COMPUTING POLICY

Introduction

The use of computers and computer systems is an integral part of the National Curriculum and knowing how they work is a key life skill. In an increasingly digital world there now exists a wealth of software, tools and technologies that can be used to communicate, collaborate, express ideas and create digital content. At Meadow Farm Primary School we recognise that pupils are entitled to a broad and balanced computing education with a structured, progressive, approach to the learning how computer systems work, the use of IT and the skills necessary to become digitally literate and participate fully in the modern world. The purpose of this policy is to state how the school intends to make this provision.

Curriculum Intent

The school's aims are to:

- Provide a broad, balanced, challenging and enjoyable curriculum for all pupils.
- Develop pupil's computational thinking skills that will benefit them throughout their lives.
- Meet the requirements of the national curriculum programmes of study for computing at Key Stage 1 and 2
- To respond to new developments in technology
- To equip pupils with the confidence and skills to use digital tools and technologies throughout their lives.
- To enhance and enrich learning in other areas of the curriculum using IT and computing. To develop the understanding of how to use computers and digital tools 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.
- The school believes that IT, computer science and digital literacy:
- Are essential life skills necessary to fully participate in the modern digital world.
- Allows children to become creators of digital content rather than simply consumers of it.
- Provides access to a rich and varied source of information and content.
- Communicates and presents information in new ways, which helps pupils understand, access and use it more readily.

- Can motivate and enthuse pupils.
- Offers opportunities for communication and collaboration through group working both inside and outside of school.
- Has the flexibility to meet the individual needs and abilities of each pupil.

Early years

It is important in the foundation stage to give children a broad, play-based experience of IT and computing in a range of contexts, including off-computer activities and outdoor play.

Computing is not just about computers. Early years learning environments should feature IT scenarios based on experience in the real world, such as in role play. Children gain confidence, control and language skills through opportunities such as 'programming' each other using directional language to find toys/objects, creating artwork using digital drawing tools and controlling programmable toys.

Outdoor exploration is an important aspect and using digital recording devices such as video recorders, cameras and microphones can support children in developing communication skills. This is particularly beneficial for children who have English as an additional language.

By the end of 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 a sequence of instructions
- Write and test simple programs
- Use logical reasoning to predict and computing the behaviour of simple programs
- Organise, store, manipulate and retrieve data in a range of digital formats
- Communicate safely and respectfully online, keeping personal information private, and recognise common uses of information technology beyond school.

By the end of key stage 2 pupils will 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.

	Year 1/2	Year 3/4	Year 5/6
Computer Science	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	Pupils should be taught to: • design write and debug programs that accomplish specific goals,…..solve problems by decomposing them in smaller parts • use sequence, selection and repetition in programs • use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs	Pupils should be taught to: • design, write and debug programs that accomplish specific goals; including controlling or simulating physical systems and solving 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
	For instance: *PM Unit 1.4 Lego Builders* *PM Unit 1.5 Maze Explorers* *PM Unit 1.7 Coding* *PM Unit 2.1 Coding*	*For instance:* *PM Unit 2.1 Coding* *PM Unit 4.1 Coding* *PM Unit 4.5 Logo*	*For instance:* *PM Unit 5.1 Coding* *PM Unit 5.5 Game Creator* *PM Unit 6.1 Coding*

	Year 1/2	Year 3/4	Year 5/6
	Pupils should be taught to: ▯ recognise common uses of information technology beyond school	Pupils should be taught to: ▯ recognise common uses of information technology beyond school	Pupils should be taught to: ▯ 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
	For instance: *PM Unit 1.9 Technology*	*For instance:* *PM Unit 4.8 Hardware Investigators*	*For instance:* *PM Unit 6.4 Blogging* PM Unit 6.6 Networks PM Unit 6.8 Binary

	Year 1/2	Year 3/4	Year 5/6
Digital Literacy	Pupils should be taught to: ▯ use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content on the internet or other online technologies	Pupils should be taught to: ▯ Use technology safely, respectfully and responsibly; recognise acceptable/ unacceptable behaviour; identify a range of ways to report concerns about content and contact	Pupils should be taught to: ▯ use technology safely, respectfully and responsibly; recognise acceptable/ unacceptable behaviour; identify a range of ways to report concerns about content and contact
	For instance: *PM Unit 1.1 Online Safety* *PM Unit 2.2 Online Safety* *PM Unit 2.5 Effective Searching*	*For instance:* *PM Unit 3.2 Online Safety* *PM Unit 3.5 Email* *PM Unit 4.2 Online Safety*	*For instance:* *PM Unit 5.2 Online Safety* *PM Unit 6.2 Online Safety*
		▯ use search technologies effectively, appreciate how results are selected and ranked and be discerning in evaluating digital content.	▯ use search technologies effectively, appreciate how results are selected and ranked and be discerning in evaluating digital content
		For instance: *PM Unit 4.7 Effective Searching*	*For instance:* *PM Unit 4.6 Blogging*

