



Rationale

At St Mary's, we believe that Computing is an integral part of preparing children to live in a world where technology is continuously and rapidly evolving, so much so that children are being prepared to work with technology that doesn't even exist yet. Therefore, we believe that it is important that our children are provided with a high-quality computing education which equips them to use computational thinking and creativity to understand and change the world.

Intent

The Computing in the National Curriculum splits the teaching and learning into three 'Pillars of Progression':

Computer Science

Digital Literacy

Information Technology

These pillars are visible in the aims of the national curriculum for computing. Pupils make progress in computing by knowing and remembering more about each of these categories, and being able to apply this knowledge. However these pillars do not sit separately from each other, knowledge from each complements the others and some subject content only exists at the interplay between the three pillars.

As children progress through KS1 and KS2 we want them to:

- Understand and apply the fundamental principles and concepts of computer science, inducing abstraction, logic, algorithms and data representation
- Analyse problems in computational terms, and have repeated practical experiences of writing computer programs in order to solve such problems
- Evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems
- Be responsible, competent, confident and creative users of information and communication technology

Computing Substantive Key Knowledge and Concepts: (Pillars of progression)			
<p>Computer Science The technical design. The design of new software, the solution to computing problems and the development of different ways to use technology.</p>	<p>Information Technology The technical knowledge. The design, use and understanding of hardware and software; computers and electronic systems for storing and using information.</p>	<p>Digital Literacy The technical skills. The ability to use information and communication technologies to find, create, evaluate, and communicate information.</p>	
Computing Disciplinary Key Knowledge:			
<p>Code Using and writing codes to produce instructions and algorithms; to solve problems; to test and use logic and sequences against inputs and outputs.</p>	<p>Connect Being able to safely, efficiently and confidently digitally connect with others.</p>	<p>Communicate Being able to safely, efficiently and confidently use apps and information technology to communicate ideas.</p>	<p>Collect Being able to safely, efficiently and confidently find, evaluate, store, sort and use appropriate data.</p>

Implementation

When planning and teaching computing at St Mary's, we believe that it is an essential part of the curriculum; a subject that not only stands alone but is woven into other subjects and should be an integral part of all learning. Teachers in Key Stages 1 and 2 use the Purple Mash scheme of work to inform the planning of their computing lessons. In EYFS, the teachers will use technology to support the learning across other subjects. They will also complete computing units which will prepare them for their learning in Key Stage 1. The school has a computing suite, laptops and iPads, ensuring that children can use computers for a range of purposes and that it is used across the wider curriculum, as well as in discreet computing lessons.

Through the framework of the 2014 National Curriculum, Computing taught at St Mary's School aims to ensure that all children:

- develop age-appropriate, accurate knowledge
- are prepared for a life in an increasingly technological world
- understand what algorithms are, how they are implemented as programs on digital devices, and understand that programs execute them by following precise and unambiguous instructions
- design, write and debug programs that accomplish specific goals
- use logical reasoning to predict the behaviour of programs and to detect and correct errors
- use sequence, selection and repetition in programs
- use technology purposefully to create, organise, store, manipulate and retrieve digital content
- recognise common use of information technology beyond school
- use search technologies effectively
- select, use and combine a variety of software on a range of devices
- use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns and recognising acceptable and unacceptable behaviour
- fulfil the requirements of the 2014 National Curriculum for Computing

Roles and Responsibilities:

The Science Subject Leader will:

- Establish a secure profile of Computing in school.
- Manage the implementation of the school policy, updating the policy and scheme of work on a regular basis in line with new initiatives
- Order, update and allocate appropriate and sufficient resources
- Model high quality teaching of Computing
- Identify needs and arrange INSET so that our staff are confident in teaching and assessing Computing
- Keep abreast of new developments and communicate these to staff
- Take an overview of the whole school planning to ensure that there is continuity and progression between year groups and learning is effectively planned for
- Support staff in developing pupils' capability within Computing
- Attend appropriate courses
- Monitor and evaluate standards in teaching and learning in Computing, for example looking at pupils' work and conducting pupil interviews
- Contribute to the School Development Plan on an annual basis to maintain and raise standards
- Assist colleagues in the planning and delivering of lessons

- Report to governors
- Use assessment of Computing to inform future planning
- Identify opportunities for Computing in the wider school curriculum.

The class teachers will:

- Plan and deliver Computing lessons to their class using Purple Mash.
- Assess the work and progress of pupils and communicate to the subject leader.
- Identify any other opportunities for Computing in the wider school curriculum.
- Have responsibility for the teaching, learning and assessment of Computing and report on pupil progress to parents.

Impact

Progress and Assessment

Teachers should use the Purple Mash progression documents and the Purple Mash declarative and procedural documents to ensure work is planned to meet the expected standard or above, assess children's work and ensure progress.

The use of retrieval practice strategies built into the learning will help teachers identify how much knowledge has been learnt in a unit. Teachers will use the 'Knowledge and Recap Questions' on Purple Mash to assess during each lesson.

An overall assessment should be made at the end of each unit. At the end of each unit of work class teachers should assess children's achievements in terms of declarative knowledge (what the children will know) and procedural knowledge (what the children will know how to do). At the end of the year, these assessments should be used to make an overall judgement on whether each child is meeting the expected standard or not.

Review:

The subject leader will review the policy annually. Policy produced May 2024.