

Monkton Church of England Primary School

Computing Policy

Lead Person: Joanne Guilder

Policy Date: November 2022

Review Date: November 2025

Signatures:

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Chair of Governors Executive Headteacher



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| C:\Users\Wendy\AppData\Local\Microsoft\Windows\INetCache\Content.MSO\69D82987.tmp    **Monkton Church of England Primary School** |
| **Compassion, Courage, Justice**  **Jesus said, ‘Go and do the same.’** |
| Our school has compassion at its heart, which inspires us to be people of courage, who care for ourselves, stand with others and seek justice as we grow and discover the world around us.    By knowing each individual, our learning environment is shaped to encourage creativity, promote challenge through our learning values and nurture spirituality, ensuring all thrive. |
| **The Parable of the Good Samaritan**    Luke 10:25-37 English Standard Version (ESV) |
| **Christian Foundations** |
| **Compassion   Courage**  **Justice** |
| **As a Federation, we are passionate about every individual flourishing, so that they can be nurtured and develop as well-rounded children, living life in all its fullness.**    Every policy is written with our Christian Vision and Foundations in mind. |

**Intent**

At Monkton Church of England School, we aim to prepare our learners for their future by giving them the opportunities to gain knowledge and develop skills that will equip them for an ever changing digital world. Knowledge and understanding of ICT is of increasing importance for children’s future both at home and for employment. Our Computing curriculum focuses on a progression of skills in digital literacy, computer science, information technology and online safety to ensure that children become competent in safely using, as well as understanding, technology. These strands are revisited repeatedly through a range of themes during children’s time in school to ensure the learning is embedded and skills are successfully developed. Our intention is that Computing also supports children’s creativity and cross curricular learning to engage children and enrich their experiences in school.

**Implementation**

Our Computing curriculum encourages all to flourish to become the very best version of themselves they can possibly be. We teach the National Curriculum, supported by a clear skills and knowledge progression using the Teach Curriculum scheme. To ensure a broad range of skills and understanding, Computing is taught across three main strands: digital literacy, computer science and information technology. As part of information technology, children learn to use and express themselves and develop their ideas through ICT for example writing and presenting as well as exploring art and design using multimedia. Within digital literacy, children develop practical skills in the safe use of ICT and the ability to apply these skills to solving relevant, worthwhile problems for example understanding safe use of internet, networks and email. In computer science we teach children to understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation. Also to analyse problems to computational terms, and have repeated practical experience of writing computer programs in order to solve such problems.

At Monkton, we give children access to a wide range of good quality resources and provide cross curricular opportunities for children to apply their Computing knowledge and skills. Online safety is taught within each unit and on a continuous basis as we ensure all children know how to remain safe online. Online safety procedures are communicated with all staff and parents, as we want everyone in our community to be safe and informed.

**Impact**

The implementation of this curriculum ensures that when children leave Monkton school, they are competent and safe users of ICT with an understanding of how technology works. They will have developed skills to express themselves and be creative in using digital media and be equipped to apply their skills in Computing to different challenges going forward.

Aims and objectives

A high-quality computing education equips pupils to understand and change the world through logical thinking and creativity, including by making links with mathematics, science, and design and technology. The core of computing is computer science, in which pupils are taught the principles of information and computation, and how digital systems work. Computing equips pupils to use information technology to create programs, systems and a range of media. It also ensures that pupils become digitally literate – able to use, and express themselves and develop their ideas through, information and communication technology – at a level suitable for the future workplace and as active participants in a digital world.

The aims of computing are to enable children:

* 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.

Teaching and learning style

As the aims of computing are to equip children with the skills necessary to use technology to become independent learners, the teaching style that we adopt is as active and practical as possible. While at times we do give children direct instruction on how to use hardware or software, the main emphasis of our teaching in computing is for individuals or groups of children to use computers to help them in whatever they are trying to study. So, for example, children might research a history topic by using the Internet. Children who are learning science might use the computer to model a problem or to analyse data. We encourage the children to explore ways in which the use of computers can improve their results, for example, how a piece of writing can be edited or how the presentation of a piece of work can be improved by moving text about etc.

We recognise that all classes have children with widely differing computing abilities. This is especially true when some children have access to computing equipment at home, while others do not. We provide suitable learning opportunities for all children by matching the challenge of the task to the ability and experience of the child. We achieve this in a variety of ways, by:

* setting common tasks which are open-ended and can have a variety of responses;
* setting tasks of increasing difficulty (not all children complete all tasks);
* grouping children by ability in the room and setting different tasks for each ability group;
* providing resources of different complexity that are matched to the ability of the child;
* using teaching assistants to support the work of individual children or groups of children.

Computing curriculum planning

The school uses TeachComputing through STEM to support planning. We adapt all planning to meet the needs of our school and children.

We carry out the curriculum planning in computing in three phases (long-term, medium-term and short-term). The long-term plan maps the computing topics that the children study in each term during each key stage. The computing co-ordinator works this out in conjunction with teaching colleagues in each year group, and the children often study computing as part of their work in other subject areas. Our long-term computing plan shows how teaching units are distributed across the year groups, and how these fit together to ensure progression within the curriculum plan.

