Computing Policy Document

Introduction

The aims of this policy are to express our school's philosophies and practises in relation to the teaching, learning and monitoring of Computing in our school. It was reviewed and updated based on the Computing programmes of study (POS): Key Stages 1 and 2 (DfE September 2014). It highlights our commitment to providing the children in our school with skills to keep them safe and to prepare them for their future years. Most recently it was updated following the period of remote learning that took place from January – March 2021.

Children's computing skills developed significantly during the period of remote learning which took place in the Spring Term 2021. School significantly invested in new hardware (Google Chromebooks) and every child that needed a device to use at home to access remote learning was provided with one. This investment was partly funded by the Government's COVID-19 Catch Up funding. Each class now has access to their own set of Chromebooks to use whenever they wish. A temporary Teaching and Learning Responsibility position was created from the beginning of the Summer Term 2021 with the aim of developing the use of the new hardware to enhance teaching and learning across the curriculum.

What do we mean by Computing?

Computing relates to the science of computers, encouraging children to write simple programs in Key Stage 1 whilst correcting errors in algorithms and programs in Key Stage 2.

What do we mean by ICT?

Information and communication technology is a term used to cover a range of equipment and systems which use information sources to analyse, process and present information, and to model, measure and control external events. At St Matthew's C of E Primary School, this includes interactive flat screens, calculators, microscopes, digital cameras (including video recording facilities), spell checkers, Beebots and roamers, visualisers, voting pods, tablets, lap tops, overhead projectors, stereos and CD players, CD ROMs and online content.

How are the two related?

At St Matthew's C of E Primary School, we use ICT to enhance teaching and learning of computing and to develop the skills of our learners. ICT helps us to provide an engaging Computing curriculum thus developing a generation of computer scientists.

Purpose

Computing has an increasingly significant impact on all aspects of modern living. Our children will become aware of this both in and out of school. At St Matthew's C of E Primary School, we believe our pupils need an education that considers the relevance of ICT in our society. Through following the progression of skills and capabilities, our children need to be able to use a variety of technology safely, confidently and effectively. They should learn to apply the knowledge and skills they have acquired to a variety of curricular areas. The importance of the effective use of ICT by children was highlighted by the COVID-19 pandemic.

This curriculum is designed to enable learners to:

- Be confident users of a wide range of ICT equipment such as cameras, Beebots and roamers and tablets
- Understand and apply the concepts of computer science within Computing but also across the curriculum
- Be creative programmers and independent analysts, providing them with the skills to debug and correct errors in computer programs
- Be responsible users of information and communication technology
- Be safe users of ICT, keeping themselves and others safe online

Intent

Statement of Aims:

At St Matthew's C of E Primary School, we are committed to providing our learners with an engaging Computing curriculum, a Computing curriculum that allows children to become the next generation of computer scientists. We are fully committed to supporting our pupils in developing their knowledge and **skills** to behave respectfully and ethically in a rapidly changing computing world. Through the use of computational thinking and creativity, children will feel inspired, adopt an inquisitive mind, and become responsible independent users of technology.

Our Computing curriculum contains clear progression of knowledge and skills as pupils move though the school. We consider that Computing is an important aspect of the cultural capital we seek to impart to our children. We invested significantly in devices during the autumn term 2020 to ensure that all children had access to hardware and software at home. In addition, we liaised with a local broadband provider to ensure that every family in school has access to the internet.

Implementation

In order to achieve this aim, we will:

- Develop the specific skills, knowledge and capabilities as identified in the National Curriculum 2014 Programmes of Study and the 'Understanding the World' area of learning in the Early Years Foundation Stage.
- Model and promote a rich Computing vocabulary to ensure pupils are able to understand and explain processes.
- Foster positive attitudes towards computing; recognising the many benefits of living in an ever-changing technological world whilst also acknowledging the dangers ICT can bring.
- Promote excellence and enjoyment through the innovative and effective use of ICT to support teaching and learning.
- Support staff to deliver a high-quality Computing education predominantly linked to Purple Mash, where knowledge and skills are progressive.
- Develop computational thinking - through repeated programming opportunities, we aim to provide learners with the ability to solve problems in a creative, logical and collaborative way.
- Equip pupils with the skills to become responsible, competent, confident and creative users of information and communication technology.
- Support parents by developing their awareness of online safety through regular workshops and communication (use of our school website, newsletters, parents' evenings).
- Provide pupils, parents, governors and staff with ways they can stay safe online, including liaising with the school's safeguarding lead as part of the Prevent initiative. Annual INSETs are used to remind staff on protocols. Communications such as briefings at staff meetings, email updates, and online safety briefings attended with link governors are also used to keep up to date. Whole and in class assemblies are used to keep children up to date and to discuss current issues.
- Provide pupils with access to a variety of devices and resources, allowing them to make choices about which devices and resources would be most appropriate for their learning.
- Provide devices and internet services for as many pupils as possible who may have barriers preventing them from accessing remote learning at home, so that a continuous curriculum (as near to what would be taught in school) is delivered. Children are expected to engage in remote learning when required, taking an active part in all lessons. Our chosen platform is Google Classroom.
- Maintain and replace resources when necessary making good use of technical support (which has now been increased from 1 to 2 afternoons per week). Use the Computing budget to maximum effect, identifying through a very clear and concise action plan where money is best spent.
- Use technology imaginatively to engage all learners and widen their learning opportunities through cross curricular opportunities.

