

The Small Schools Multi-Academy Trust
Computing Policy – January 2016

Purpose of Study

“A high quality computing education equips pupils to use *computational thinking* and *creativity* to understand and change the world.”

Information Technology capability is concerned with the storing, processing and presenting of information by electronic means. The development of IT is changing the home and workplace and not least the school. Its impact on the lives of people and the economy continues to grow. It is therefore essential that pupils can take advantage of its opportunities and understand its effects. IT in the National Curriculum will, it is hoped harness this new and exciting development in education and in the process equip the children to meet the needs of the future.

A view of Computing in the National Curriculum

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 (Computer Science)
- can analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems (Computer Science)
- can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems (Information Technology/Creativity)
- are responsible, competent, confident and creative users of information and communication technology. (Digital Literacy/E-safety)

What is IT capability?

A child who had developed IT capability will:

- Be confident in his/her use of IT
- Select and use IT as appropriate to the task in hand
- Identify situations where the use of IT would be relevant and beneficial
- Be able to reflect and comment on the use of IT he/she made
- Recognise that IT affects the way in which people live, work and communicate

IT capability will be developed progressively over a child’s school life through a range of experiences matched with opportunities for reflection on the appropriateness and relevance of its use in and out of school.

Incorporating IT into the curriculum may achieve two objectives:

- To extend and enhance learning in all the curriculum areas of the National Curriculum and beyond

- To help the child develop throughout the curriculum. A range of resources e.g. multi-media PC/iPads will enable children to choose the most appropriate technology as they practise their IT skills and develop IT capability.

Children in both Key Stages have access to laptops and iPads with appropriate software. All classrooms have computers for the children to access during lesson time. In addition iPads are available in all three school.

Both Key Stages have the capability to access the internet via the wifi connections that cover the whole school. All classes (and Hall) have an interactive whiteboard installed.

School objectives

Foundation Stage:

Pupils will have access to IT as outlined for KS1 and software appropriate to their needs. However, much of the early work developing IT capability involves children working on activities which do not necessarily involve the use of ICT. For example in learning to handle information, they will spend time sorting and arranging objects in different ways which will help them to understand how a computer database will classify and sort data. iPads are a permanent fixture in Foundation stage are used to aid curriculum delivery, notably in maths and phonics.

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 CS
- create and debug simple programs CS:C
- use logical reasoning to predict the behaviour of simple programs CS
- use technology purposefully to create, organise, store, manipulate and retrieve digital content C:DL
- recognise common uses of information technology beyond school CS
- 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. DL:ES

CS = Computer Science C = Creativity DL = Digital Literacy ES = E-Safety

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 CS:C
- use sequence, selection, and repetition in programs; work with variables and various forms of input and output CS:C
- use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs CS
- 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 CS:DL:ES
- use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content DL:ES
- 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 C:DL:ES
- use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. DL:ES

CS = Computer Science
C = Creativity
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The internet and the world wide web

At Key Stage 2 pupils will:

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

Access to the internet will be needed for many activities, particularly the web. Ofsted's recommendation is not to be too restrictive; they advocate a managed, rather than a 'locked down', approach. They recommend that pupils need to learn how to use technology safely, respectfully and responsibly, not to have their responsibility for this taken on by others.

IT and special needs

Not every child learns in the same way or at the same pace. Information Technology can be very successful with pupils whose attention span is short and whose motivation is slow. Lack of basic skills prevents children from progressing and can deny children access to some areas of the curriculum. The computer can remove some of the obstacles and open up new areas of learning; for instance reluctant writers can be encouraged to put together stories using multi-media systems which allow them to use sound and pictures as well as text. The advantages to using a computer are:

- Working at a pace suited to the pupil's needs

- Allowing a student to go over work privately
- Judicious use of appropriate software can provide teaching material tailored to individual needs
- The pupil has immediate feedback
- The computer is non-judgmental

The SSMAT has achieved dyslexia friendly status Level 1, which demonstrates good practice for children with specific learning difficulties.

Equal Opportunities

It is the policy of the school to provide equal learning opportunities for all children, regardless of sex, race, health, belief or academic ability.

Record Keeping and Assessment

A record will be kept of the software used and objectives being covered by the pupil/class and collated at the end of each academic year with the information being passed on to the subsequent class teacher in order to achieve continuity and progression. Pupils will be observed using IT and their progress as appropriate.

The role of the Co-ordinator

To ensure that the IT hardware and software is carefully managed throughout the Academy, in order to implement school policy successfully.

Whilst staff must develop their own familiarity with both the software and hardware and recognise the appropriateness of its use, the co-ordinator should assist wherever possible and keep them updated on new developments in this subject area.

- To co-ordinate long term planning throughout the school in order to achieve the objectives at each key stage
- Attend specific training and inset days and represent the school at appropriate cluster meetings
- Monitor and review IT work in practice
- To organise and support resources and prioritise purchases
- To ensure the safety of equipment and its maintenance