'Every Child Counts, Every Moment Matters'

Millfields First School

Computing Policy

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Background and Rationale

Computing is concerned with how computers and computing systems work, in both natural and artificial systems. Pupils are taught the principles of information and computation, how digital systems work and interact and how to put this knowledge to use through programming.

Computing continues to evolve very quickly and has now become firmly entrenched in many aspects of everyday life, both at home and in the workplace. As it underpins today's modern lifestyle it is essential that all pupils gain the confidence and ability to prepare them for the challenge of a rapidly developing and changing technological world. The use of Computing and computational thinking will enhance and extend children's learning across the whole curriculum whilst developing motivation and social skills.

This policy sets out Millfields First School's aims and strategies for the successful delivery of Computing. This policy should be read in conjunction with other relevant school policies such as the Safeguarding, Equal Opportunities, Curriculum, SEND and Assessment policies. It has been developed by the Computing Coordinator in consultation with the SENCO, Leadership Team, teachers and external consultants. This policy is based on government recommended/statutory programmes of study.

Aims

Through the teaching of Computing, we equip children to participate in a world of rapidly changing technology. We believe that every child should have access to a curriculum that enables mastery and excellence, supporting children in making achievements to the very best of their abilities.

We understand the importance of technology in not only supporting the Computing and whole school curriculum but also in the day-to-day life of our school. Technology in school provides enhanced collaborative learning, better engagement of pupils, easier access to curricular content and support for the understanding of new concepts, meeting individual needs of our pupils. It is a critical part of teaching and learning at Millfields First School.

The objectives of teaching Computing are to:

- Provide an exciting, rich, relevant and challenging Computing curriculum for all pupils.

- Enthuse and equip children with the capability to use technology throughout their lives.

- Give children access to a variety of high-quality hardware, software and unplugged resources.

- Instil critical thinking and reflective learning for all our pupils, particularly when engaging with technology and its associated resources.

- Teach pupils to become responsible, respectful and competent users of data, information and communication technology.

- Teach pupils to understand the importance of governance and legislation regarding how information is used, sorted, created, retrieved, shared and manipulated.

- Equip pupils with skills, strategies and knowledge that will enable them to reap the benefits of the online world, whilst being able to minimise risk to themselves or others.

- Use technology imaginatively and creatively to inspire and engage all pupils, as well as using it to be more efficient in the tasks associated with running an effective school.

- Provide technology solutions for forging better home and school links.

- Utilise computational thinking beyond the Computing curriculum.

- Exceed the minimum government recommended/statutory guidance for programmes of study for Computing and other related legislative guidance (online safety.)

Curriculum

The teaching of Computing at Millfields follows a scheme of work developed to cover the curriculum outcomes listed below. Our long-term plan maps the Computing topics that the children study in each term during each key stage, identifying key learning objectives for each unit of work. The scheme covers a progression of skills across each Key Stage, allowing children to continually build upon their prior knowledge to development their ability and understanding of Computing further.

E-Safety outcomes

E-Safety and the responsible use of technology is embedded in our Computing scheme of work. Through Early Years, children will participate in discussions about the use of technology and what to do if they saw something inappropriate or that causes concern.

Throughout Key Stages 1 and 2, children develop an understanding of how to use technology responsibly, securely and safely. They will learn to recognise acceptable and unacceptable behaviours on the internet or other devices and identify where to go for help and support, being able to report concerns about material, content and contact responsibly.

These outcomes and goals are covered in-depth in our school's E-Safety policy.

Early Years

We aim to provide our pupils with a broad, play-based experience of Computing in a range of contexts. We believe the following:

- Pupils gain confidence, control and language skills through opportunities to 'paint' on the interactive board/devices and play educational games.

- Take photographs and videos with adult support.

- Use appropriate apps with adult support.

Key Stage 1 outcomes

- Understand what algorithms are, how they are implemented as programs on digital devices, and that programs execute by a sequence of specific instructions.

- Create and debug simple programs

- Use logical reasoning to predict the behaviour of simple programs

- Organise, store, manipulate and retrieve data in a range of digital formats, including the creation, editing and retrieval of word documents.

