Computing Policy

'Together we unlock potential and learn for life'

Moor First School

This policy was approved by the Governing Body of Moor First School at their meeting on:

Signed …… Chair of Governors

Signed …….. Co-Headteacher

Signed …….. Co-Headteacher

Signed …….. Curriculum Leader

Review Frequency	Next review
Every 3 years	May 2024

Updated: V. Wood, May 2021

Introduction

Computing teaching at Moor First School aims to follow the follow the requirements of the National Curriculum for Computing; providing a broad, balanced and differentiated curriculum. It is a subject, which not only stands alone but is woven and should be an integral part of all learning. Computing, in general, is a significant part of everyone's daily life and children should be at the forefront of new technology, with a thirst for learning what is out there. Computing within schools can therefore provide a wealth of learning opportunities and transferrable skills explicitly within the Computing lesson and across other curriculum subjects. Through the study of Computing, children will be able to develop a wide range of fundamental skills, knowledge and understanding that will actually equip them for the rest of their life. Computers and technology are such a part of everyday life that our children would be at a disadvantage-would they not be exposed to a thorough and robust Computing curriculum. The use of information and communication technology is an integral part of the national curriculum and is a key skill for everyday life. computers, tablets, programmable robots, digital and video cameras are a few of the tools that can be used to acquire, organise, store, manipulate, interpret, communicate and present information.

Aims and Objectives

The aim of this policy is to outline the purpose, nature and management of the computing taught at Moor First School.

The school's aims are to:

 provide a relevant, challenging and enjoyable curriculum for computing for all pupils.

 meet the requirements of the national curriculum programmes of study for computing.

 use computing as a tool to enhance learning throughout the curriculum.

 to use computing as a tool to improve any relevant whole school targets set on the school development plan.

 to respond to new developments in technology.

 to equip pupils with the confidence and capability to use computing throughout their later life.

 to enhance learning in other areas of the curriculum using computing.

 to develop the understanding of how to use 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.

Entitlement

The curriculum guidance for the Foundation Stage (both upper and lower) is drawn from the Early Years Foundation Stage Curriculum (birth to five) from the area of Understanding the World. Within the Early Years Curriculum, children work towards achieving the Early Learning Goals.

Following on from this, children will be taught the skills and knowledge of computing as outlined in the Programmes of Study in the National Curriculum for computing.

Inclusion, SEND and Equal opportunities (see also equal opportunities policy and SEN policy)

At Moor First, we teach computing to all children, 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. Computing forms part of the school curriculum policy to provide learning opportunities that enable all pupils to make progress by setting suitable learning challenges and responding to differing needs. As a school, we aim to include all learners through engaging and exciting computing activities. We aim to develop a passion and enthusiasm for computing through inclusion and engaging in group work. Resources for SEN children and gifted & talented will be made available to support and challenge appropriately. We believe that all children have the right to access ICT 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 ICT and computing curriculum for some pupils.

Rationale

Moor First believes that computing:

- gives pupils immediate access to a rich source of materials.
- can present information in new ways which help pupils understand access and use it more readily.
- can motivate and enthuse pupils.
- can help pupils focus and concentrate.
- offers potential for effective group working.
- has the flexibility to meet the individual needs and abilities of each pupil.

Implementation

At Moor First School we use a range of teaching styles with an emphasis on active learning by including the children in discussions, experimentations and investigations.

At Moor First School, we teach computing using the aims and objectives from the Early Learning Goals and the National Curriculum. In the Early Years Foundation stage, children have access to a range of devices and remote controlled toys and resources so that they can explore simple technologies independently and use them in their learning and play. Children across school are encouraged to use technology where appropriate to support their learning in all subjects and to share their work on relevant platforms.

All pupils participate in weekly computing lessons delivered by class teachers. Teachers use the 'Teach Computing' scheme of work as a supplement to their computing lessons rather than following it as a prescribed model. Alongside Teach Computing, teachers also use aspects of Twinkl and other online resources to ensure that all areas of the programme of study are covered. Teachers tailor the units for their own classes to provide thematic, cross-curricular lessons that engage and capture the children's interests.

All children take part in Safer Internet and E-Safety days. Parents/staff and governors are continually updated with E-safety documentation and signposted to relevant training opportunities on an annual basis. All parents are invited to complete 'acceptable use agreements' with their children and assemblies/classroom displays regularly reinforce these rules.

