



Manor Primary School Policy Document

Computing Curriculum Policy

‘Our vision is to create a school community where children grow into happy, confident and responsible individuals, who work hard together to achieve their full potential.’

Section 1 – Intent

Through computing, we want to prepare our children for an ever developing technological world. Our aim is to provide a high-quality computing education which equips children to use computational thinking and creativity to understand and change the world. At Manor Primary School, we understand that it is essential for pupils to understand modern information and communication technologies, and for them to use these skills to become responsible, competent, confident and creative participants of an increasingly digital world. Technology is changing the lives of everyone. Through teaching Computing, we aim to equip children to participate in a rapidly-changing world that is controlled and transformed by technology. It is our intention to enable the children to develop the skills necessary to be able to use information in a discriminating and effective way. Our Computing curriculum should be relevant to the pupils' lives and reflect the increase in computing, preparing children for a life where technology surrounds them.

Section 2 – Curriculum Implementation

As a school, we follow the National Curriculum 2014 Programme of Study for computing and in order to teach each strand of the NC, we use the NCETM Teach Computing programme of study which we believe provides our students with a solid understanding of the key fundamentals of computing and will help prepare them for an ever changing digital world.

At Manor, we believe that an engaging and motivating Computing curriculum will enable our learners to:

- Make links across the curriculum
- Build knowledge of principles of information and computation, how digital systems work, and how to put this knowledge to use through programming.
- Become digitally literate – able to use, express themselves and develop ideas through information and communication technology.
- Become fully aware of how to remain safe online through regular and comprehensive e-safety teaching and learning sessions.

Most work will be recorded in floor books across each year group, which should provide a chronicle of learning and progress, showing the computing journey across each year group

There will be an emphasis on learning the concepts and vocabulary so that children understand meaning and can discuss these correctly and confidently. An age-appropriate list of vocabulary will be included in the termly curriculum letter and this vocabulary will be continuously reinforced during computing lessons.

A curriculum map for computing provides structure to the teaching and learning that is planned for the subject. This ensures that concepts, knowledge and skills build on what has been taught before, and are logically sequenced towards achieving a clearly defined end point. As a result, children build up their knowledge and understanding in layers and without gaps, and in such a way that they will remember content in the long term.

Curriculum coverage and progression:

- Planning for Computing is implemented using the NCETM Teach Computing scheme which addresses the requirements of the National Curriculum. Using the objectives of the National Curriculum, teachers can also choose to address these through topics rather than sticking rigidly to the Teach Computing programme. This may be prevalent in the teaching of basic skills in programmes such as Microsoft Word, Excel and PowerPoint or through the use of the Lego Computing package but are carefully tailored to meet the requirements of the National Curriculum.
- Key skills in information technology are developed through separate teaching of computer based basic skills.
- E-Safety is systematically, comprehensibly and regularly taught and engaged in awareness of events such as Safer Internet Day and through the use of the Governments: Education for a Connected World Framework 2020 alongside Project Evolve.
- Progressive teaching sessions help build the skills and understanding of Digital Literacy.
- Cross curricular opportunities for computing are identified wherever possible.

Learning and Progression Outcomes

EYFS

- Pupils build confidence to use technology purposefully to support their learning for all Early Learning Goals as appropriate.
- Pupils in Foundation Stage class will have experiences using technology indoors, outdoors and through role play in both child-initiated and teacher-directed time.

Key Stage 1

Throughout Key Stage 1, through following the NCETM Teach Computing programme, we will teach our children 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.
- 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.

Key Stage 2

Throughout key stage 2, through following the NCETM Teach Computing programme, we will teach our children 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.

Section 3 – Curriculum Impact

Through the effective delivery of our computing curriculum and the NCETM Teach Computing programme we believe:

- Children will be computational thinkers – having the ability to solve problems in a creative, logical and collaborative way – is developed through repeated programming opportunities and opportunities to build understanding and apply the concepts of computer science.
- Children will become responsible, competent, confident and creative users of information and communication technology.
- Children will have a growing awareness of how technology is used in the world around them and of the benefits that it provides. They are supported to evaluate and use information technology, including new or unfamiliar technologies.
- Children will have opportunities for communication and collaboration develop understanding of the purposes for using technology and these are used to bring together home and school learning experiences.
- Children will have access to an ever increasing variety of devices and resources and are encouraged to reflect on the choices they make to use them.
- Children will:
 - Develop computing skills, knowledge and understanding
 - Develop an understanding of the wider applications of computer systems and communication technology in society
 - Develop independent and logical thinking through reasoning, decision making and problem solving
 - Develop imagination and creativity
 - Work independently and collaboratively

Additional Information

Assessment:

- Progress is assessed formatively by class teachers based on the criteria set out in the National Curriculum and summatively, through the use of using pre and post assessment tasks devised by Teach Computing programme.

