MERTON BANK PRIMARY SCHOOL

Computing Policy

INTENT:

At Merton Bank Primary School, we understand that a high-quality computing education is essential for pupils to understand modern information and communication technologies (ICT), and for them to use these skills to become responsible, competent, confident and creative participants of an increasingly digital world.

Throughout this policy, we outline how we, as a school, will deliver the requirements of the Key Stage 1 and Key Stage 2 computing programmes of study, and to ensure that our pupils have the digital skills they need. We aim to inspire pupils to continue to learn and apply the skills they learn at high school, university, and beyond in the workplace.

At Merton Bank, we ensure that all children are provided with the opportunity to reach their full potential, within a positive and nurturing environment. Through an engaging and challenging computing curriculum we aim to encourage children to become motivated and resilient learners who are never less than their best. The children undertake a broad and balanced programme of study that takes account of abilities, aptitudes and physical, emotional and intellectual development.

IMPLEMENTATION:

Computing will be delivered in accordance with the statutory entitlement as specified in the National Curriculum (September 2014). 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

To ensure that the Computing programmes of study and attainment targets are translated into practical and manageable teaching plans, children will be taught in line with the agreed progression documents. The Computing long-term plan should be referred to in order to see which units of work should be taught when. This plan also specifies continuous work and cross curricular links with various aspects of the 2014 curriculum.

National Curriculum Aims

Key Stage 1 Objectives

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 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

Key Stage 2 Objectives

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
- use logical reasoning to explain how some simple algorithms work 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
- use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content
- 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
- use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact

Wider Curriculum

Computing will also be embedded into the Wider Curriculum which will give children the opportunity to use computing alongside other subjects to demonstrate and practise skills in a variety of situations. Our bespoke curriculum gives children the opportunity to…

- Build creativity opportunities into planning for the class based on skills-based objectives
- Devise activities that allow children to pursue their interests
- Plan learning opportunities with a cross-curricular approach
- Plan for a range of teaching and learning styles so children can show their creativity e.g. role play, hands on experimentation, problem solving, discussion, collaborative work
- Give children clear but challenging and achievable goals
- Share objectives with the children and give them opportunities to choose ways of working and how to shape the direction of work
- Use stimulating starting points to capture interest and fire imagination
- Actively encourage questioning

Early Years Foundation Stage

Children will enter the early years setting with varying levels of experience of using computers. Some children will have considerable experience of the use of computers and remote-control type toys. However, there will still be a need to direct these skills into more focussed learning. In addition, there will be children who will be using the computer or other ICT equipment for the first time. ICT in the early years setting is much more than simple mouse control; it can be an exciting and motivating activity used to develop many important areas of learning.

Teachers who teach early years children need to ensure that the children are being given opportunities for the use of ICT in order to develop skills across the areas of learning. These ICT opportunities should be available freely on continuous provision.

Planning and assessment

All teachers will plan for ICT and computing in accordance with their specified year group units taken from the Kapow Computing scheme of work. In addition, computing will be planned for and taught within all curriculum subjects in Key Stage 2 and Key Stage 1. Hence not only teaching ICT and computing skills but using ICT across the curriculum in practical and creative ways to enhance the teaching of other subjects.

Wherever possible planning will be undertaken with other year group colleagues and the plans then shared with other teaching and non-teaching staff. Each member of staff will be responsible for planning computing work to meet the needs of the individuals in their class. Planning should also consider the weekly time allocation for Computing as defined by the laptop timetable and in the National Curriculum programmes of study.

SEND children will access their current year group objectives where appropriate but, on occasion, may be taught prior objectives from a previous year group in order to ensure a secure foundation of knowledge and understanding.

At Merton Bank, assessment is an integral part of the teaching process. Assessment is used to inform planning and to facilitate differentiation. The assessment of children's work is on-going and responsive to ensure progress is made by all. Feedback is provided to children in a timely fashion and work is marked in accordance with the school's marking policy; this affords children the opportunity to engage in meaningful dialogue with their teacher about their

learning. Staff will use half termly trackers to update children's progress in relation to the computing objectives covered in that half termly topic area. Comments are made as to the positive aspects and areas for improvement to assist the subject lead in altering the curriculum and resources as necessary.

Role of subject leader

The role of the computing subject leader is to monitor and support colleagues in the teaching of computing; in order to do so they must be informed about current developments in the subject and provide strategic lead and direction for the subject across school.

Monitoring takes place regularly through book scrutinies and lesson observations undertaken by the subject leader. Feedback is given to relevant staff members in a timely and constructive fashion in order to continually improve the teaching of computing at Merton Bank. Furthermore, pupil and staff voice are also taken into consideration via informal interviews and questionnaires which enable the subject leader to gain further insight into the impact and quality of computing teaching across school.

The subject leader must continually ensure that challenging, quality teaching and learning opportunities (in line with national curriculum requirements) are being provided.

Role of the class teacher

At Merton Bank all teachers share responsibility for making their pupils computer literate. This means that all teachers themselves will need to become 'computing' literate to an appropriate level – acting as role models with their use of ICT. The Computing Subject Lead will provide support and assistance for this and is responsible for monitoring computing throughout the school.

Class teachers are responsible for their own class organisation and teaching style in relation to the teaching of computing, but at the same time must ensure these reflect the overall aims and philosophy of this policy. Due to the varied nature of computing, direct teaching will be carried out either to pairs, small groups or a whole class situation. Children will sometimes be grouped by ability (mixed or similar), age (in mixed age classes) or in mixed friendship groups. There may be occasions when software or a specific skill might need to be introduced to an individual child depending on the specific task. This will allow children to work on individually prepared tasks with work matched to each child's own development needs.

Pupils should experience the frequent use of computer technology, readily increasing their independence and ability to choose the appropriate software for a given curriculum activity. Computing should be embedded in all other subjects, with Interactive screens being used to enhance lessons in an exciting, *interactive*, stimulating way wherever appropriate. Appropriate classroom strategies should be adopted to ensure equal access to all aspects of computing for all children.

The range of software and planned activities should provide for the progression of skills and concepts, and the practical application of these. Where activities are lengthy, rotas may need to be used to record individual pupils' access to computers, using a flexible timetable where necessary. Knowledge organisers and mini quizzes produced by the subject lead are to be used by the class teacher to support the delivery of each topic area of the computing curriculum and to begin to assess the children's subject knowledge.

IMPACT:

The impact of our computing teaching will ensure that our children will attain the necessary *breadth of study* by being given opportunities to work with a range of information, explore with a variety of tools and devices, and compare the different uses of ICT.

We will provide children of all abilities the opportunity to develop their skills, knowledge and understanding, thereby ensuring continuity and progression, alongside an increasing level of challenge as they move up through the school.

Through our computing curriculum our children will be provided with the opportunity to reach their full potential, within a positive and nurturing environment. Through an engaging and challenging computing curriculum we will encourage children to become motivated and resilient learners who are never less than their best.

COVID 19:

As a result of the 2020 global COVID 19 pandemic, we are aware of the huge importance of providing children with the opportunity to revisit and consolidate their computing skills. Whilst our school approach to our computing curriculum remains unchanged, every effort has been made to ensure staff are aware of missed learning opportunities from the previous year and how best to build and develop a child's understanding and skills. A recovery curriculum plan has been drawn up, where necessary, to highlight to class teachers where there may have been 'missed parts of the curriculum' and how they can ensure that these areas are covered alongside their current years teaching. Throughout the year, children will consolidate and refine their skills to ensure our children develop confidence in all areas of the computing curriculum.

Written by Lizzy Baker (Subject Leader)
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