In Key Stage 1, the children learn to understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions. They are taught to create and debug simple programs and use logical reasoning to predict the behaviour of simple programs. They are shown how to use a range of technology purposefully to create, organise, store, manipulate and retrieve digital content as well as recognise common uses of information technology beyond school. They are 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 or contact on the internet or other online technologies.

In Key Stage 2, the children design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts. They use sequence, selection, and repetition in programs, use logical reasoning to explain how some simple algorithms work and correct errors in algorithms and programs. Children are taught to understand computer networks, including the internet, and the opportunities they offer for communication and collaboration. They use search technologies effectively, learn to appreciate how results are selected and ranked, and be discerning in evaluating digital content. Children select, use and combine a variety of software (including internet services) on a range of digital devices to create a range of programs, systems and content that accomplish given goals. They use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.

Objectives

Early years (see also early year's policy)

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 in role play. Children gain confidence, control and language skills through opportunities to 'paint' on the whiteboard or drive a remote-controlled toy. Outdoor exploration is an important aspect, supported by ICT toys such as metal detectors, controllable traffic lights and walkie-talkie sets. Recording devices can support children to develop their communication skills. This is particular 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 a range of 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, 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; generate appropriate inputs and predicted outputs to test programs.

 use logical reasoning to explain how some simple algorithms work and correct errors in algorithms and programs.

 understand computer networks, including the internet, and the opportunities they offer for communication and collaboration.

 use search technologies effectively, learn to appreciate how results are selected and ranked, and be discerning in evaluating digital content.

 use and combine a variety of software (including internet services) on a range of digital devices to create a range of programs, systems and content that accomplish given goals.

 use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour.

 identify a range of ways to report concerns about content and contact.

<u>Resources and access</u>

The school acknowledges the need to continually maintain, update and develop its resources and to make progress towards a consistent, compatible pc system by investing in resources that will effectively deliver the strands of the national curriculum and support the use of computing across the school. Teachers are required to inform the computing coordinator of any faults as soon as they are noticed.

Resources (if not classroom based) are safely located in the medical room and school office. A service level agreement with entrust is currently in place to help support the coordinator to fulfil this role both in hardware & audio visual. ICT and computing network infrastructure and equipment has been sited so that:

 every classroom from nursery to Y4 has a PC connected to the school network and an interactive whiteboard with sound.

 there is 1 laptop trolley in school containing 15 laptops with internet access available to use in classrooms.

 there is 1 iPad trolley in school containing 15 iPad’s with internet access available to use in classrooms.

 there are 20 Lenovo tables in school with internet access available to use in classrooms.
 each class from Y1 – Y4 has an allocated slot in the timetable for teaching of specific ICT and computing skills.
 each class teacher can then book out the laptops and iPad's if needed for additional cross curricular lessons.
 pupils may use computing independently, in pairs, alongside a TA or in a group with a teacher.
 the school regularly utilises the support of the ICT and computing technician who works across the Biddulph Schools Trust.
 a governor will be invited to take a particular interest in ICT and computing in the school.

All technology used within school is regularly PAT tested, including all chargers and leads for iPads/tablets.

Planning

At Moor First School, we teach computing in a variety of ways. We use aspects of the Teach Computing Scheme alongside Twinkl and Scratch. These help to form part of KS1 and KS2 curriculum long term and Medium Term Creative Curriculum Plans. A two-year rolling program has been created for this. Teachers are encourage to incorporate computing in other areas of the curriculum.

As the school develops its resources and expertise to deliver the computing curriculum, modules will be planned in line with the national curriculum and will allow for clear progression. Modules will be designed to enable pupils to achieve stated objectives. Pupil progress towards these objectives will be recorded by teachers as part of their class recording system. Staff will follow medium term plans with objectives set out in the national curriculum and use the same format for their weekly planning sheet. A minority of children will have particular teaching and learning requirements which go beyond the provision for that age range and if not addressed, could create barriers to learning. This could include G&T children, those with SEN or those who have EAL. Teachers must take account of these requirements and plan, where necessary, to support individuals or groups of pupils to enable them to participate effectively in the curriculum and assessment activities. During any teaching activities teachers should bear in mind that special arrangements could be made available to support individual pupils. This is in line with the school inclusion policy. These children should be identified and discussed at pupil progress meetings to ensure appropriate provisions or interventions are put into place.