	Year 1/2	Year 3/4	Year 5/6
ICT	Pupils should be taught to: use technology purposefully to create, organise, store, manipulate and retrieve digital content	Pupils should be taught to: 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	Pupils should be taught to: 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
	For instance: *PM Unit 1.3 Pictogram* *PM Unit 1.6 Animated Stories* *PM Unit 1.8 Spreadsheets* *PM Unit 2.3 Spreadsheets* *PM Unit 2.4 Questioning* *PM Unit 2.6 Creating Pictures* *PM Unit 2.7 Making Music* *PM Unit 2.8 Presenting Ideas*	*For instance:* *PM Unit 3.3 Spreadsheets* *PM Unit 3.4 Typing* *PM Unit 3.6 Branching* *PM Unit 3.7 Simulations* *PM Unit 3.8 Graphing* *PM Unit 4.3 Spreadsheets* *PM Unit 4.4 Writing* *PM Unit 4.6 Animation* *PM Unit 4.9 Making Music*	*For instance:* *PM Unit 5.3 Spreadsheets* *PM Unit 5.4 Databases* *PM Unit 5.6 3d Modelling* *PM Unit 5.7 Concept Maps* *PM Unit 6.3 Spreadsheets* *PM Unit 6.5 Text Adventures* *PM Unit 6.7 Quizzing*

Implementation of the policy

The school acknowledges the need to continually maintain, update and develop its resources and to make progress towards consistent, compatible computer systems by investing in resources that will effectively deliver the objectives of the National Curriculum and support the use of IT, computer science and digital literacy across the school. Teachers are required to inform the computing subject leader of any faults as soon as they are noticed. Resources, if not classroom based, are located in the computing suite. A service level agreement with LEAD IT Services is currently in place to help support the subject leader to fulfill this role both in hardware and software.

Computing network infrastructure and equipment has been sited so that:

- Every classroom from nursery to Y6 is connected to the school network and has an interactive whiteboard with sound and video facilities.
- There is a computing suite, two trolleys containing laptops and the use of a class set of ipads.
- Internet access is available in all classrooms.
- Each class from Y1 – Y6 has an allocated slot per week for teaching computing as a discrete subject.
- The computing suite, laptops and ipads are available for use throughout the school day as part of computing lessons and for cross-curricular use.
- Pupils may use IT and computing independently, in pairs or as part of a group.
- The school has a computing technician who is in school every Thursday from 1pm.

Planning

The school uses Purple Mash, a whole school scheme of work for Y1 to Y6 which fully meets the objectives of the national curriculum for Computing and allows for clear progression in computing.
We assess the children's work in computing by making informal judgments as we observe the children during lessons. Once the children complete a unit of work, we make a summary judgment of the work for each pupil as to whether they have yet to obtain, obtained or exceeded the expectations of the unit.

Pupils with special educational needs (see also SEN policy)

We believe that all children have the right to access IT and computing. In order to ensure that children with special educational needs achieve to the best of their ability, it may be necessary to adapt the delivery of the computing curriculum for some pupils.
We teach IT and computing to all children, whatever their ability. Computing forms part of the national curriculum to provide a broad and balanced education for all children. Through the teaching of computing we provide opportunities that enable all pupils to make progress. We do this by setting suitable challenges and responding to each child's individual needs. Where appropriate IT can be used to support SEN children on a one to one basis where children receive additional support.

Equal opportunities (see also equal opportunities policy)
We will ensure that all children are provided with the same learning opportunities regardless of social class, gender, culture, race, disability or learning difficulties. As a result, we hope to enable all children to develop positive attitudes towards others. All pupils have equal access to computing and all staff members follow the equal opportunities policy. Resources for SEN children and gifted and talented will be made available to support and challenge appropriately.

Cross curricular links

As a staff we are all aware that IT and computing skills should be developed through core and foundation subjects. Where appropriate, IT and computing should be incorporated into schemes of work for all subjects. IT and computing should be used to support learning in other subjects as well as developing computing knowledge, skills and understanding. Our school provides pupils with opportunities to enrich and deepen learning using cross-curricular approaches and uses Purple Mash across the curriculum, which embeds computing in English, Mathematics, Science, Geography and History from Year 1 to Year 6.
Parental involvement
Parents are encouraged to support the implementation of IT and computing where possible by encouraging use of IT and computing skills at home for pleasure, through home-learning tasks and use of the school website. Parents will be made aware of issues surrounding e-safety and encouraged to promote this at home.