- Keep up to date with new initiatives and effective resources that are contextual to our school and pupils.
- Support children's long term retention of knowledge and skills in Computing
- Facilitate the children's use of their Computing knowledge and skills to help them to take more control of their own learning across the curriculum, in line with the school's drive on metacognition.
- Ensure staff are kept up to date with developments in technology which could impact on teaching and learning.

The impact of remote learning during the national lockdown and subsequent school closures from January to March 2021 was significant. All children that needed one were provided with a school device to enable them to access the school's remote learning offer. Almost all children were logging on to lessons every day and keeping in close contact with their class teacher and teaching assistant. Due to this, the impact on their progress during this period was minimised, albeit remotely.

Curriculum coverage and progression:
The children in our school will meet the curriculum objectives through our chosen scheme of work initially devised by Purple Mash, but personalised for St. Matthew's. This is a scheme of work based on the National Curriculum Programmes of Study. There is also a programme for the Early Years Foundation Stage and this supports teachers and pupils in reaching the early learning Goals, thus preparing them for Key Stage 1.

The areas of capability in computing are:
- Computer Science (CS)
- Information Technology (IT)
- Digital Literacy (DL)

In addition to our discrete timetabled sessions for Computing, the curriculum objectives will also be integrated into other subjects at appropriate stages to enhance other learning.

Early Years Foundation Stage:
Just as in the rest of the school, children in Reception class will be taught computing through the scheme of work initially devised by Purple Mash, which meets the expectations of the EYFS. Pupils will have experiences using technology in a variety of environments (indoors and outdoors) in both child-led and teacher-directed time. The children will grow in confidence and develop their skills as they work towards and meet their Early Learning Goals.

Online Safety:
Our scheme of work provides our children with a progressive curriculum that is underpinned by online safety principles. Learning about online safety is part of PSHE and whenever technology is used, children are reminded of good practise. You can read more about how we promote online safety at St Matthew's C of E Primary School in our Online Safety Policy.

All staff sign our ICT Security Policy, which refers continuously to the good practice of online safety. Parents sign on behalf of their child at the start of their school journey to say that they will support their child in understanding acceptable use of technology in school. Our school supports pupils in the recognition of cyber bullying, a modern and potential risk to wellbeing, by providing the children and staff with steps to take to deal with it should this threat materialise.

All members of staff are accountable for reporting online safety concerns observed by themselves or reported to them from any member of the school community. This is in line with and no different from the procedures currently in place for reporting any other type of safeguarding concern.

An online safety group is being developed and will meet on a half-termly basis to discuss how to raise awareness of staying safe online and to equip all staff, pupils and their parents with steps to take should concerns to online safety arise. Just as we would do so in school, staff report any online safety concerns that may arise from Remote Learning, using the CPOMs system that we have in place.

Impact
Assessment and Feedback:

- The class teacher and support staff use formative assessment during whole class or group teaching. Pupil strengths and difficulties are observed and used to inform future planning.
- Open questions are used to challenge children's thinking and learning.
- Staff build on previously outlined knowledge and skills in Computing for each age group so that children are always thoroughly prepared for the next stage in their learning. As the majority of local secondary schools use Google Chromebooks, this includes Key Stage 3.
- Each class teacher submits a record, indicating pupils who are beginning, working within or who are secure in age-expected attainment. This is passed on to the next class teacher.
- Children are encouraged to set success criteria for their work.
- Children are encouraged to self-assess at the start and end of a unit of work.
- Children are encouraged to evaluate other's work through supportive and positive peer assessment. Children identify next steps for their own learning.
- Information is shared with the school community through the school website, display, class assemblies, end of year reports and newsletters.
- Progress is assessed on an on-going basis using the statements on Target Tracker, our school tracking system. This ensures teachers are aware of individual pupil's progress in computer science, information technology and digital literacy.
- Teachers / support staff are required to provide feedback to pupils who have submitted their work through online platforms such as Purple Mash and Google Classrooms.

