Computing Policy

At Rokeby Park Primary School, we strive to deliver a high-quality computing curriculum which allows our pupils to recognise the significance of digital technology in their everyday lives. We explicitly teach pupils the skills and knowledge they need to become creative, digitally literate, computational thinkers. This policy sets out a framework within which teaching and non-teaching staff can work and gives guidance on planning, teaching and assessments.

The use of digital technology, especially 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 word there now exists a wealth of software, tools and technologies that can be used to communicate, collaborative, express ideas and create digital content. At Rokeby Park Primary School, we recognise that pupils are entitled to a broad and balanced computing education with a structured, progressive, cyclical approach to the learning of how computer systems work, programming, creative media and data and information. This provides our pupils with the skills necessary to become digitally literate and participate fully in the modern world. Where possible, we make explicit links with mathematics and science to enhance our computing curriculum further.

Aims
The overall aim for computing is for pupils to become computer scientists and be digitally literate along with enriching learning for all pupils and to ensure that teachers develop confidence and competence to teach computing and plan cross curricular STEM activities to support the pupils.

The national curriculum for computing aims to ensure that all pupils:

- Can understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation
- 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.

Computing offers opportunities for pupils to:
- Develop their ability to apply their digital literacy capability to support their use of language and communication skills;
- Develop their digital literacy capability and understand the importance of information and how to select and prepare it;
- Develop their computational thinking – 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;
- Become responsible, competent, confident and creative users of information and communication technology;
- Explore their attitudes towards Computing, its value for themselves, others and society and their awareness of its advantages, risks and limitations;
- Develop skills involved in computer science, digital literacy and information technology;
- Grow an awareness of how technology is used in the world around them and of the benefits that it provides;
- Communicate and collaborate in order to develop understanding of the purposes for using technology and these are used to bring together home and school learning experiences;
- Engage all pupils imaginatively and widen their learning opportunities
- Develop an understanding of how to use technology safely and the risks associated.

Curriculum

The children undertake a broad and balanced programme that takes into account children's abilities, needs as well as their emotional and intellectual development. Through computing, the children will learn a range of skills and knowledge to become digitally literate and understand how to use technology safely. We follow the NCCE's Teach Computing scheme for work using their cyclical pedagogy to ensure our pupils know more, remember more and are able to do more with their computing knowledge and skills.

Early Years
Pupils in the Early Years Foundation Stage have access to a range of technology, including tablets and Bee-Bots, within their continuous provision and have access to iPads and laptops weekly. Pupils in the Foundation Stage will have experiences using range of technology for a variety of purposes in both child-initiated learning and adult led activities. Opportunities for technology as a tool to support learning and teaching in all areas are identified in planning.

Key Stage 1
During Key Stage 1, pupils will use a range of technology in school and learn how to stay safe whilst using this. They will explore why different technology is used for different purposes and recognise common uses of information technology beyond school. Pupils will develop their understanding of basic subject-specific vocabulary relating to specific technology, coding and online safety.

Pupils will learn how to become **digitally literate** by using a range of technology safely and understand the need to keep information private. They will learn what is meant by the term online safety and know who to speak to if they are concerned about something they have seen or heard online.

Children will learn about what algorithms are and know how these can be implemented whilst using technology and also through unplugged devices to develop their **computer science** skills. Children will learn the importance of following step by step instructions to achieve a required outcome and will be able create and debug simple programs.

The children will learn about the purposes of a range of technology and why some technology is used for certain tasks to develop their understanding of **information technology.** The children will have opportunities to browse appropriate websites safely, create digital media and understand how technology is used for data and information. Through this, the children will learn how technology can be used to find out information. The children will also have the opportunity to explore ways of organising their work and findings using a range of programs such as Microsoft Office and Scratch.

Key Stage 2
During Key Stage 2, the children develop their confidence and abilities when using a range of technology and will have the opportunities to design, write and debug programs to achieve specific goals. The children will understand how to keep themselves and others safe online, understand the need to keep personal information private and know ways to report concerns about content and contact. The pupils will work on their understand of subject-specific vocabulary taught in Key Stage 1 and learn new terminology.

During Key Stage 2, pupils will continue to develop their knowledge and skills to become more **digitally literate** by learning about behaviours that are acceptable and unacceptable online and the risks associated with these. The children will spend time exploring what could be classed as a risk to them and others online and understand that they have choices to make when it comes to these. Throughout the key stage the children will have opportunities to discuss what they have seen on the internet and evaluate how accurate and authentic the information is that they find online.

Pupils will extend their knowledge of **computer science** skills by using their knowledge and understand of algorithms to create their own by making predications, repetition and experiment with different variables.

The children have opportunities to write their own and explain how it works along with solving any problems that occur along the way.

The pupils will continue to explore a range of software and technology and use the most appropriate based on a specific purpose for this. The children will learn how to collect a range of data and will learn the skills needed to organise and present the data using different programs. Throughout the key stage children will also explore animation and learn how to produce films/ animation and edit it.

