

## Computing at St. Margaret's

Everyone is valued. Everyone is motivated. Everyone achieves

**Enriching / Challenging / Creative / Curious learners / Independent thinkers / Problem solvers**

### INTENT

At St Margaret's we want to equip children with the knowledge and technical skills required to access the jobs of the future and to ensure children have the knowledge, skills and understanding to keep themselves safe online.

*"Nine in 10 organisations across Great Britain currently lack digital skills."*

### Open University report 'Bridging the Digital Demand'

We understand the immense value that technology plays not only in supporting the computing and whole school curriculum but overall, in the day-to-day life of our school. Our aims are to fulfil the requirements of the National Curriculum for Computing whilst also providing collaborative learning opportunities, engagement in rich content and supporting pupil's conceptual understanding and support the needs of all our pupils.

*"A high-quality computing education equips pupils to use computational thinking and creativity to understand and change the world.... core of computing is computer science, in which pupils are taught the principles of information and computation, how digital systems work, and how to put this knowledge to use through programming. Building on this knowledge and understanding, pupils are equipped to use information technology to create programs, systems and a range of content." (National Curriculum)*

Our **challenging** curriculum empowers our pupils to become explorers, **creators, problem solvers, independent thinkers** and inventors with a tool bag of skills and knowledge which they can apply across a range of devices. Our hands-on practical approach to teaching inspires children to develop confidence and a love of technology.

Computing has deep links with mathematics, science and design & technology and our aim is to provide a broad and balanced curriculum whilst ensuring that pupils become digitally literate and digitally resilient. Technology is ever evolving and we aim to develop pupils who can use and express themselves, develop their ideas through information and communication technology at a suitable level for the future workplace and as active participants in a digital world.

### Implementation

To ensure high standards of teaching and learning in computing, we implement a curriculum that is progressive throughout the whole school. The computing curriculum is in line with **2014 Primary National Curriculum**. This provides a broad framework and outlines the knowledge and skills taught in each key stage.

In Computing, we use the **National Centre for Computing Education (NCCE)** curriculum to ensure that our pupils are offered a sequenced curriculum, where skills are developed and extended year on year.

The units are based on a spiral curriculum. This means that each of the themes is revisited regularly (at least once in each year group), and pupils revisit each theme through a new unit that consolidates and builds on prior learning within that theme. This style of curriculum design reduces the amount of knowledge lost through forgetting, as topics are revisited yearly.

Teacher's subject knowledge and confidence is supported through the comprehensive teaching resources which run alongside each unit plan. Lessons are amended and adapted to tailor learning to pupil needs, ensuring children are supported to keep up with learning within all units. **'Teach Computing'** is broad enough to meet the three required areas in the National Curriculum: **Computer Science, Information Technology and Digital Literacy.**

The subject of computing is much younger than many other subjects, and as such, there is still a lot more to learn about how to teach it effectively. To ensure that teachers are as prepared as possible, the **Teach Computing Curriculum** builds on a set of pedagogical principles which are underpinned by the latest computing research. To demonstrate effective pedagogical strategies throughout. To remain up-to date as research continues to develop, every aspect of the curriculum is reviewed each year and changes are made as necessary.

Whilst recognising the benefits that technology brings, children are taught about the risks that the technological world can present. They learn strategies to ensure safe and positive experiences whilst online at an age-appropriate level. We use **'Project EVOLVE Toolkit'** is based on UKCIS framework **"Education for a Connected World"** to ensure progressive, up to date teaching of Online Safety throughout all year groups.

To ensure that skills are fully taught and practised, we teach computing through timetabled computing lessons - where appropriate, cross curricular links are made. As with other areas of the curriculum, vocabulary is an intrinsic part of the lessons, with staff modelling and developing pupils' use of the correct computing terminology throughout the lesson. During each unit of work a pupil friendly glossary is provided to support leaning and embed key technical vocabulary. We have a wide range of resources to support our computing teaching including but not limited to, Chrome Books, Window PC's, Microbits and Crumble kits

## **Impact**

Children will have a good understanding of key computing vocabulary and concepts. Our children will be confident using a range of technology and be able to clearly discuss their learning from past and current topics, as well as explain their next steps. They will be confident users of technology, able to use it to accomplish a wide variety of goals, both at home and in school.

**We measure, assess and monitor the impact of the curriculum through the following:**

- 🌐 Pupil self-evaluation and peer evaluation
- 🌐 Monitoring of pupil voice to check pupils have retained knowledge/skills
- 🌐 Children should have acquired key vocabulary and concepts/knowledge
- 🌐 Formative assessment used to diagnose and address learning gaps
- 🌐 End of block formative and/or summative assessments
- 🌐 Assessment/Outcomes – Attainment against expected outcomes during the year and at the end of each year
- 🌐 Analysis of assessment, diagnosing knowledge and learning gaps
- 🌐 Monitoring – of books and outcomes to check curriculum delivery, quality learning and pupil understanding
- 🌐 Monitoring – Learning walks to check learning is delivered effectively
- 🌐 Monitoring – subject leads reflect and analyse effectiveness of curriculum teaching and learning
- 🌐 Monitoring – subject leads check that the curriculum meets the needs of all pupils through quality teaching, with tailored support and intervention where appropriate
- 🌐 Reflective staff feedback, joint staff sessions and questionnaires inform CPD to maintain and enhance teacher expertise