- Formative assessment is used by the class teacher and teaching assistant during whole class or group teaching. Children's confidence and difficulties are observed and used to inform future planning.
- Over time, Children are taught how to self-assess and to evaluate their own and others' work in a positive and supportive environment, including peer assessment.
- Open questions are used to challenge children's thinking and learning.
- Information is shared within the school community through the school website, display, celebration events, newsletters, and end of year reports.

e-Safety:

- The school has a separate e-safety policy in place that details how the principles of e-safety will be promoted and monitored.
- All children are taught the importance of e-safety and online gaming through both targeted planning and regular discussion leading from the: Education for a Connected World 2020 Framework and through the use of the Project Evolve resources.
- The school take part in Safer Internet Day activities.

Monitoring:

- The impact of the Computing curriculum is monitored by the Computing Team through pupil discussion, samples of work and discussion with teachers.
- The Computing Team conducts audits of the training needs of teachers and teaching assistants to improve their subject knowledge and confidence.
- Requests for training in Computing can be part of individual teacher's performance management plan.
- The Computing Team conducts audits of resources in order that they are current and fit for purpose. Gaps are highlighted and identified through action planning and where necessary School Improvement Plans.

Equal opportunities:

- The school maintains its policy of equal opportunities as appropriate for Computing.
- Computers and related technology are made available to all pupils regardless of gender, race or abilities.
- The class teacher differentiates work by task, resource or support, to ensure the individual needs of more-able and SEN pupils are met.
- The school is aware that not all pupils have the same access to computers at home and this is considered by staff in the planning and delivery of the curriculum.

Resources:

- The school has a range of resources to support the delivery of the Computing curriculum, learning across all areas of the National curriculum.
- The Computing Team keeps up to date with new technologies and reviews the school's provision and resources.
- Hardware and software faults must be logged by staff and can be found in the technician's computer room.
- The Computing Action Plan expresses the school's priorities for future expenditure and is reviewed by the Computing Team and Head teacher.
- Old resources are disposed of responsibly.

Roles and responsibilities:

- The school community works together to ensure the implementation of the Computing policy.
- The subject leader is responsible for monitoring curriculum coverage and the impact of learning and teaching; and assists colleagues in its implementation.
- Subject leaders in other curriculum areas are responsible for recognising the links between computing and English, Mathematics, Science and foundation subjects; and planning to use these to support learning across the school.
- The class teacher is responsible for delivering an effective Computing curriculum and integrating this into their planning for other subject areas where this is appropriate.
- The school receives technical support from WeST technicians and they are responsible for the maintenance of computers, printers, the school network and keeping software up to date. The subject leader liaises with the technicians to ensure that the systems are running efficiently.

Curriculum Leadership

The subject leader for computing will:

- Be aware of statutory requirements and current good practice - sharing information that may be beneficial to staff.
- Inspire an exciting, informed and creative approach to teaching.
- Support teaching through leading inset, giving advice, and through modelling, feeding back from lesson observations and work scrutiny, team teaching, and monitoring of planning and assessment.
- Use moderation to ensure that knowledge and skills are sequenced across time and being taught systematically and cumulatively, so that new knowledge and skills build on what has been taught before and pupils can work towards clearly defined end points.
- Maintain and store resources, and purchase new resources when necessary.

SEND

The school has the same academic, technical and vocational aspirations for almost all learners. Where this is not practical, adaptations will be made to the curriculum and resources to allow access to computing for all pupils with SEND. See also the SEND Policy.

Health and safety:

- Age appropriate class and safety rules are displayed in the learning environment.
- Equipment is maintained to meet agreed safety standards.
- From Foundation Stage, pupils are taught to respect and care for technology equipment.
- Further guidance can be found in the school's health and safety policy.

Review

- This policy will be reviewed annually by the Computing Team and shared with the school community.