Tilery Primary School

Computing

What we will offer

At Tilery Primary School we recognise that children are living within an increasingly technological world and aim to develop confidence and knowledge through our Computing curriculum. We aim to increase our children's knowledge and curiosity of the wider world and promote high aspirations. We teach skills which are practised in sessions and then applied across the curriculum to enhance other subjects. Alongside computing skills we regularly revisit internet safety and the importance of why we need to keep ourselves safe on the internet. As children leave primary school, we aim for children to transfer this knowledge and have the confidence to implement these skills in everyday situations. By ensuring our pupils secure computing skills we prepare them for their future education and aspire them succeed in an everchanging technological world.

Based on the National Curriculum and the individual needs of our children, we have created a computing progression map which sets out the objectives taught in each year group. The key knowledge and skills that children acquire and develop throughout each block have been mapped to ensure progression between year groups throughout the school.

Through the study of the following concepts: multimedia, programming, working online, E-safety and data we intend to provide our children with a deep understanding of how to keep safe and make best use of the technology around us. As they continue on their computing journey, we aim to foster a interest of the subject that develops alongside their computing skills. All topics incorporate how pupils can learn how to keep themselves safe and this is woven through each concept.

We support all pupils; regardless of ability, gender or ethnicity, to have equal access to our Computing curriculum.

Our Computing topics are designed to support pupils to build upon the knowledge they have acquired in previous learning. The curriculum is cyclic and is designed to allow children to explore through topics including: text and graphics; presentations; video and sound recordings; programming and internet research.

Pupils are encouraged to use skills and knowledge gained in English and Maths lessons, as well as other Foundation Subjects to enhance their learning in Computing. Care has been taken to ensure that our Computing curriculum reflects our increasingly diverse school community.

How we will deliver it

Every class has a timetabled opportunity to use the iPads or PCs for focussed Computing lessons. Opportunities are also given for iPads to be used for research, presentations and creativity within topic lessons. We encourage staff to incorporate technology throughout the wider curriculum and use these skills to research and present finings in a variety of ways.

- Computing at Tilery follows a carefully planned curriculum, which builds upon knowledge, skills and concepts as children move through the school. The long-term plan sets out the Computing units which are to be taught throughout the year and ensures that the requirements of the National Curriculum are fully met.

- Computing is taught weekly, so that the children have the opportunity to broaden their understanding and learning. We use progression grids to ensure there is clear progress in the knowledge, skills, concepts and vocabulary taught. The concepts are built upon sequentially through the teaching of text and graphics; presentations; video and sound recordings; programming and internet research.

- Skilled staff, including specialist visitors into school, facilitate children's learning within lessons, with pupils having frequent opportunities to enquire, explore and organise and communicate their computing knowledge. This includes, but is not limited to, specific days linked to E-Safety and On-line bullying.

During lessons :

- key Computing concepts are discussed at the beginning of each unit and teachers explain when they were last taught to enable children to understand their computing learning journey
- lessons begin by reviewing previous learning allowing the children to demonstrate their skills and to revisit the knowledge required to fully access new learning
- key learning is revisited frequently, to make it memorable, relevant and easy to retrieve
- shared learning objectives ensure pupils understand what is expected of them and the focus of the learning enabling children to self-evaluate their understanding
- teachers use effective questioning, and provide opportunities for discussion and investigation to support the development of vocabulary, which is taught and modelled by teachers in every lesson
- teachers use a variety of apps and software to introduce new learning and to inspire children
- quality first teaching ensures children build on prior learning and knowledge
- pupils are encouraged to make connections both within and across subjects
- teaching staff are skilled when assessing children's learning and knowledge throughout the topic
- pupils are supported to make rapid and sustained progress
- clear end points and assessment materials ensure that accurate judgements are made on pupils' achievement.

- We enrich our children's learning through specific computing subject days, visitors into school, workshops and when appropriate visits to inspire our children

- Pupils and staff evidence what has been learned in lessons within through collating photographic, video, presentation and research evidence within a Computing Evidence folder, saved on the staff shared area.

- We know that the quality of lessons offered to the children are good through evidence collected during learning walks, lesson observations, work scrutinies and pupil voice activities. The Computing subject leader is able to ascertain what children have remembered, what they have learned, what they are able to talk about and the knowledge, skills and concepts they have acquired during each Computing topic.

As part of the National Curriculum we will ensure the following

Key stage 1 pupils will be 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.

Key stage 2 pupils will be 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.

The difference it will make

We enable our pupils to gain a meaningful understanding of what Computing is and how this can impact their own lives. Our curriculum allows children to explore and have opportunities to compare key Computing concepts and use these to complete challenges, research topics and understand the impact computing can have on the world around them.

We evidence this through our school assessment materials, which identify clear and progressive end points. Our School Data Company (SDC) tracking system, which teachers complete at the end of each topic, enable us to assess progress. Data from these assessments is then collated to enable subject leaders to monitor progress and attainment across the school. Should issues be identified, subject leaders can address this directly with class teachers.

We know that our children enjoy our computing curriculum because they are highly motivated and are fully engaged during Computing lessons and are inspired to progress their own learning, applying their skills when using different types of technology. We monitor the impact of teaching during learning walks, lesson observations and pupil voice activities. The Computing subject leader is therefore able to ascertain what children have remembered, what they have learned, what they are able to talk about and the knowledge, skills and concepts they have acquired during each computing topic. Our Computing curriculum is successful as it supports pupils to acquire the appropriate knowledge and skills which can support them to succeed in the next stage of their education and inspire them to consider amazing career opportunities.