



Computing Curriculum statement

Intent

At St Mark's, by the end of EYFS, we aim for the children to have a good understanding of simple algorithms such as recipes. They will have been provided with opportunities to develop their ability to use computational thinking effectively, such as through using the RAMP (Read, Act, Model, Program), linked to different texts being studied in class (e.g. looking at where 'sequence', 'selection' and 'repetition' appears in stories such as *'Going on a Bear Hunt'*). They will also have had the opportunity to use digital devices to write simple programmes (Bee Bots).

By the end of KS1, children will have an early understanding of computer science and computational thinking. They will have developed early coding and understood the use of algorithms. They will also have a good understanding of the various uses of IT such as creating spread sheets or creating digital pictures. They will also have explored varying IT equipment and their uses to set a good foundation for application in KS2.

By the end of KS2, we want our pupils to be fluent with a range of tools to best express their understanding. Children have the independence and confidence to choose the best tool to fulfil the task and challenge set by teachers. We have the ambition that children can take their learning from the computing curriculum and apply it to other contexts. In addition, we aspire for our children to be equipped to operate in a rapidly changing workplace and to be prepared for the career opportunities that will open to them.

The aspects of computing we focus on are:

E-Safety:

- This is closely linked and covered through the aspects of our PSHE curriculum (taken from the statutory PSHE program of study provided by the DfE)

Digital Literacy:

- Introduce students to basic computer operations, including hardware and software.
- Teach safe and responsible internet usage, online etiquette, and cybersecurity awareness.
- Familiarize students with word processing, spreadsheets, and presentation software.

Programming and Computational Thinking:

- Begin with simple block-based coding concepts and progress to text-based programming languages.
- Develop problem-solving skills through coding exercises and projects.
- Introduce logical reasoning and algorithmic thinking.

Creative Multimedia:

- Explore digital art and design principles using graphics software.
- Encourage creativity through digital storytelling, animations, and multimedia presentations.

Robotics and Physical Computing:

- Introduce basic robotics and hands-on programming using age-appropriate kits.
- Teach students to construct and program simple robots.

Data Handling and Analysis:



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- Introduce data collection, organization, and basic analysis.
- Familiarize students with graphing and data representation tools.

Implementation

A combination of teacher-led instruction, hands-on activities, group projects, and self-paced learning will be the form the St Mark's Computing curriculum will take. We want our children to be exposed to a variety of computing programmes and equipment they may encounter through their lives. At St. Mark's, the children experience their Computing curriculum through adult led lessons and independent application tasks. We have planned and integrated opportunities throughout each year group's other subject areas where children can use their newly acquired IT skills and apply them to our wider St. Mark's school curriculum.

Access to appropriate hardware, software, and a safe online environment for students will be provided to allow children to practise their digital skills and the Computing co-ordinator will monitor equipment to ensure that the school has the necessary support for effective and safe implementation. In the time between computing units of work, previous areas of study will be set up around the classroom in a 'continuous provision' style of learning where children can recap, practise and use the tools, programs and prompt cards to further deepen their understanding.

Impact

A high quality computing education aims to develop a range of programming and technological skills that are transferable to other curriculum areas, including Science, Mathematics, English and History. As pupils progress through KS1 and KS2 children will become increasingly confident in:

- The application of their digital skills
- Becoming increasingly efficient and effective communicators, collaborators and analysts
- Showing imagination and creativity in their use of ICT in different aspects of their learning and life beyond school
- E-safety and the risks involved when using the internet

The impact of the computing curriculum at St. Mark's is assessed continuously against the age-related expectations in computing for each year group. In doing so, we are ensuring that the necessary support is provided for all children to have a good understanding of the primary computing curriculum whilst allowing us to effectively differentiate tasks for students. This will be used to inform the Computing coordinator of any further areas for curriculum development, pupil support and/or training requirements for staff. The Computing co-ordinator will regularly monitor the curriculum's implementation and effectiveness, making adjustments as needed to meet the evolving needs of primary school students in the digital age.

Other methods of judging the impact of the computing curriculum offered are through the following methods:

- Pupil discussions and interviewing the pupils about their learning (pupil voice)
- Monitoring planning of lessons by the subject lead and providing feedback
- Photo evidence and images of the pupils' practical learning
- Monitoring of children's work



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