



St Mary's Computing Intent, Implementation and Impact



Intent

At St Mary's our curriculum will work to the expectations set out in the framework document for The National Curriculum in England, September 2014 for Years 1 to 6; and the Early Years Foundation Stage Curriculum, 2014.

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.
- 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.

All pupils at St Mary's have the right to have rich, deep learning experiences that balance all the aspects of computing. With technology playing such a significant role in society today, we believe 'computational thinking' is a skill children must be taught if they are to be able to participate effectively and safely in this digital world. A high-quality computing education equips pupils to use creativity to understand and change the world. With this in mind, pupils are introduced to a wide range of technology, including laptops, iPads and interactive whiteboards, allowing them to continually practice and improve the skills they learn.

Implementation

In the Early Years, the Computing teaching happens through cross-curricular learning with an emphasis on hands-on experiences. Teaching is through context-based and role play experiences using many resources such as I-Pads and programmable toys.

From Year One upwards, we use Teach Computing as a cohesive scheme of work addressing the statutory aspects of the National Curriculum. As a school, we believe in delivering fun and engaging lessons which help to raise standards and allow all pupils to achieve their full potential.

All Computing lessons begin with the children acknowledging the on-line safety rules which are adhered to across the school community. We use resources from Project Evolve as starters within lessons, to regularly drip feed internet safety.

Work from our lessons is recorded within a whole class digital floor book which children contribute to and are proud of. We use additional online resources to support the evidence in the digital floor book, such as Google Classroom, Padlet and SeeSaw.

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

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

Impact

At St Mary's, we encourage our children to enjoy and value the curriculum we deliver.

We will constantly ask the why behind their learning and not just the how. We want learners to discuss, reflect and appreciate the impact computing has on their learning, development and well being. Finding the right balance with technology is key to an effective education and a healthy life-style. We feel the way we implement computing helps children realise the need for the right balance and one they can continue to build on in their next stage of education and beyond.

We encourage regular discussions between staff and pupils to best embed and understand this. The way pupils share and celebrate their work within our digital floor books will best show the impact of our curriculum.