- Use technology safely and respectfully, keeping personal information private and recognise common uses of information technology beyond school.

Key Stage 2 outcomes

- Design, write and debug programs that accomplish specific goals.

- 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, evaluation and presenting data and information.

Assessment for Learning

Teachers assess children's work and progress in Computing through informal assessments during lessons. Areas of development and achievement are identified during learning and oral feedback is given in the moment, providing advice, guidance or further challenge. This allows children to reflect on their progress and continually further their learning within the lesson. Children are encouraged to be critically reflective of their own learning, making judgements about how they can improve both their own work and that of their peers.

Alongside this formative assessment, the progress of each child is recorded against national curriculum objectives. This summative assessment, along with the observations made during lessons, allows teachers to plan for future learning using specific and focussed objectives.

Inclusion

At Millfields First School, we aim to enable all children to achieve to their full potential. We teach Computing to children of all abilities, social and cultural backgrounds, those with disabilities, EAL speakers and SEN statement and non-statemented. We make use of the flexibility that technology provides, allowing pupils to access learning opportunities across the curriculum regardless of their individual needs.

Resources

A range of resources are available which successfully supports delivering the Computing curriculum and enables all learners to reach their full potential.

Resources are suitably maintained and replenished when needed, a task which is overseen by the Computing Leader in conjunction with the IT Technician during weekly visits.

Audits of school resources are conducted regularly by the Computing Leader and an itemised list of all resources is shared with staff and kept up to date by the Computing Leader. The Computing Leader keeps up to date with the latest technology resources and will make informed decisions about possible procurement of them through their own research. The Computing Action Plan details future resource procurement which is shared with senior leaders before the budget setting period.

Digital Leaders

Each class has two pupil representatives, known as Digital Leaders. These children support the teaching and learning of Computing within their classroom and provide feedback on their learning and the technology and apps they have used. The Digital Leader's support class teachers and the Computing Coordinator in teaching e-safety and the safe use of technology to their peers. They work with the Computing Coordinator to gain a good understanding on e-safety which they share with the other children through Pupil Voice assemblies and through Computing lessons. These children also have strategies to support children who have concerns about their own use of technology, both in and out of school, giving advice and helping them to speak to an adult when they are worried or feeling unsafe.

Through Digital Leader meetings, these children have the opportunity to test and learn new technology and apps. This allows the children to support their class teacher in delivering Computing lessons, helping others when they are stuck, problem solving and technical issues and demonstrating the correct or most efficient methods of using the different technology.

Monitoring, Evaluation and Feedback

Monitoring standards of teaching and learning within Computing is the primary responsibility of the Computing Leader. All teachers are expected to keep a portfolio of children's work or curriculum areas covered through teaching. This portfolio must contain work samples from all areas of the curriculum taught for the year group, in line with the Computing scheme of work. Details of monitoring and evaluation schedules can be found in the Computing Action Plan and School Monitoring Schedule.

Monitoring will be achieved through:

- Work scrutiny.
- Observations.
- Pupil voice.
- Teacher voice.
- Reflective teacher feedback.
- Learning environment monitoring.

Evaluation and Feedback will be achieved through:

- Using recognised standards documentation for end-of-year expectations.
- Using recognised national standards for benchmarking Computing provision in primary schools.
- Written feedback on evaluation of monitoring activities to be provided by the Computing Leader in a timely manner.
- Staff and pupil questionnaires and audits to identify areas of strengths and need for development in the curriculum area.
- Questionnaires and workshops provided for parents to update on changes to the curriculum, address concerns and gain feedback on how the Computing curriculum is supporting children outside of school.
- Feedback on whole school areas of development in regard to Computing to be fed back through staff meetings.

Health and Safety

Millfields First School takes all necessary measures to ensure both staff and pupils are aware of the importance of health and safety in and out of school. Both staff and pupils are trained to handle electrical equipment correctly, including how to power off and on. Pupils are reminded about the dangers of electricity and the danger signs to look out for.