Monitoring and review

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 cycle. This may be through lesson observations, pupil discussion and evaluating pupil work.
We allocate time for the vital task of reviewing samples of children's work and for visiting classes to observe teaching in the subject.
The role of the Subject Leader

There is a computing subject leader who is responsible for the implementation of computing policy across the school. Their role is to:

- Offer help and support to all members of staff (including teaching assistants) in their teaching, planning and assessment of computing.
- Provide colleagues opportunities to observe good practice in the teaching of computing.
- Maintain resources and advise staff on the use of digital tools, technologies and resources.
- Monitor classroom teaching or planning following the schools monitoring programme.

- Monitor the children's progression in computing, looking at examples of work of different abilities.
- Keep up-to-date with new technological developments and communicate information and developments with colleagues
- Lead staff training on new initiatives.
- Attend appropriate in-service training
- Have enthusiasm for computing and encourage staff to share this enthusiasm
- Keep parents and governors informed on the implementation of computing in the school.
- Liaise with all members of staff on how to reach and improve on agreed targets
- Help staff to use assessment to inform future planning.

The role of the class teacher

Individual teachers will be responsible for ensuring that pupils in their classes have opportunities for learning computing and using their knowledge, skills and understanding of computing across the curriculum.

They will plan and deliver the requirements of the National Curriculum for Computing to the best of their ability. We set high expectations for our pupils and provide opportunities for all to achieve, including girls and boys, pupils with educational special needs, pupils with disabilities pupils from all social and cultural backgrounds, and those from diverse linguistic backgrounds.

The class teacher's role is a vital role in the development of computing throughout the school and will ensure continued progression in learning and understanding, and create effective learning environments.

The class teacher will also:
- Secure pupil motivation and engagement
- Provide equality of opportunity using a range of teaching approaches and techniques
- Use appropriate assessment techniques and approaches
- Set suitable targets for learning as outlined in the inclusion policy.
- Maintain up to date assessment records.

Staff training

The computing subject leader will assess and address staff training needs as part of the annual development plan process or in response to individual needs and requests throughout the year.

Individual teachers should attempt to continually develop their own skills and knowledge, identify their own needs and notify the subject leader.

Teachers will be encouraged to use IT and computing to produce plans, reports, communications and teaching resources.

Health and safety (see also Health and Safety policy)

The school is aware of the health and safety issues involved in children's use of IT and computing.

All fixed electrical appliances in school are tested by a Local Authority contractor every five years and all portable electrical equipment in school is tested by an external contractor every twelve months.

Staff should not bring their own electrical equipment in to school but, if this is necessary, equipment must be PAT tested before being used in school. This also applies to any equipment brought in to school by, for example, visitors running workshops, activities, etc. and it is the responsibility of the member of staff organising the workshop, etc. to advise those people.

All staff should visually check electrical equipment before they use it and take any damaged equipment out of use. Damaged equipment should then be reported to a computer technician, bursar or head teacher who will arrange for repair or disposal.
In addition:

- Children should not put plugs into sockets or switch the sockets on.
- Trailing leads should be made safe behind the equipment
- Liquids must not be taken near the computers
- Magnets must be kept away from all equipment
- E-safety guidelines will be set out in the e-safety policy & Acceptable Use Policy

Security

We take security very seriously. As such:

- The computing technician will be responsible for regularly updating anti-virus software.
- Use of IT and computing will be in line with the school's 'acceptable use policy'. All staff, volunteers and children must sign a copy of the schools AUP.
- Parents will be made aware of the 'acceptable use policy'.
- All pupils and parents will be aware of the school rules for responsible use of IT and computing and the internet and will understand the consequence of any misuse.
- The agreed rules for safe and responsible use of IT and computing and the internet will be displayed in all computing areas.

Impact

After the implementation of this robust computing curriculum, children at Meadow Farm Primary School will be digitally literate and able to join the rest of the world on its digital platform. They will be equipped, not only with the skills and knowledge to use technology effectively and for their own benefit, but more importantly – safely. The biggest impact we want on our children is that they understand the consequences of using the internet and that they are also aware of how to keep themselves safe online.
As children become more confident in their abilities in Computing, they will become more independent and key life skills such as problem-solving, logical thinking and self-evaluation become second nature.

Policy prepared by:

Mrs Doriver Lilley, Computing Lead.

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Date ratified by the Strategic Committee: July 2023

(Chair of the Strategic Committee)

Signed:

Mrs M. Gaiderman

Signed: S Eyre (Head Teacher)

Mrs S. Eyre

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