

Introduction

The use of 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 world there now exists a wealth of software, tools and technologies that can be used to communicate, collaborate, express ideas and create digital content. At Moorpark Junior School we recognise that pupils are entitled to a broad and balanced computing education with a structured, progressive, approach to learning how computer systems work, the use of IT and the skills necessary to become digitally literate and participate fully in the modern world. The purpose of this policy is to state how the school intends to make this provision.

Intent

The school's aims are to:

- Provide a broad, balanced, challenging and enjoyable curriculum for all pupils.
- Develop pupil's computational thinking skills that will benefit them throughout their lives.
- Meet the requirements of the national curriculum programmes of study for computing at Key Stage 2
- To respond to new developments in technology
- To equip pupils with the confidence and skills to use digital tools and technologies throughout their lives.
- To enhance and enrich learning in other areas of the curriculum using IT and computing.
- To develop the understanding of how to use computers and digital tools 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.

Rationale

The school believes that IT, computer science and digital literacy:

- Are essential life skills necessary to fully participate in the modern digital world.
- Allows children to become creators of digital content rather than simply consumers of it.
- Provides access to a rich and varied source of information and content.
- Communicates and presents information in new ways, which helps pupils understand, access and use it more readily.
- Can motivate and enthuse pupils.
- Offers opportunities for communication and collaboration through group working both inside and outside of school.
- Has the flexibility to meet the individual needs and abilities of each pupil.

Objectives

By the end of key stage 2 pupils should be taught 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.

Resources and access

The school acknowledges the need to continually maintain, update and develop its resources and to make progress towards consistent, compatible computer systems by investing in resources that will effectively deliver the objectives of the National Curriculum and support the use of IT, computer science and digital literacy across the school. Teachers are required to inform the computing subject leader of any faults as soon as they are noticed. Resources if not classroom based are located in shared areas of the school. A service level agreement with CORE IT Support is currently in place to help support the subject leader to fulfil this role both in hardware & software. Computing network infrastructure and equipment has been sited so that:

- Every classroom has a computer connected to the school network and an interactive whiteboard with sound and video facilities.
- There are 240 Chromebooks across the school which are shared equally across the school.
- There are 30 iPads across the school, shared between the year groups.
- Internet access is available in all classrooms.
- Each class has an allocated slot per week for teaching computing as a discrete subject.
- Pupils may use IT and computing independently, in pairs, alongside a TA or in a group with a teacher.
- The school has a computing technician who is in school every Thursday, 12:30 – 4:00
- A governor will be invited to take a particular interest in computing in the school.

Curriculum coverage and progression

- Planning for Computing is implemented using the National Curriculum Programme of Study for Computing.
- Long term planning has been developed using the NCCE computing scheme and demonstrates coverage and progression of the attainment expectations at the end of Key Stage 2 as identified in the Computing PoS.
- Medium term planning takes account of differentiation and progression and is also based on the NCCE computing scheme.
- Key skills in information technology are developed through Multimedia and Handling Data threads and are integrated into learning in other curriculum areas.
- E-Safety is also developed through PSHE, explicit online safety sessions and the computing curriculum.
- Opportunities for technology as a tool to support learning and teaching in all areas are identified in curriculum planning.
- A model of blended learning and flipped learning has been introduced, but is not yet embedded.
- Online learning is implemented through Google Classrooms and homework is also set online.

Assessment

- Progress is assessed on an on-going basis using the end of unit summative assessment from each unit of the NCCE computing scheme of work. This ensures teachers are aware of individual pupil's progress in computer science, information technology and digital literacy.
- A record of basic skills is also regularly updated.
- Self and 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 use to inform future planning.
- Each class teacher maintains a record, indicating pupils that are working beyond or below age-expected attainment. This is passed on to the next class teacher.
- Open questions are used to challenge children's thinking and learning.
- Children are encouraged to evaluate their own and others' work in a positive and supportive environment, including peer assessment.
- Teacher's judgments are supported through an electronic portfolio of evidence which provides examples of age-expected attainment.

- Information is shared with the school community through the school website, display, celebration events, newsletters, and end of year reports.

Online safety

- The school has an Online Safety policy in place that details how the principles of online safety will be promoted and monitored.
- The school promotes the principles of online safety and consistently models and shares the principles so that they are understood by not only children but by the whole school community.

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 SEND 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 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 Computing subject leader provides an annual report to governors on the impact of the Computing curriculum and how resources are being effectively deployed. Governors may include Computing in their learning walks around 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 CORE IT and the technician is responsible for the maintenance of computers, printers, the school network and keeping software up to date. The subject leader liaises with the technician to ensure that the systems are running efficiently.

Health and safety

- Age appropriate class and safety rules are displayed in the learning environment.
- Equipment is maintained to meet agreed safety standards.
- Further guidance can be found in the school's health and safety policy.