Assessment and record keeping (also see assessment policy)

Teachers regularly assess capability through observations and looking at completed work. Key objectives to be assessed are taken from the national curriculum to assess key computing skills each term. Assessing computing work is an integral part of teaching and learning and central to good practice. It should be process orientated - reviewing the way that techniques and skills are applied purposefully by pupils to demonstrate their understanding of the concepts of computing. As assessment is part of the learning process it is essential that pupils are closely involved. Assessment can be broken down into;

 formative assessments are carried out during and following short focused tasks and activities. They provide pupils and teaching staff the opportunity to reflect on their learning in the context of the agreed success criteria. This feeds into planning for the next lesson or activity.

 summative assessment should review pupils' capability and provide a best fit level. Use of independent open ended tasks, provide opportunities for pupils to demonstrate capability in relation to the term's work. There should be an opportunity for pupil review and identification of next steps. Summative assessment should be recorded for all pupils – showing whether the pupils have met, exceeded or not achieved the learning objectives.

Assessment is carried out termly using the assessment grids that have been created. Teachers assess the children's work in Computing by making informal judgements as they observe them during lessons. We have clear expectations of what the pupils will know, understand and be able to do at the end of each key stage. We keep a record of children's skills in this subject which we discuss with parents during Parents Evenings and additional meetings/discussions that take place throughout the year. We report on Computing to parents in the annual school report.

Monitoring and evaluation

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, book trawl of looking at other data for the subject. The subject leader is also responsible for supporting colleagues in the teaching of computing, for being informed about current developments in the subject, and for providing a strategic lead and direction for the subject in the school. We allocate special time for the vital task of reviewing samples of children's work and for visiting classes to observe teaching in the subject.

Responsibilities

The role of the co-ordinator

 there is an ICT and computing coordinator who is responsible for producing an ICT and computing development plan and for the implementation of the ICT and computing policy across the school.

 to offer help and support to all members of staff (including teaching assistants) in their teaching, planning and assessment of computing.

 to maintain resources and advise staff on the use of materials and equipment.

 to monitor classroom teaching or planning following the schools rolling programme of monitoring.

 make reference to any initiatives that can improve data targets on the school development plan.

 to monitor the children's computing work, looking at samples of different abilities.

 to lead staff training on new initiatives.

 to attend appropriate in-service training and keep staff up to date with relevant information and developments.

 to liase with all members of staff on how to reach and improve on agreed targets.

 to 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 ICT and computing skills and using ICT and computing across the curriculum.

 to plan and deliver the requirements of the EYFS outcomes and early learning goals or primary framework for computing to the best of their ability.

 at Moor First School, we set high expectations for our pupils and provide opportunities for all pupils 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 ensures success by creating effective learning environments.

 securing children's motivation and concentration.

 providing equality of opportunity through teaching approaches.

 using appropriate assessment approaches.

 setting suitable targets for learning as outlined in the inclusion policy.

 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.

 to keep up to date assessment records.

Parental involvement

Parents are encouraged to support the implementation of ICT and computing where possible by encouraging use of ICT and computing skills at home during home-learning tasks and through the school website. They will be made aware of e-safety and encouraged to promote this at home.

Staff training and CPD

 the ICT and computing coordinator 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 coordinator.

 teachers will be encouraged to use ICT 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 ICT and computing.

All fixed electrical appliances in school are tested by a LA contractor every five years and all portable electrical equipment in school is tested by an external contractor every twelve months. It is advised that staff should not bring their own electrical equipment in to school but if this is necessary, then the equipment must be pat tested before being used in school. This also applies to any equipment brought in to school by, for example, people 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 the senior site technician, bursar or head teacher who will arrange for repair or disposal.

 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.
 safety guidelines in relation to IWBs will be displayed in the classrooms.
 e-safety guidelines will be set out in the e-safety policy & AUP.

Security

the ICT and computing technician /coordinator will be responsible for regularly updating anti-virus software.
 use of ICT and computing will be in line with the school's E safety Policy and Acceptable Use Agreement'. All staff, governors and volunteers must sign a copy of the schools AUP.
 parents will be made aware of the 'acceptable use policy' at school entry and KS2.
 all pupils and parents will be aware of the school rules for responsible use of ICT and computing and the internet and will understand the consequence of any misuse.
 the agreed rules for safe and responsible use of ICT and computing and the internet will be displayed in all ICT and computing areas.
Moor First is committed to ensuring that personal information is properly managed and that we ensure compliance with the GDPR data protection legislation 25th May 2018 and updates.
staff are reminded of the following policies/documents: Teacher Professional Standards, Student code of conduct and Safeguarding.

The Governing Body of Moor First School is responsible for determining the content of the policy and the Head Teacher for implementation.

Senior leadership teams and school governors have oversight of our school aims, policies, actions plans and financing for this subject.

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