TILERY PRIMARY SCHOOL

COMPUTING POLICY

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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 which shows the learning journey each child will take whilst they are with us here at Tilery Primary School. 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 an 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.

Aims & objectives

The school's aims are to:

- Meet the requirements of the National Curriculum programmes of study for computing.
- Provide a relevant, challenging and enjoyable curriculum for computing for all pupils.
- Use ICT and computing as a tool to enhance learning throughout the curriculum.
- Respond to new developments in technology.
- Equip pupils with the confidence and capability to use ICT and computing throughout their later life.
- Develop the understanding of how to use ICT and computing safely and responsibly.

The National Curriculum for computing aims to ensure that all pupils:

- Can understand and apply the fundamental principles of computer science, including logic, algorithms, data representation, and communication.
- Can analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems.
- Can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems.
- Are responsible, competent, confident and creative users of information and communication technology.

Early Years

It is important in the Foundation Stage to give children a broad, play-based experience of Computing in a range of contexts, including outdoor play. Computing is not just about computers. Early years learning

environments should feature Computing scenarios based on experience in the real world, such as role play. Children gain confidence, control and language skills through opportunities to explore using non-computer based resources such as metal detectors, controllable traffic lights and walkie-talkie sets. Recording devices can support children to develop their communication skills. This is particularly useful with children who have English as an additional language.

By the end of key stage 1 pupils should 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.

By the end of key stage 2 pupils should be taught to:

- Design and write 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; generate appropriate inputs and predicted outputs to test programs
- Use logical reasoning to explain how a simple algorithm works 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
- Describe how internet search engines find and store data; use search engines effectively; be discerning in evaluating digital content; respect individuals and intellectual property; use technology responsibly, securely and safely
- Select, use and combine a variety of software (including internet services) on a range of digital devices to accomplish given goals, including collecting, analysing, evaluating and presenting data and information.

Concepts & progression of knowledge & skills

Our Tilery Computing curriculum has 5 clear concepts throughout which include multimedia, programming, working online, E-safety and data. These key concepts are then broken down into skills which should be taught in relevant year groups. As we journey through our computing curriculum we revisit any taught skills to ensure children can make links and connections to prior learning.

Sequencing i.e. revisiting & making connections to previous learning

We have carefully selected the different concepts to our Computing curriculum. This has enabled us to sequence together a journey that demonstrates clear progression building upon children's prior learning and allowing them to make links within the concepts to skills taught in previous and existing year groups. At Tilery we encourage our children to make links to other subjects, within Computing we are able to support the delivery of other subjects and enable our children to show that they can use taught skills in all areas of our curriculum.

SEN

At Tilery Primary we recognise the need to cater for children with special educational needs. Work is differentiated to assist in children's learning in terms of:

• learning outcomes
• tasks
• teaching methods
• resources
• outcome

Tasks can be broken down into small steps, giving children achievable goals. Vocabulary can be pre-taught, word banks and visual cues can be provided. Activities should reinforce children's understanding of the subject and their basic literacy or numeracy skills should not be a barrier.

At Tilery, our curriculum is structured in a way that best prepares the children not only for their journey through primary school but also into the next years of their education and into adulthood. We aim to provide our children with a solid base of education whilst aspiring to inspire them into a role that they see as their ideal job providing them with the early tools to pursue this as a career option.

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 findings 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.

Our staff have opportunities to share any resources they find useful with regards to the teaching of computing. Using a local resource, SPARK Teesside, we are able to demonstrate job roles in specific areas which links to our ethos inspiration or aspiration. This resource is used throughout the school and can expose the children to job roles they did not know existed.

Assessment is in line with the school's assessment policy. Teachers are expected to assess at the end of every term against the end points outlined on the Computing curriculum map for each year group, alongside the key concepts. The subject leader is responsible for monitoring the standard of the children's work and the quality of teaching in line with the schools monitoring policy. This may be through lesson observations, pupil and staff discussion and evaluating pupil work.

At the end of each unit of work children should be assessed by teachers against the taught skills, this can allow teachers or subject leaders to monitor where support may be needed, whether that be in a specific year group or across school.

Resources

At Tilery, we have access to 30 android tablets within our Foundation Stage stored in a charging trolley. Key stage one have a trolley of 24 iPads and in Key Stage 2 there are two trolleys of iPads one trolley containing 30 iPads and the other 24 iPads. Each teacher also has their own teaching iPad with access to streaming services in order to display their iPad on teaching computers. All staff have access to SPARKS Tees Valley resources which can be intertwined throughout our curriculum in order to underpin our ethos of 'Inspiration for Aspiration'. Any apps that staff may need on the iPads can be sent out across the network to enable quick access.

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. This impact is measured through the data provided by class

teachers and where gaps may arise in the data. This then allows specific support to be put in place which will address gaps in teaching and that will aid the children achieving what has been set out for them.

Curriculum Enrichment

At Tilery we promote a greater learning environment beyond what goes on in the classroom. Not only do we use technology as part of our learning but we also use it to aid and support learning throughout school. Technology is used effectively as means to support learning and engage children in all of their learning.

At Tilery Primary School, we teach computing to all children, whatever their ability, age, gender or race. Computing forms part of our school curriculum policy to provide a broad and balanced education for all children.

We provide learning opportunities that are matched to the specific needs of children with learning difficulties. In some instances the use of ICT has a considerable impact on the quality of work that children produce; it increases their confidence and motivation and allows access to parts of the curriculum to which the children would otherwise not have had.

Roles and Responsibilities

The Governing Body

The Governing Body will monitor the effectiveness of this policy and hold the Headteacher to account for its implementation.

The Governing Body will also ensure that:

- Enough teaching time is provided for pupils to cover the National Curriculum and other statutory requirements;
- Proper provision is made for pupils with different abilities and needs, including children with special educational needs (SEN);
- The school implements the relevant statutory assessment arrangements;
- It participates actively in decision-making about the breadth and balance of the curriculum.

Headteacher

The Headteacher has overall responsibility for the leadership and management of the school. As the leading professional, the Headteacher is responsible for ensuring that this policy is adhered to, and that:

- All required elements of the curriculum, and those subjects which the school chooses to offer, have aims and objectives which reflect the aims of the school and indicate how the needs of individual pupils will be met;
- The amount of time provided for teaching the required elements of the curriculum is adequate and is reviewed by the Governing Body;
- The school's procedures for assessment meet all legal requirements;
- The Governing Body is fully involved in decision-making processes that relate to the breadth and balance of the curriculum;
- Proper provision is in place for pupils with different abilities and needs, including children with SEN.

Role of the Subject Leader

The role of a subject leader is to provide professional leadership and management for a subject to secure high quality teaching, effective use of resources and improved standards of learning and achievement for all pupils.

The subject leader ensures that the policy is adhered to and will:

- provide leadership and direction for the subject and ensure that it is managed and organised to meet the aims and objectives of the school and the subject;
- have responsibility for securing high standards of teaching and learning in their subject as well as playing a major role in the development of school policy and practice;

- ensure that practices improve the quality of education provided, meet the needs and aspirations of all pupils, and raise standards of achievement;
- play a key role in supporting, guiding and motivating teachers;
- evaluate the effectiveness of teaching and learning, the subject curriculum and progress towards targets for pupils and staff, to inform future priorities and targets for the subject;
- produce an annual action plan which will be part of a School Development Plan.

It is important that a subject leader has an understanding of how their subject contributes to school priorities and to the overall education and achievement of all pupils.

Role of the Class Teacher

Classroom staff will ensure that the school curriculum is implemented in accordance with this policy.