

*"Learning with our head, heart and hands so that we can experience life in all its fullness"*

## **Computing**

### **Intent, Implementation and Impact**



#### **Intent**

***"We believe that "computing is not about computers anymore. It is about living."  
Nicholas Negroponte***

At Matching Green CE Primary School we use a scheme of work that aims to instill a sense of enjoyment around using technology and to develop children's appreciation of its capabilities and the opportunities technology offers to, create, manage, organise and collaborate. Tinkering' with software and programs forms a part of the ethos of the scheme as we want to develop children's confidence when encountering new technology, which is a vital skill in the ever evolving and changing landscape of technology. Through our curriculum, we intend for children not only to be digitally competent and have a range of transferable skills at a suitable level for the future workplace, but also to be responsible online citizens.

Our children will be taught Computing in a way that ensures progression of skills, and follows a sequence to build upon and reinforce previous learning, make connections and develop subject specific languages; making them successful.

Our computing curriculum enables children to meet the end of Key Stage Attainment targets outlined in the National Curriculum. It also links with our RSE curriculum and is aligned to the DFE's Education for a Connected World framework. This guidance was created to help equip children for life in the digital world, including developing their understanding of appropriate online behaviour, copyright issues, being discerning consumers of online information and healthy use of technology.

#### **Implementation**

Computing' is an umbrella term used. At its core is computer science (programming) but it also covers the aspects of information technology (processes) and digital literacy (communication). Our curriculum therefore has three significant strands which run throughout:

- Computer Science
- Information Technology
- Digital Literacy

These three combined are computing.

Our Class Curriculum Coverage document shows when each of the units are covered throughout our two year rolling cycle alongside National Curriculum objectives. We have also broken down larger objectives into smaller, more manageable objectives.

As we have mixed aged classes the topics have been selected to match up with the overall curriculum topic being taught that term, whilst also ensuring that there is a broad and equal coverage throughout each cycle and that children are able to progress and develop their computing skills.

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Our Progression of Skills document shows the skills that are taught within each year group and how these skills develop to ensure that objectives are securely met by the end of each key stage.

Our Computing Vocabulary document outlines the key art and design language children will be exposed to throughout the unit of work.

The scheme of work that Matching Green CE Primary School follows a scheme that is designed with 5 key areas:

- Computing systems and networks
- Programming
- Creating media
- Data handling
- Online safety

At Matching Green we ensure that our Computing curriculum is broad and balanced, our 'Skills Showcase' units provide children with the opportunity to learn and apply transferable skills. Where meaningful, units have been created to link to other subjects such as science, art, and music to enable the development of further transferable skills and genuine cross-curricular learning. The knowledge and skills that the children acquire from these units are then applied throughout other units within the scheme. Key skills are visited several times with increasing complexity in a spiral curriculum model; allowing children to revise and build on their previous learning. Each unit fully scaffolds and supports essential and age appropriate sequence learning.

Our Computing curriculum also allows teachers the flexibility to adapt a unit to better reflect the overall class topic, to reflect a significant national or international event or to reflect a significant class interest. Creativity and independent outcomes are robustly embedded into our units, supporting children in learning how to make their own creative choices and decisions.

Lessons at Matching Green CE Primary School incorporate a range of teaching strategies from independent tasks, paired and group work as well as unplugged and digital activities. This variety means that lessons are engaging and appeal to those with a variety of learning styles. Differentiated support is given to each child throughout the lesson to ensure that lessons are enjoyed and accessed by all whilst also stretching the higher attaining children when required. Knowledge organisers for each unit support children in building a foundation of factual knowledge by encouraging recall of key facts and vocabulary.

Strong subject knowledge is vital, and this is an area that the staff at Matching Green need support with therefore, as staff must have confidence and skill to deliver a highly effective and robust Computing curriculum. We have therefore chosen a scheme that has excellent CPD links to develop subject knowledge and support ongoing CPD. Further CPD opportunities can also be found via webinars led by Computing subject specialists.

Computing is taught as a block of lessons over a short period of time (1-3 days typically) this allows children to become fully immersed in their topic, to refine, improve and properly evaluate their piece of work. The SLT and teachers of Matching Green CE Primary School found that this was a far better way of teaching a unit as opposed to one lesson a week. We found that there was little cohesion between the lessons with interest and enthusiasm around the topic waning towards the end. This allows teachers and children to put their full efforts

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and attention into the unit. Where relevant teachers plan and deliver cross curricular lessons linked to this topic.

The children at Matching Green have access to a suite of iPads and laptops and have access to Interactive Smart Boards in each classroom as well as the School Hall.

At certain times throughout the academic year the whole school come off topic and immerse themselves in a whole school theme e.g. 'Fantastic Plastic', 'The Olympics' throughout these mini topics time is given for children to use and enhance their Computing knowledge. In Key Stage 2 the school children are encouraged to share their homework via IT e.g. in the form of Powerpoints.

Our RSE curriculum supports the delivery of online safety lessons. This is supplemented by the school taking part in national awareness campaigns e.g Safer Internet Day as well as workshops/talks from outside agencies. We also regularly share Online Safety information with parents/carers and involve them in appropriate workshops. The school uses information from Childnet, ThinkUKnow, Internet Matters and the NSPCC among many other agencies/charities to keep them updated and informed about the changing online landscape.

### **Impact**

The Computing curriculum has been designed in a way that involves the children in the evaluation, dialogue and decision making about the quality of their outcomes and the improvements they need to make. By taking part in regular discussions and decision making processes, children will not only know facts and key information, but they will be able to talk confidently about their own learning journey, have higher metacognitive skills and have a growing understanding of how to improve.

The impact of the teaching and learning is monitored through both formative and summative assessment opportunities. Each lessons provides teachers with strategies to assess children against the learning objective and at the end of each unit there is a knowledge catcher and a quiz.

Teachers use a range of Assessment for Learning strategies to tailor their next steps in the teaching and learning cycle. Teachers assess children's attainment alongside the National Curriculum objectives using an agreed code.

The expected impact of the Computing Curriculum Matching Green CE Primary School is that children will leave equipped with a range of skills to enable them to succeed in their secondary education and be active participants in the ever-increasing digital world. The children will:

- Be critical thinkers and able to understand how to make informed and appropriate digital choices in the future
- Understand the importance that computing will have going forward in both their education and working life and in their social and personal futures
- Understand how to balance time spent on technology and time spent away from it in a healthy and appropriate manner
- Understand that technology helps to showcase their ideas and creativity. They will know that different types of software and hardware can help them achieve a broad variety of artistic and practical aims
- Show a clear progression of technical skills across all areas of the National Curriculum – computer science, information technology and digital literacy

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- Be able to use technology both individually and as part of a collaborative team
- Be aware of online safety issues and protocols and be able to deal with any problems in a responsible and appropriate manner
- Have an awareness of development in technology and have an idea of how current technologies work and relate to one another
- Meet the end of key stage expectations outlined in the National Curriculum