MANEY HILL PRIMARY SCHOOL

COMPUTING POLICY

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COMPUTING POLICY

Introduction

The use of computers and computer systems is an integral part of the National Curriculum and is a key skill needed for everyday life. In a rapidly-changing digital world there are a range of tools which are used to communicate, interpret and express information. At Maney Hill Primary School we recognise that pupils are entitled to a broad and balanced computing education to learn the skills needed to participate effectively in a digitally modern world. This policy document is a statement of the aims, principles and strategies for the teaching and learning of computing.

Aims

In our teaching of computing, we aim to:

- Provide a relevant, challenging and enjoyable curriculum for all pupils.
- Provide a safe environment for computing and develop an understanding of how to use technology safely and responsibly.
- Encourage pupils to use their computing skills to enhance learning throughout the curriculum.
- Equip pupils with the confidence to respond to new developments in technology.
- Equip pupils with the skills to use digital tools and technologies throughout their lives.
- Develop pupils understanding of how to effectively communicate using technology, select and use information for a purpose and how to apply principles of computer science.

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.

Rationale

The school believes that computing:

- Is an essential life skill to participate fully in a digital world.
- Provides immediate access to rich and varied sources of information.
- Communicates and presents information in new and different ways to help pupils access, understand and use information.
- Ensures that pupils become digitally literate and confident with computer science so they are able to use and express themselves through technology.
- Can motivate and enthuse pupils, providing different opportunities for group work.
- Has the flexibility to meet the individual needs and abilities of each pupil.

Curriculum Framework

The fundamental skills, knowledge and concepts of the subject are set out in the National Curriculum 2014.

Early Years

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 experiences in the real world, such as in role play. Pupils gain confidence, control and language skills through opportunities to use the Beebots, taking photos, 'paint' on the whiteboard or program a toy using resources such as Purple Mash. Recording devices can support pupils to develop their communication skills. Pupils in the Early Years also have access to iPads as they become more proficient in their use of ICT.

Key Stage One

By the end of Key Stage One, pupils should 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 both precise and unambiguous.
- 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 Two

By the end of Key Stage Two, 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. Pupils recognise acceptable and unacceptable behaviour and identify a range of ways to report concerns about content and contact.

Planning

Curriculum planning in computing is in three phases (long-term, medium-term and short-term). Long term and Medium term planning shows how teaching units are distributed across the year groups, and how these fit together to ensure progression within the curriculum. The medium-term plans identify the key learning objectives for the half term in each unit of work.

The class teacher is responsible for writing the short-term plans using a computing scheme of work to support delivering the computing national curriculum. Computing lessons can be planned as specific, discrete lessons identifying a specific learning objective to develop technical skills and vocabulary such as a lesson focussed on 'debugging' a program.

Lessons may also be planned to provide pupils with the opportunity to apply their computing skills across the curriculum. The lesson plans should still include details of the specific computing learning objectives that are covered and key technical vocabulary.

Assessment

Assessment is a key part of the teaching and learning in our school. Assessment should be purposeful through observations and completed work to inform teachers and support staff of what children have learnt. Key objectives which will be assessed are shared with pupils by discussing learning objectives at the beginning and end of the lesson. Details will also be shared with parents in the annual pupil report to parents.

Assessment can be broken down into:

- Formative assessments are carried out to provide opportunities for reflection on the current learning objects which can then feed into future planning, this could include pupil/peer assessments, observations and reviewing focused tasks from the lesson.
- Summative assessments are used to review pupils outcomes at the end of a computing unit. This could include moderating pupils work against the expected standard or teacher assessments against the national curriculum objectives.

Resources

Computing contributes to teaching and learning in all curriculum areas. The school acknowledges the need to continually maintain, update and develop the resources to effectively deliver the computing curriculum across the school. To support computing across the school there are two sets of laptops (KS1 and KS2) and three sets of portable iPads (EYFS/KS1, Lower KS2 and Upper KS2). All laptops and iPads connect to School's wireless network for access to the internet and are stored centrally for easy access. New Promethean ActivPanel boards have been fitted in

KS1 and SMARTBoard™ Interactive Whiteboards are fitted in KS2 which are used daily for whole class teaching in all subjects. As well as these larger pieces of hardware, all classes in the school also have access to digital cameras stored in each classroom.

Computers across the school are installed with a variety of software to aid computing teaching and its application across the curriculum. This includes:

- Purple Mash software.
- Word processing software, ranging from 2Simple to Microsoft Word and Microsoft Publisher.
- Spreadsheet software, including Microsoft Excel.
- Presentation software, including Microsoft PowerPoint.
- Painting and drawing software.
- Photo editing software.
- Music editing software such as Audacity™.
- Control programs such as LogoMotion™.
- Communication software such as Skype™.

The iPads also contain a variety of apps, organised into folders for different curriculum areas.

Hardware and software issues

Any problems involving hardware and software should be emailed directly to the technician. The technician is available every other Tuesday and remotely by telephone or email.

Health and Safety

The school is aware of the health and safety issues involved with the use of computing tools. Pupils need to be made aware of:

- Potential hazards and risks to themselves and others when using computing tools, for example, internet safety, cyber bullying, trailing wires and health issues such as, repetitive strain injury and eyesight problems.
- The steps they will need to take to control risks e.g. safety rules for the internet, correct posture etc.
- The action they should take if risks occur such as reporting it to a member of staff immediately.

  (See E-safety Policy)

Special Educational Needs and Disabilities (SEND)

All individuals will be given the opportunity to develop their full potential in computing irrespective of race, culture, gender, religion or ability.

The school has a responsibility under the government's Inclusion Strategy to provide 'effective learning opportunities for all pupils', setting out three principles that are essential to developing a more inclusive curriculum:

- Setting suitable challenges.
- Responding to pupil's diverse learning needs.
- Overcoming potential barriers to learning and assessment for individuals and groups of pupils.

(See SEND Policy)

Equal Opportunities

All pupils are of equal value and will have opportunities to learn and be successful. It is important that all pupils should feel that they belong, and we aim to promote a feeling that they are accepted, welcomed and valued so that they can contribute and participate fully in all areas of their school life. In our Computing teaching we will be proactive in removing barriers to learning and success to enable all pupils to develop positive attitudes.

(See Equal Opportunities Policy)

Role of the Subject Leader

The class teacher is responsible for the organisation of computing in his/her class. However, the computing subject leader is responsible for monitoring the standard of the children's work and the quality of teaching. 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.