Computing

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Introduction

The use of computers and computer systems is an essential part of the National Curriculum and knowing how they work is an important life skill to have. In a digital world that is ever increasing, there is now a variety of different software, tools and technologies that can be used to communicate and collaborate ideas and create digital content. At St Mary's Catholic Primary School, children are accessing a broad and balanced computing education with a structured but progressive approach to learning how computer systems work. They will understand the use of IT and the skills necessary to become digitally literate and will be able to participate fully in the modern world. The purpose of this policy is to state how St Mary's intends to make this provision.

Intent

Our Computing curriculum at St Mary's is designed to create digitally literate children, through providing an education that teaches both computer science, in which children are taught the fundamental principles of computing, alongside encouraging them to use different forms of digital media and devices to express themselves

Our units are sequenced and progressive, giving particular attention to fundamental concepts and are built on prior knowledge. This curriculum will introduce some children to the world of computing, whilst enhancing the skills others may already have. We believe it is vital to prepare our children for their future endeavours, by equipping them with a computing curriculum that is rich in fundamental computer sciences, together with the confidence to use their practical skills to become active participants in the digital world.

Implementation

Computing at St Mary's is supported by iCompute which is a broad, balanced and rich scheme that covers the National Curriculum. The three strands within the curriculum are: Computer Science, Information Technology and Digital Literacy (including E-safety). iCompute is taught in 30 minute sessions which provides children with the time to develop their knowledge, skills and vocabulary within Computing. The Computing curriculum is supported through long term

plans, knowledge organisers, unit overviews, short term planning and assessment tools to ensure children show progress.

An imperative part of our computing curriculum is teaching the children to use technology safely, in which we use a pupil-centred approach at St Mary's. What do the pupils of St Mary's need to know about digital safety? Children will be educated in the importance of E-Safety, according to their individual/class needs; this will be done from EYFS to Year 6, with a clear progression of skills throughout. Issues that are age-related will be addressed in each year group, which we will engage parents in also, where necessary. Our children will be aware of who can they can speak to for help and support, should they have any concerns, or recognise unacceptable behaviour online. Cyber-bullying is discussed during Safer Internet Day and Anti-Bullying Week.

We also believe it is important for children to become accustomed to technological language, therefore teachers are encouraged to use topic-specific language and vocabulary. To fully enrich our children in the realistic world of technology, local experts will be invited into school, to enhance their learning experience, which will support our journey in creating competent and confident creative users of information and communication technology.

Impact

The curriculum intent states that it is accessible for all groups and it is intended that all children can access it. By following and monitoring the curriculum and its delivery, leaders are supported by iCompute in ensuring that all teachers teach the full range of lessons for each year group and that they are taught in accordance with the planning to ensure consistency, challenge and inclusion. Children that leave St Mary's, will be safe and responsible users of information technology, that are able to participate, understand and transform, a rapidly changing world.

Rationale

The school believes that IT, computer science and digital literacy:

- are essential life skills required to fully participate in the modern digital world.
- allows children to become creators of digital content rather than only consumers of it.

- provides access to a rich and varied source of information and content.
- communicates and presents information in new ways, which helps pupils understand, access and use it more readily.
- can motivate and enthuse pupils.
- offers opportunities for communication and collaboration through group working both inside and outside of school.
- has the flexibility to meet the individual needs and abilities of each pupil.

The National Curriculum

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.

Resources

The school recognises the need to continually maintain, update and develop its resources and to make progress towards consistent, compatible computer systems. This can be done by investing in resources that will effectively deliver the objectives of the National Curriculum and support the use of IT, computer science and digital literacy across the school. Teachers are required to inform the computing subject leader of any faults as soon as they are noticed. The Computing curriculum is taught using ipads and laptops.

Planning

St Mary's will be using iCompute for Primary schools - the whole-school scheme of work for Year 1 to Year 6 pupils. iCompute fully meets the objectives of the National Curriculum for

Computing and displays a clear progression in computing throughout the Curriculum. Pupil progress towards these objectives will be recorded by teachers as part of the school recording system. Staff will follow iCompute's planning guidance and pupil progress trackers.