Monitoring:
The Computing Subject Leader regularly monitors the impact of the curriculum through lesson drop-ins and formal visits to class, discussions with pupils and teachers, looking at samples of work / unit outcomes, and pupil evaluation forms.

Access to the Curriculum
For all pupils, access to the computing curriculum and relevant areas in Understanding the World is ensured through the delivery of our scheme of work. A range of differentiated activities are organised according to the area of computing capability being taught and the age of the children. Computers with access to the Internet are available on a timetabled basis and most classes have a timetabled slot per week. Some classes, due to timetabling reasons or for optimum use of time, conduct their Computing lessons in blocks. Additional ICT slots can be booked to enhance teaching and learning across the curriculum. Reception classes can also book the laptops as and when required/ when they are not already timetabled. Years 1 to 5 have access to Chromebooks (1 per pupil) for a minimum of one hour each week. Remote Learning will take place according to our Remote Learning Policy, ensuring that aspects of the Computing curriculum are not missed as a result of a bubble closure.

Resources
Following the recent investment in devices (partly funded by the COVID-19 Catch-Up funding), we now have over 250 Google Chromebooks in school. This extensive resource will be a major support in the teaching of Computing. Each class has their own set contained in their own charging trolley. Most classes keep these in their classrooms, however a couple of classes with reduced space have to keep these just outside the classroom. However, they are within easy reach. We also have a number of full size laptops. Our Reception classes use tablets and iPads which are stored in their classrooms. There is also a large number of Android tablets in the hall cupboard for general use as required.

An interactive flat screen is available in each classroom. Each classroom also has its own digital camera too. All children are given access to a range of other ICT equipment e.g., digital cameras, tablets, Beebots and Roamers. ICT in the world around us is reflected where appropriate in the Early Years Foundation Stage role-play areas.

Where support and / or specialist equipment is required to access the Computing curriculum, it is provided after consultation with the SEND Inclusion Co-ordinator. Some children with SEND have continuous access to their own laptop or desktop PC according to their needs.

Equal Opportunities
At St Matthew's C of E Primary School, we believe all our children are entitled to benefit from equal access to work and equipment in computing regardless of race, gender, intellectual and physical ability and disadvantage. Class teachers should consider such issues and ICT materials free from bias will be sought.

Roles and Responsibilities
In addition to overseeing the computing curriculum and ensuring that it is delivered to the standard set out in our policy, the computing subject leaders' responsibilities include:

- The responsibility for monitoring curriculum coverage and the impact of teaching and learning. This also includes assisting colleagues in its implementation through peer support and / or training.
- Providing an annual report to governors on the impact of the Computing curriculum and how resources are being effectively deployed.
- Devising a realistic, relevant and pupil centred action plan which enhances teaching, accelerates progress and raises standards.
- Being responsible for collecting assessment reports from teachers as units are completed throughout the year. This also includes regular analysis (half termly) to assess progress and identify those pupils who may not be on track to meet end of year targets.

Other responsibilities relating to computing are as follows:
- The class teacher is responsible for delivering an effective Computing curriculum and integrating this into their planning for other subject areas where this is appropriate.
- The school receives technical support from Crystal and the technician is responsible for the maintenance of computers, printers, the school network and keeping software up to date. The technician is in school two afternoons each week.
- The subject leader liaises with the technician to ensure that the systems are running efficiently. The technician uses the school log (which staff use when necessary) to solve any issues that may arise. Should any urgent issues arise on days when the technician is not in school, the Computing leader contacts Crystal to seek assistance. This may require an extra visit to school or the problem is often resolved remotely.
- All staff are responsible for reporting any issues or support needed in the school log.
- All staff are responsible for looking after and returning equipment so that it is charged and ready for the next class or group to use. Staff know that no child should be left unsupervised with ICT equipment.

Health and Safety
- The Local Education Authority checks all electrical equipment regularly.
- Computers are placed carefully to ensure that health and safety requirements regulations are compiled with.
- The Computing leader and Safeguarding leader in school ensure that members of staff are informed of the aspects of the health and safety policy that relate specifically to ICT.

- The Computing leader and person responsible for the health and safety policy ensure that they are aware of new issues and developments relating to health and safety and ICT and update staff members as and when appropriate.
- Teachers model appropriate uses of all equipment before children have access to it. Mobile phones belonging to staff are locked away.
- Access to the Internet carries with it potential risk, because of the gravity of this risk we have a separate Internet Access policy and a separate Online Safety policy. The children are well educated about the potential risks online continuously, through the teaching of the curriculum, class assemblies led by the school council and through our Safer Internet Week. In addition to this, no children are allowed to access the Internet without an appropriate adult being present.

Review
This policy will be reviewed annually and as / when changes in Computing occur.

Written by G Harris
Computing Leader
Last updated: April 2021