

Computing Curriculum Statement

Intent

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.

Computing at St Mary's intends to develop 'thinkers of the future' through modern, ambitious and relevant education in Computing. We want to equip our pupils with the ability to use computational thinking and creativity that will enable them to be active participants in the digital world. It is important to us that pupils have confidence using technology, become digitally literate and understand how to use this ever-changing technology to express themselves, as tools for learning and as a means to drive their generation forward into the future.

Implementation

Our computing scheme is based on the Teach Computing Curriculum, which has been created by the National Centre for Computing Education (NCCE). This scheme has been thoroughly tested by teachers, is grounded in the latest research and allows our children to enjoy the full breadth of what computing involves. Computing is taught using a discrete lesson approach, which allows declarative knowledge (knowing that), procedural knowledge (knowing how) and specific skills being taught to be focused on. This is important to allow children to master this knowledge and apply each skill they encounter, as well as develop their computational thinking. Each unit is focused around a theme which will cover one or more of the National Curriculum statements.

Key Stage 2 children will complete 6 units over the school year (one each half term); covering all relevant computing national curriculum links. Key Stage 3 children will complete 3 units over the school year (one each term); again, all relevant computing national curriculum links will be covered over the course of the school year. Please see our Computing Long Term plan for detail of units covered.

In addition:

- Children will have access to a wide range of resources including computers, laptops, microbits and other third-party software.
- Our lessons are inclusive to all and lessons are adapted to ensure that every child has access to the curriculum. Staff will be informed about a list of key inclusion strategies to be used as and when needed. This may include changing the language that is used to ensure understanding
- There will be core vocabulary that will be used throughout the school to embed key concepts. This will also ensure consistency/structure.

- Children are taught to be safe users of technology through digital literacy computing lessons and PSHE lessons. These support children in considering areas such as online bullying; privacy and security; copyright and ownership; and managing online reputations.
- The skills and knowledge developed through the computing curriculum can be applied to other areas of the primary curriculum including: Art, DT, maths and Music.
- The progression of skills document sets out the key skills and knowledge that it is important for all children to have by the end of the unit.
- To support teaching, staff will have access to a range of planning and resources through the Teach Computing Curriculum.

Impact

At St Mary's, we aspire to equip all our pupils with the computing skills necessary to ensure that they are ready for the curriculum at their next school and broaden their horizons to impact their lives and future.

In order to achieve this, we will ensure that skills build on those that have been attained in previous years to consolidate and build on them as they move through the school. Assessment takes place throughout each lesson, using formative and summative strategies such as asking challenging questions; verbal and written feedback; observation of children's work; and final projects showing the application of their knowledge and what they have learned. In addition, the Teach computing curriculum has assessment tools (such as rubrics and quizzes) that can be used to help assessment. The progression of skills document identifies the key skills and knowledge for each unit and supports teachers in making judgements after teaching each unit. Parents/ carers will be informed of pupil progress on their child's annual report and at biannual parent/carer consultations. There is a whole school monitoring, evaluation and review cycle. Each subject leader reviews their subject annually. An action plan is put in place and shared with staff.

By the time Year 8 children leave St Mary's, we want them to be able to use these skills and a range of tools to complete a range of computing tasks creatively, independently and safely.