

Computing at St Monica's School



"Tell me and I forget. Teach me and I remember. Involve me and I learn." - Benjamin Franklin

Intent

Our aim is to provide a high-quality computing education which equips children to use computational thinking and creativity to understand and change the world. The curriculum will teach children key knowledge about how computers and computer systems work, and how they are designed and programmed. Learners will have the opportunity to gain an understanding of computational systems of all kinds, whether or not they include computers.

By the time they leave St Monica's School, children will have gained key knowledge and skills in the three main areas of the Computing curriculum: computer science (programming and understanding how digital systems work), information technology (using computer systems to store, retrieve and send information) and digital literacy (evaluating digital content and using technology safely and respectfully). The objectives within each area support the development of learning across the school, ensuring a solid grounding for future learning and beyond.

Implementation

During EYFS at St Monica's School

In EYFS, pupils build confidence to use technology purposefully to support their learning for Early Learning Goals as appropriate. Children develop listening skills, problem-solving abilities and thoughtful questioning - as well as improving subject skills across the seven areas of learning. Pupils are taught:

- to recognise that a range of technology is used in places such as homes and schools: watching a video clip, listening to music, playing games on the interactive whiteboard.
- to select and use technology for particular purposes: using a camera or tablet to take a photograph, exploring mechanical toys, using the internet to search for information.
- that while the internet can be an exciting place where they can learn and have fun, sometimes they may encounter things online which make them feel worried, scared or sad.

During Key Stage 1 at St Monica's School

In Key Stage 1, pupils are 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.

During Key Stage 2 at St Monica's School

In Key Stage 2, pupils are 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.

Planning

- The Computing curriculum map shows the units to be covered each term, based on the Kapow scheme of work.
- There is a medium-term plan for each unit of work.
- Plans and resources are designed to support the needs of pupils with SEND/higher ability and those new to English.
- Plans are annotated and adapted to show how less able and those new to English will access the content.
- More able children are planned for so that they can deepen their computing knowledge and skills.
- Skills will be explicitly taught, and units allow time for children to apply them independently.

Teaching

- A unit should be covered over a half term.
- Flexible groupings are used during lessons: mixed ability group work, paired work, guided and independent work and whole class work.
- Lessons will provide opportunities to learn and develop new vocabulary and skills.
- Key stage 1 and 2 each have a weekly 1-hour computing lesson.
- E-safety runs throughout the whole year as appropriate.
- Internet safety lessons are provided at the start of each half term.
- Online safety is also taught through the Ten Ten resource.

Marking and feedback

Work should be marked according to the school marking policy by using:

- Peer and self-assessment
- Oral feedback

Impact

The computing curriculum allows children to:

- develop independent and logical thinking through reasoning.
- have a good understanding of the benefits and risks associated with a broad range of digital technology.
- develop imagination and creativity.
- identify the source of problems and work with perseverance to 'debug' them.
- be competent and adaptable learners who apply practised approaches to their learning.
- work independently and collaboratively to create and evaluate computing projects.

Assessment

Key Stage 1 and 2

- AFL should be used within each lesson to establish next steps for pupils.
- Electronic portfolios of work are created and reviewed.
- Each unit is assessed as it is completed.

EYFS:

- Each child's level of development is assessed against the early learning goals.

Monitoring

Monitoring is undertaken by teachers, the subject leader and SLT during the school year to measure the impact of the computing curriculum. This will include:

- learning walks during lessons.
- discussions with pupils about what they have learnt.