Our medium-term plans are adopted and adapted from the Teachcomputing Scheme and these give details of each unit of work for each term. They identify the key learning objectives for each unit of work and stipulate the curriculum time that we devote to it. The computing co-ordinator is responsible for keeping and reviewing these plans. As we have mixed-age classes, we do our medium-term planning on a two-year rotation cycle. In this way we ensure that we cover the National Curriculum without repeating topics.

The class teacher is responsible for writing the short-term plans with the computing component of each lesson. These daily plans list the specific learning objectives of each lesson. Computing may not be taught as a separate subject but integrated across the curriculum.

The topics studied in Computing are planned to build upon prior learning. While we offer opportunities for children of all abilities to develop their skills and knowledge in each unit, we also build planned progression into the scheme of work, so that the children are increasingly challenged as they move up through the school.

Foundation Stage

We teach computing in reception classes as an integral part of the Understanding of the World area of learning where they explore how things work. The children have the opportunity to use the computers and a digital camera. Then during the year they gain confidence and start using the computer to find information and use it to communicate in a variety of ways.

The contribution of Computing to teaching in other curriculum areas

Computing contributes to teaching and learning in all curriculum areas. For example, graphics work links in closely with work in art, and work using databases supports work in mathematics, while the Internet proves very useful for research in humanities subjects. Computing enables children to present their information and conclusions in the most appropriate way.

English

Computing is a major contributor to the teaching of English. Through the development of keyboard skills and the use of computers, children learn how to edit and revise text. They learn how to improve the presentation of their work by using desk-top publishing software.

Mathematics

Many Computing activities build upon the mathematical skills of the children. Children use Computing in mathematics to collect data, make predictions, analyse results, and present information graphically. They also acquire measuring techniques involving positive and negative numbers, and including decimal places. Programs are also used to reinforce taught topics and to consolidate knowledge. The area of algorithms also supports mathematics.

Personal, social and health education (PSHE) and citizenship

Computing contributes to the teaching of PSHE and citizenship as children learn to work together in a collaborative manner. Our ethos is that everyone is special and valued. They develop a sense of global citizenship by using the Internet and e-mail. Through the discussion of moral issues related to electronic communication, children develop a view about the use and misuse of computers, and they also gain a knowledge and understanding of the interdependence of people around the world.

Teaching Computing to children with additional and special needs

At Monkton CEP School we teach computing to all children, whatever their ability. Computing forms part of our school curriculum policy to provide a broad and balanced education for all children, as every child is equally important to us. We provide learning opportunities that are matched to the needs of children with learning difficulties. In some instances, the use of ICT has a considerable impact on the quality of work that children produce; it increases their confidence and motivation. When planning work in computing, we consider the targets in the children’s Individual Education Plans (IEPs).

Assessment and recording

Teachers assess children’s work in computing by making informal judgements as they observe them during lessons. On completion of some pieces of work the teacher marks it and comments as necessary. At the end of the year the teacher writes a written comment on the annual report to parents.

The Computing co-ordinator keeps some samples of the children’s work.

Resources

All computers are linked to the school network.

Our school has a small computer suite with 8 computers.

All classrooms have an Interactive White Board with an attached computer.

Class 1 – 2 computers

Class 2 – 2 computers

Class 3 – 3 computers

Class 4 – 4 computers

PPA Room – 1 computer

Acorn room – 1 laptop linked to a projector

Hall – Laptop attached to projector

All teaching staff have a laptop for their planning and research.

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All the school is linked to Fibre Optic Broadband.

We have 36 iPads (old and new) along with suitable charge and sync trollies. These are used throughout the school. A Mac Air laptop is used to sync these and update the software. We also now have a 8 laptops to be used in class. Class 1 also have a mini iPad for observations.

Along with the computers, the school has the following:

Hardware

* Printing via School Digital Photocopier
* Scanner within the photocopier
* Digital camera in each class
* Video recorders for each class
* 8 Beebots (in ICT Suite)
* 3 Roamer (in ICT Suite)
* 2 Digital Microscopes
* 2 3in1 Microscopes
* Sensors
* Tuff cams
* Mircophones
* Visualizer
* Trail camera
* Digital Underwater Camera
* Weather station with PC interface
* 2 Log boxes
* 1 Webcam

Software

The school has a wide range of software on the school network which supports all areas of the curriculum.

The school employs the services of a technician who visits the school for four hours on a monthly basis. This is through a local company. He is also expected to keep the iPads updated and synced.

Monitoring and review

The monitoring of the standards of the children’s work and of the quality of teaching in computing is the responsibility of the computing co-ordinator. The computing co-ordinator is also responsible for supporting colleagues in the teaching of computing, for keeping informed about current developments in the subject and for providing a strategic lead and direction for the subject in the school. The integration of ICT across the curriculum is monitored through observations.

The computing Co-ordinator is: Mrs Joanne Guilder

The Business Manager manages the purchasing of Hardware and manages the day to day issues linked to the Network.