Assessment and record keeping

Teachers will regularly assess progress through observations and evidence. Key objectives to be assessed are taken from the National Curriculum to assess computing each term. The school also uses iCompute's assessment criteria and pupil progress trackers as a guide. Assessing computing is an essential part of teaching & learning and key to good practice. We assess the children's work in computing by making informal judgments as we observe the children during lessons. Once the children complete a unit of work, they will complete a 'Respond Sheet' that is composed of 3 questions surrounding the topic completed, key vocabulary analysis where children can define and explain key words met within the topic and a big question that relates to the theme of the topic. This helps Teachers to make a judgement on assessment as well as Teacher assessment throughout as to whether a pupil is Working Towards, at the Expected standard or achieved Greater Depth standard.

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 schools monitoring cycle. This may be through lesson observations, pupil discussion and evaluating pupil work. We allocate time for the vital task of reviewing samples of children's work and for visiting classes to observe teaching in the subject.

Pupils with special educational needs

All children have the right to access IT and computing at St Mary's and we ensure that children with special educational needs achieve to the best of their ability. It may be required to adapt the delivery of the computing curriculum for some pupils. At St Mary's we teach IT and 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 opportunities that enable all pupils to make progress. We do this by setting suitable challenges and responding to each child's individual needs. Where appropriate IT can be used to support SEN children on a one to one basis where children receive additional support.

Equal opportunities

At St Mary's we 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 computing and all staff members follow the equal opportunities policy. Resources for SEN children and gifted & talented will be made available to support and challenge appropriately.

The role of the Subject Leader

The computing subject leader is responsible for the implementation of computing policy across the school. Their role is to:

- offer help and support to all members of staff (including teaching assistants) in their teaching, planning and assessment of computing.
- provide colleagues opportunities to observe good practice in the teaching of computing.
- maintain resources and advise staff on the use of digital tools, technologies and resources.
- monitor classroom teaching or planning following the schools monitoring programme.
- monitor the children's progression in computing, looking at examples of work of different abilities.
- manage the computing budget.
- keep up-to-date with new technological developments and communicate information and developments with colleagues
- lead staff training on new initiatives.
- attend appropriate in-service training
- have enthusiasm for computing and encourage staff to share this enthusiasm.

- keep parents and governors informed on the implementation of computing in the school.
- liaise with all members of staff on how to reach and improve on agreed targets
- 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 class have opportunities for learning computing and using their knowledge, skills and understanding of computing across the curriculum. They will plan and deliver the requirements of the National Curriculum for Computing to the best of their ability. At St Mary's we set high expectations for our pupils and provide opportunities for all to achieve, including girls and boys, pupils with educational special needs, pupils with disabilities pupils from all social and cultural backgrounds, and those from diverse linguistic backgrounds.

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, and create effective learning environments.

The class teacher will also:

- secure pupil motivation and engagement
- provide equality of opportunity using a range of teaching approaches and techniques
- use appropriate assessment techniques and approaches
- set suitable targets for learning as outlined in the inclusion policy.
- maintain up to date assessment records(see policy document).

Staff training

The computing subject leader will assess and address staff training needs as part of the annual development plan process or in response to individual needs and requests throughout the year. Individual teachers should attempt to continually develop their own skills and knowledge, identify their own needs and notify the subject leader. Teachers will be

encouraged to use IT and computing to produce plans, reports, communications and teaching resources.

Health and safety

The school is aware of the health and safety issues involved in children's use of IT and computing. All fixed electrical appliances in school are tested by a Local Authority contractor every five years and all portable electrical equipment in school is tested by an external contractor every twelve months. It is advised that staff should not bring their own electrical equipment in to school but, if this is necessary, equipment must be PAT tested before being used in school. This also applies to any equipment brought in to school by, for example, visitors 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 a computer technician, bursar or head teacher who will arrange for repair or disposal.

In addition:

- children should not put plugs into sockets or switch the sockets on.
- trailing leads should be made safe behind the equipment
- liquids must not be taken near the computers
- magnets must be kept away from all equipment
- safety guidelines in relation to IWBs will be displayed in the classrooms
- e-safety guidelines will be set out in the e-safety policy & Acceptable Use Policy