Computing Curriculum Planning
At Rokeby Park, computing is taught around a set of key concepts and second order concepts. A range of key concepts are explored through each computing unit. These concepts include:

1. **Computing systems and networks:** (systems, networks and how they are used, the internet, hardware and software)
2. **Programming:** (interpreting, creating and evaluating algorithms, programming to accomplish specific goals, detecting and correcting errors)
3. **Data and information:** (collecting, analysing, evaluating, presenting data and information)
4. **Creating media:** (design and development, communicating and collaborating online, evaluating online content, respectful and responsible communication, presenting, creating content)

As part of the work on each key concept, children also explore and learn about:

- The effective use of tools
- The impact of technology
- Safety and security

The curriculum is implemented through the use of the NCCE's Teach Computing scheme of work. A subject progression document is integral to the teaching and learning of computing across the whole school, and ensures that children are given the opportunity to build upon prior knowledge. The Teach Computing scheme of work was used to write the subject progression document and create progressive Key Performance Indicators (KPIs). Long term plans, medium term plans and pacing sheets provide an appropriate balance and distribution of work throughout the year. By following the progression document alongside the Teach Computing scheme of work, it ensures a sequence of lessons where knowledge and skills are practised, acquired and progressively built upon. Key vocabulary within the classroom is displayed and this is consistently referred to during lessons.

Assessment and Recording
At Rokeby Park assessment is an integral part of the teaching process. Children will record their learning in computing books as well as saving it in their online RM student folders or submission through MS TEAMS. The assessment of children's work is on-going to ensure that understanding is achieved and that progress is being made. Feedback is given to the children as soon as possible and guided by the schools' Marking and Feedback Policy. Progress is assessed on an ongoing basis against statements agreed with schools across the Constellation Trust along with carefully selected Five Key Questions. Assessments are recorded formally on a half-termly basis.

Monitoring
The impact of the computing curriculum is monitored regularly by the computing lead through pupil discussions, samples of work, discussions with teachers and lesson observations. This is then used to develop subject action plans. The computing lead regularly audits provision and staff training and plans training based on the needs of the staff.

Online Safety

Due to the increasing importance and ever-changing nature of online safety, a separate online safety policy has been created, detailing filtering and monitoring procedures along with other information about how we support staff, pupils and parents to stay safe online. Using the Teach Computing scheme of work, our school provides a progressive computing curriculum, which also teaches children about saying safe online and this is also supported throughout PSHE Jigsaw lessons. Online safety is a topic which is taught progressively in each year group through Teach Computing. Opportunities for learning about online safety are part of PSHE Jigsaw lessons and reinforced whenever technology is used and at regular assemblies. Clear rules for online safety are set out in the form of acceptable usage agreement which parents and pupils sign when a pupil first starts at the school. The school buys into a service called ESafe who monitor the school's computers. They look for patterns, trends and anything that could potentially be a safeguarding risk to staff and pupils. ESafe send weekly monitoring reports to the Designated Safeguarding Lead. Online safety rules are also displayed in each classroom for pupils to refer to if needed. See Jigsaw overview below to show additional online safety coverage- Relationships

Equal Opportunities

All pupils regardless of race or gender shall have the opportunity to develop skills using computers and other related technology. The school will promote equal opportunities for computer usage and fairness of distribution of ICT resources. 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.

Roles and Responsibilities

The Head teacher will:
- Actively support and encourage staff, praising good practice and supporting staff development, in-service training (particularly for the Computing Lead) and acquiring resources

The Computing Lead will:
- Advise and support staff in planning, teaching and learning of computing;
- Monitor teachers' planning as part of ongoing subject monitoring and evaluation of practice;
- Use feedback from monitoring to develop an action plan for computing with realistic and developmental targets;
- Audit, identify, purchase and organise all computing resources, ensuring they are readily available and well maintained;
- Document and review the agreed ways of working through a written policy document and knowledge and skills progression
- Compile a portfolio of children's computing work to evidence progression and examples of good practice for staff to refer to;
- Keep up to date on new developments in the use of computing in the curriculum and inform staff
- Promote music throughout the school

The Class Teacher will:
- Be responsible for the planning and teaching of computing as set out in this policy;
- Use 'Key Performance Indicators' to inform teaching and learning as well as assess children's understanding;
- Follow the subject's long term plan and develop termly year group medium term plans and pacing sheets;
- Embed the computing knowledge and skills progression document within planning and quality first teaching;
- Create and regularly refer to a key vocabulary display within the class linked to each theme

Resources

The school has a range of resources to support the delivery of the Computing curriculum, the Early Years Framework and learning across all areas of the National curriculum. Each class (Year 1- Year 6), have some computers which the pupils can access and there are shared iPads across all year groups. The EYFS have additional iPads which can be used in made school along with other technological toys and equipment, for example, Bee-Bots. Over this academic year, we will be enhancing our curriculum resources further through the purchasing of Crumbles and Micro:Bits. Teachers are mindful when setting tasks online and take into account not all pupils may have access to a device at home when they are planning. In addition, we invite visitors into school to run workshops and sessions with children, staff and parents to inform and inspire pupils. The computing action plan feeds into the schools' priorities for equipment and future expenditure. Any expenditure is reviewed by the head teacher to look at the impact the purchase will have on pupils' learning.

School Website and Social Media

Our school website is located at www.rokebyparkprimary.org.uk.

The school has a Twitter account to share what is happening in school and for the purposes of self-publicising. Staff are asked to tweet weekly to share events and successes within each class, and is used as an additional information resources for the parents.

The school also has a Facebook account to share what is happening in school and for the purposes of self-publicising. This account is run by the admin staff and is used to share events, school information and successes within each class.

The school uses 'Ping' and 'ClassDojo' which enables the school to keep in touch with the parents via text.

Copyright and Licensing

All software used will be in strict accordance with the licence agreement. RM support the school with technical issues as well as ensuring that software on the computers is up to date and in accordance to licences.

Personal software should not be loaded onto school computers.