



# THE POLICY FOR COMPUTING ST MARY'S FIELDS SCHOOL

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<b>Policy Review Date:</b>	Spring 2023	Headteacher - Mrs R Dulieu	Signature	Date
<b>Ratified by Governing Body:</b>				
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## Introduction

This policy has been written in line with the National Curriculum programmes of study for Computing.

The use of information and communication technology is an integral part of the national curriculum and is a key skill for everyday life. Computers, iPads, 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 St Mary's Fields Primary 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.

### Objectives

- To provide a relevant, challenging and enjoyable curriculum for ICT and computing for all pupils.
- To meet the requirements of the national curriculum programme of study for ICT and computing.
- Use ICT and 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 ICT and computing throughout their later life.
- To enhance learning in other areas of the curriculum using ICT and computing.
- To develop the understanding of how to use ICT and computing safely and responsibly.

### Aims:

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.

## **Principles of Teaching and Learning**

### Equal Opportunities and Differentiation

All pupils should have the opportunity to develop computing capability. We ensure that all our pupils:

Have access to computing resources, providing times in the week when pupils who do not have access to the Internet or a computer can access these to complete home-learning or visit educational websites.

Have equal opportunities to develop computing capability. Use software that is appropriate to their ability.

Differentiation is achieved through differentiated activities and differentiated learning outcomes.

### Breadth and balance

We will ensure that in any key stage opportunities will be provided to extend pupils' technological skills, individually and with others. They will also be able to engage in technology through practical and digital means.

There will be a balance of skills studied as outlined in the curriculum overview. Long, medium and short term plans are to be regularly used to ensure that appropriate breadth and balance is maintained for each class.

### Cross-curricular skills and links

Pupils will engage in learning through computing to apply their knowledge to cross-curricular links, ensuring that these are mutually enriching.

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.

## **Objectives**

### EYFS- Foundation Years:

It is important in the foundation stage to give children a broad, play-based experience of ICT and Computing in a range of contexts, including outdoor play. Computing is not just about computers. Early years learning environments should feature Computing 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 programme a toy. Recording devices can support children to develop their communication skills. This is particularly useful with children who have English as an additional language.

### Key Stage 1

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.

## Key Stage 2

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.

## Assessment and Recording

Teachers assess children's work in computing by making informal judgements as they observe them during lessons. On completion of a piece of work the teacher marks it and comments as necessary. Children's work is evidenced on the shared network and is monitored termly. Children are encouraged to evaluate their own work and learning.

## 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 technician, office or computing leader of any faults as soon as they are noticed. A service level agreement with entrust is currently in place to help support the coordinator to fulfill this role both in hardware & audio visual. ICT and computing network infrastructure and equipment has been sited so that:

- Each class from Y1 – Y6 has an allocated slot across the week for teaching of specific ICT and computing skills.
- Pupils may use ICT and computing independently, in pairs, alongside a TA or in a group with a teacher.

- Every classroom from Foundation 1 to Y6 has a laptop connected to the school network and an interactive whiteboard/Genex boards with sound, DVD and video facilities.
- The school has an ICT and computing technician and who is in school for 1 day. A governor will be invited to take a particular interest in ICT and computing in the school.

### Planning

In response to the requirements of the new National Curriculum, topics are being planned to allow for clear progression. Topics will be designed to enable pupils to achieve stated objectives. Pupil progress towards these objectives will be recorded by teachers as part of their class recording system. Staff will follow medium term plans with objectives set out in the national curriculum and use the same format for their weekly planning sheet.

### Inclusion

At St Mary's we plan to provide for all pupils to achieve, including boys and girls, higher achieving pupils, gifted and talented pupils, those with SEN, pupils with disabilities, pupils from all social and cultural backgrounds, children who are in care and those subject to safeguarding, pupils from different ethnic groups and those from diverse linguistic backgrounds.

### Health and safety

The school is aware of the health and safety issues involved in children's use of ICT and computing. All electrical appliances in school are tested accordingly. It is advised that staff should not bring their own electrical equipment in to school but if this is necessary, then the equipment must be P.A.T tested before being used in school. This also applies to any equipment brought in to school by, for example, people running workshops, activities, etc. and it is the responsibility of the member of staff organising the workshop, etc. to advise those people. All staff should visually check electrical equipment before they use it and take any damaged equipment out of use. Damaged equipment should then be reported to the ICT technician, office staff or head teacher who will arrange for repair or disposal.

### Security

- The ICT and computing technician will be responsible for regularly updating anti-virus software.
- Use of ICT and computing will be in line with the school's 'Acceptable Use Policy'. All staff, volunteers and children must sign a copy of the schools AUP.
- Parents will be made aware of the 'Acceptable Use Policy'.
- All pupils and parents will be aware of the school rules for responsible use of ICT and computing and the internet and will understand the consequence of any misuse.

The agreed rules for safe and responsible use of ICT and computing and the internet will be displayed in all ICT and computing areas.

## Glossary of Terms

### Abstraction

Only focussing on the details relevant to the task, in computing this may be by using a database to handle data. In doing this the data can be looked at in specific groups. An example is using Target Tracker to show the progress of pupils on Pupil Premium.

### Logic

The non-arithmetic operations performed by a computer, such as sorting, comparing, and matching, that involve yes-no decisions. This might be completed using programs such as Excel

### Algorithms

The step-by-step procedure for a machine to complete a task, for example the instructions given to a pro-bot to guide it round a track, or the instructions put into a bee- bot to guide it through a maze.

### Data Representation

The way in which information is presented. In its simplest form this could be representing a data set as a graph. However it is also using the appropriate software for the task. Not everything has to be done in Word or PowerPoint.