Computing Policy 2025-2026

Overview

We will provide a high quality computing education that equips our pupils to use computational thinking and creativity to understand and change the world.

Strong links will be made with mathematics, science and design technology and provides insights to both natural and artificial systems. The core of computing will be Computer Science, in which pupils will be taught the principles of information and computation, how digital systems work and how to put this knowledge to use through programming.

AIMS OF THE CURRICULUM:

- To build on this knowledge and understanding so that pupils are equipped to use information technology to create programs, systems and a range of content.
- To ensure that pupils become digitally literate – able to express themselves and develop their ideas through, information and communication technology – at a level suitable for the future workplace and as active participants of a digital world.
- To ensure that pupils can understand and apply the fundamental principles and concepts of Computer Science, including abstraction, logic and algorithms and data representation.
- To ensure that pupils can analyse problems in computational terms and have repeated practical experience of writing computer programs in order to solve such problems.
- To enable pupils to evaluate and apply information technology including new and unfamiliar technologies, analytically to solve problems
- To ensure that pupils are responsible, competent, confident and creative users of information and communication technology.

CURRICULUAM DELIVERY:

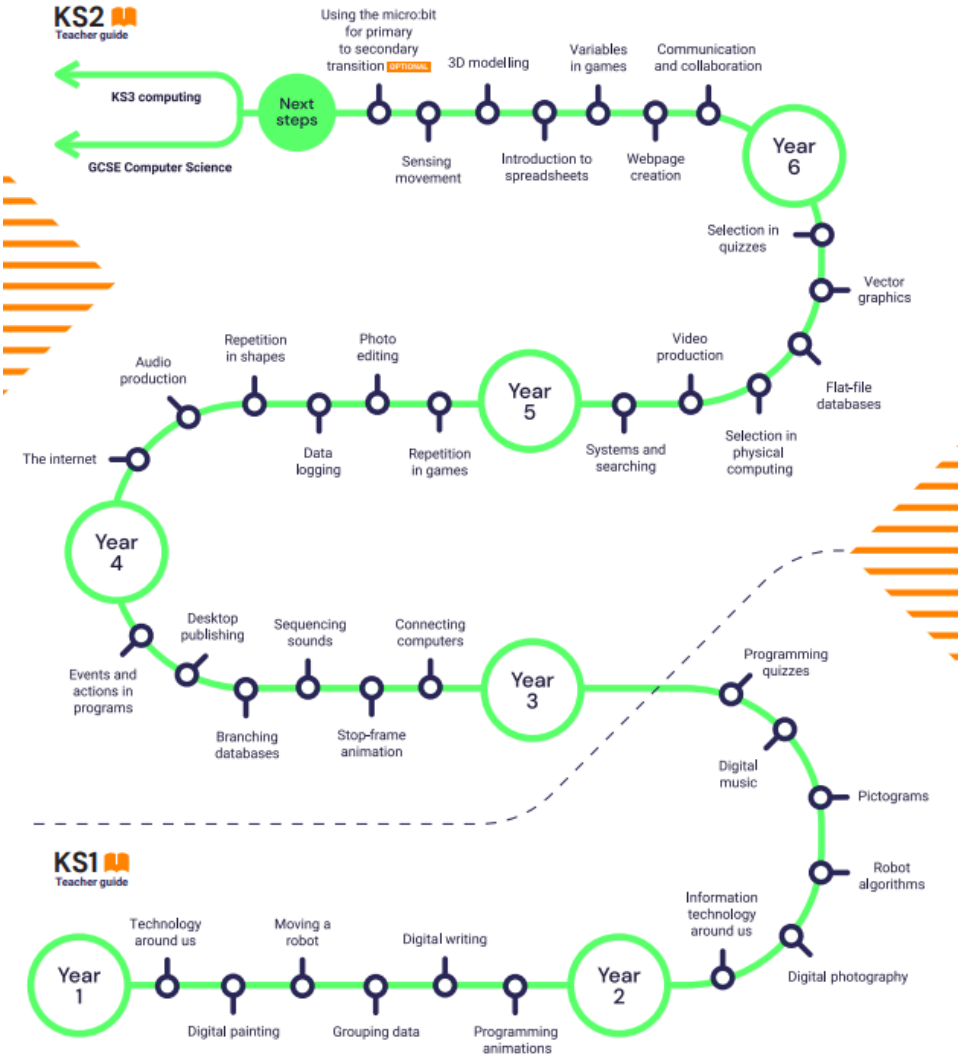
At St Mary's, we implement the 'Teach Computing' curriculum as developed by the National Centre for Computing Education (NCEE). The National Centre for Computing Education (NCCE) is funded by the Department for Education and supporting partners and marks a significant investment in improving the provision of computing education in England. It is delivered by STEM Learning and the resources have been created by subject experts, using the latest pedagogical research and teacher feedback.

The curriculum is sequenced progressively to enable children to master a range of skills as below:

- Pupils will 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.
- Pupils will be taught to create and debug simple programs in KS1 and design, write and debug programs that have accomplished specific goals, including the control of physical systems and solving problems by decomposing them into smaller parts.
- Pupils will be taught to use logical reasoning to predict the behaviours of simple programs and in KS2 they will be taught to explain how some simple algorithms work. The will also be taught to detect and correct errors in algorithms and programs.
- Pupils will learn how to use technology purposefully to create, organise, store, manipulate and retrieve digital content.
- Pupils will be taught how to recognise common uses of information technology beyond school, understand computer networks including the internet and how they provide multiple services such as the world wide web and the opportunities they offer for communication and collaboration

- They will learn how to use sequence, selection and repetition in programs, work with variables and various forms of input and output.
- They will be taught how to use search technologies effectively, appreciate how results selected and ranked and be discerning in evaluating digital content.
- They will learn how to 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.

CURRICULUM PROGRESSION



By the end of each key stage, pupils are expected to know, apply and understand matters, skills and processes specified in the relevant program of study. Pupils will know how to use technology safely and respectfully, keeping personal information private; identify a range of ways to report concerns about content and contact. Pupils will be more appropriately prepared for the demands of the KS3 curriculum and have a deep and thorough understanding of what is expected so that this can be applied. Pupils will also be able to make more cross curricular links and observe where computing skills would be effective and how certain work could be presented in exciting and engaging formats.