidelines as:

1. Data Handling & Research
2. Programming and Modelling
3. Multi-media & Visual Media
4. Non-Curricular (eg typing skills)

Children will be taught from each of these strands within each Key Stage.

The recommended starting point for the allocation of time to the teaching of computing is approximately 50 minutes per week. (Designing & Timetabling the primary curriculum) However, due to the priority that the school places, together with the significant cross-curricular links between subjects, computing is timetabled for approximately 1.5 hours per week for each class.

PLANNING

Time allocation is planned according to the School Policy on Curriculum Planning. Planning for computing is a process in which all teachers are involved.

- **Long Term Planning.**

The Yearly Programme provides an outline of the strand and software and packages that link directly to the unit of work being studied each term for each year group. It is essential that each member of staff is aware of the strands and units of work being covered in their year group.

- **Medium Term Planning.**

The computing work for a particular strand should be recorded on the medium term plans as a unit of work lasting between 6-8 weeks and refer to the long term plan for computing.

The medium term plan, for each strand for each year group list the learning objective, main activities, resources/software, vocabulary/key terms and the success criteria and assessment where appropriate.

- **Short Term Planning (where necessary)**

The short term planning includes the lesson structure which outlines the strand, unit of work, the learning objective, main activities, resources/software, vocabulary/key terms and the success criteria.

CLASSROOM MANAGEMENT

- Hands on experience is the foundation for progress in computing.
- Maximum use should be made of computers supported by work and discussion away from the computer.
- Organisation of the teaching of computing is dependent upon the ability of the children and the availability of computers.
Normally children will work individually, in pairs or in small groups on the computer.
- The introduction of new knowledge or skills should involve whole class teaching and demonstrations.
- The 'cascade' approach should be used to enable children to have access to the KS2 facilities on a regular basis without interrupting the teacher.
- More able children should be encouraged to act as 'trainers' and be responsible for ensuring the cascade approach operates smoothly.
- The use of time limits to monitor pace of children's learning is important.

STRATEGIES FOR RECORDING AND REPORTING

The children's work is viewed as an on-going record of their progress and attainment in this subject.

Their confidence and purposeful use of equipment to communicate and handle information in support of their learning should reflect their level of attainment as indicated by the National Curriculum.

- **Recording**
The Class Record Sheets which indicate the data/skill/programme for each child are a record of the specific skill-based tasks which children complete during any assessment. The assessments are planned as recorded on the medium term plan where necessary showing what the assessment task is and how it is to be assessed. The pupils are assessed according to a general ICT level 1-4 and the specific learning objectives associated with the strand completed. The assessment identifies whether the pupil is performing at a high, medium or low standard within that strand.
- **Reporting**
Reporting in computing will focus on each child's effort and progress over the year as indicated on the computing assessment class record sheets.

A COMPREHENSIVE INVENTORY OF COMPUTING HARDWARE

The inventory of hardware equipment is located on the T drive and updated as required periodically.

CARE OF EQUIPMENT

1. It is important that a computer is placed in a position that is most accessible without being close to sources of heat, dust or damp.
2. Work areas should be kept as clean as possible. Do wipe the monitor screen occasionally.
3. Take great care with all leads as these tend to be the weakest links on a computer system, especially when moving trolleys from place to place.
4. Make sure the paper can feed into the printers correctly before using the printer. Always leave the printer with paper in it
5. The digital cameras should be charged in advance of use and logged out using the computer equipment loan book.