

# St Michael's Primary Computing Policy



## Introduction

Computers are now part of everyday life, and for most of us technology is an essential part of everyday life. At St Michael's we want to ensure that our children are digitally literate in order for them to succeed in later life. In 2014 the national curriculum introduced a new subject, computing, to replace ICT. As such it allows our school to provide an even more exciting and rigorous curriculum that addresses the challenges and opportunities offered by our technologically rich world. Through the study of computing the children at St Michael's will gain an understanding of computational systems, whether they use computers or not. Through the computing programme of study, they will develop computational thinking skills, which will allow them to solve problems, design systems and understand the power and limits of human and machine intelligence. While computing is at the forefront of the 2014 curriculum we must not forget the skills needed to be digitally literate; such as typing, collaboration and sharing information. We also aim to ensure that our children know how to use technology safely. The purpose of this policy is to state how the school intends to make this provision.

## Aims

The computing curriculum involved three clear aspects: computing science (CS), information technology (IT) and digital literacy (DL). 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 (CS)
- Can analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems (CS)
- Can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems (IT)
- Are responsible, competent, confident and creative users of information and communication technology (DL)

Our school aims to:

- Provide the children with a relevant, challenging and enjoyable curriculum for computing, while meeting the objectives set out in the programmes of study
- To equip pupils with the relevant skills needed for future life
- To enhance learning in all areas of the curriculum
- To develop the children's understanding of how to use technology safely
- To respond to changes and developments in technology and computing

## Objectives

### 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. 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 drive a remote-controlled toy.

### End of Key Stage 1 & 2 objectives

This table shows the content of the key stage objectives can be broken down into the three main areas of the curriculum.

	KS1	KS2
<b>CS</b>	<p>Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions.</p> <p>Create and debug simple programs.</p> <p>Use logical reasoning to predict the behaviour of simple programs.</p>	<p>Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts.</p> <p>Use sequence, selection and repetition in programs; work with variables and various forms of input and output.</p> <p>Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.</p> <p>Understand computer networks including the Internet; how they can provide multiple services, such as the World Wide Web.</p> <p>Appreciate how (search) results are selected and ranked.</p>
<b>IT</b>	<p>Use technology purposefully to create, organise, store, manipulate and retrieve digital content.</p>	<p>Use search technologies effectively.</p> <p>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.</p>
<b>DL</b>	<p>Recognise common uses of information technology beyond school.</p> <p>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 (such as gaming platforms)</p>	<p>Understand the opportunities that networks offer for communication and collaboration.</p> <p>Be discerning in evaluating digital content.</p> <p>Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.</p>

Please note that the statutory requirements are not labelled under the three headings, and the distinction between digital literacy and information technology is open to interpretation.

### Teaching and Learning

- The schemes of work are designed with each of the computing aspects clearly identified along with appropriate progression and opportunities for assessment.
- Where possible pupils will be encouraged to train and assist their peers.
- Pupils will be given access to the school's Google Drive and will use this for storing their work in order to develop their skills for the future.
- Pupils will use computing capabilities to support learning in other curriculum areas including core and foundation subjects.
- Staff will use a range of teaching styles in teaching computing i.e. whole class, small group and individual use of ICT equipment.

- Children should be taught that you do not need to have a computer to use computing science. The use of Barefoot Computing will be used in lessons to help children to 'think like a computer'.
- Provision will be made for differentiation in order to develop the potential of the more able child as well as that for the less able pupil.
- The staff will monitor and evaluate current practice within the school, including pupils' continuity and progress. From this, planning for future programmes of work and staff INSET will be undertaken.
- The staff will review both the provision of computing as a subject within the national curriculum and as a cross-curricular process. This review will take place at the completion of the year's work.

### **Assessment, Recording and Reporting**

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- The programmes of work identify clear opportunities for the monitoring and recording of the pupils' progress.
- A clear recording mechanism.
- Programmes of work include related tasks that assist the teacher to assess the pupils' progress and attainment in computing.
- Differentiated assessment for pupils with high levels of computing capability, or special needs.
- Progress in computing will be reported at least once a year and information about the use of IT within the wider curriculum will inform the annual computing assessment.

### **Monitoring and evaluation**

The subject leader is responsible for monitoring the standard of the children's work and the quality of teaching in line with the school's monitoring cycle. The subject leader is also responsible for supporting colleagues in the teaching of computing; for being informed about current developments in the subject; and for providing a strategic lead and direction for the subject in the school. We allocate special time for the vital task of reviewing samples of children's work and for visiting classes to observe teaching in the subject.

### **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 IT and computing across the school.

### **Pupils with special educational needs**

We believe that all children have the right to access IT and computing. In order to ensure that children with special educational needs achieve to the best of their ability it may be necessary to adapt the delivery of the St Michael's Computing Policy and computing curriculum for some pupils. We teach computing to all children, whatever their ability. Computing forms part of the national curriculum to provide a broad and balanced education for all children. Through the teaching of 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 IT and computing can be used to support SEN children on a one to one basis where children receive additional support. Additionally, we will use adapted resources if possible such as visual timetables, different coloured backgrounds and screen printouts.

## **Equal opportunities**

St Michael's Primary School will ensure that all children are provided with the same learning opportunities regardless of social class, gender, culture, race, 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 and all staff members follow the equality scheme policy. Resources for SEN children and gifted & talented will be made available to support and challenge appropriately.

## **The role of the co-ordinator**

- To offer help and support to all members of staff (including teaching assistants) in their teaching, planning and assessment of Computing.
- To support the technician in the maintenance of resources and advise staff on the use of equipment and resources.
- To monitor classroom teaching or planning following the school's rolling programme of monitoring.
- To monitor the children's Computing work, looking at samples of different abilities.
- To identify where money from the budget could or should be spent on Computing resources.
- To lead staff training on new initiatives.
- To attend appropriate in-service training and keep staff up to date with relevant information and developments.
- To have enthusiasm for Computing and encourage staff to share this enthusiasm.
- To help staff to use assessment to inform future planning.

## **The role of the class teacher**

Individual teachers will be responsible for ensuring that pupils in their classes have opportunities for learning and using computing skills across the curriculum.

The teacher should:

- Plan and deliver the requirements of the EYFS outcomes and early learning goals or the scheme of work for KS1 and KS2 to the best of their ability.
- Ensure success by creating effective learning environments, securing the pupils motivation and concentration
- Providing equality of opportunity through teaching approaches and by following this policy document.
- using appropriate assessment approaches
- The class teacher's role is a vital role in the development of Computing throughout the school and will ensure continued progression in learning and understanding.

## **Security**

- The 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 school's AUP.
- Parents will be made aware of the 'acceptable use policy' on an annual basis.
- 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 Computing Coordinator will be responsible for logging, reporting and dealing with offensive or unsuitable inputs on the school system or search engines from pupils/members of staff.

**Cross curricular links**

As a staff we are all aware that IT, digital literacy 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 developing computing skills.

**Parental Involvement**

Parents are encouraged to support the implementation of computing where possible by encouraging use of IT and digital literacy skills at home during home-learning tasks and through the school website. They will be made aware of e-safety and encouraged to promote this at home.