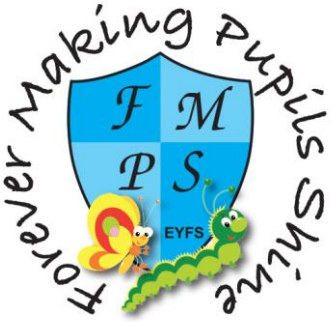
Framwellgate Moor Primary School



Computing Policy

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1) Intent

At Framwellgate Moor Primary School we understand the importance of a secure understanding of computing skills. Technology is ever-changing, and influences the lives of people around the world. We want to model and educate pupils on how to use technology creatively, purposefully and positively, and our broad knowledge-rich curriculum encompassing computer science, information technology and digital literacy reflects this. We constantly ask the why behind children's learning and not just the how. As computational thinkers, pupils will know how to analyse problems, have repeated practical experience of writing computer programs and use information technology with competence and confidence in order to create a range of content, express themselves and develop their ideas.

Computers are now part of everyday life. For most of us, technology is essential to our lives, at home and at work. 'Computational thinking' is a skill children must be taught if they are to be ready for the workplace and able to participate effectively in this digital world'.

(Simon Peyton-Jones, Chairman, Computing At School)

Early Years and Foundation Stage

Computing is embedded throughout our foundation stage curriculum. In the Foundation Stage children are given 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 feature Computing scenarios based on experience in the real world, such as in role play. Children gain confidence, control and language skills through opportunities to explore using non-computer based resources such as metal detectors, controllable traffic lights and walkie-talkie sets. Recording devices support children to develop their communication skills, this is particular useful with children who have English as an additional language. All Children have free access to various forms of IT throughout the school day.

KS1 & KS2 Purpose of Study

A high-quality computing education equips pupils to use computational thinking and creativity to understand and change the world. Computing has deep links with mathematics, science, and design and technology, and provides insights into both natural and artificial systems. The core of computing is computer science, in which pupils are taught the principles of information and computation, how digital systems work, and how to put this knowledge to use through programming. Building on this knowledge and understanding, pupils are equipped to use information technology to create programs, systems and a range of content. Computing 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.

Curriculum Aims

Our curriculum 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.

Key Stage 1

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

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.

2) Implementation

We aim to create skilful computer scientists capable of applying their knowledge in a variety of contexts. In order to achieve this, computing is embedded across the curriculum to allow children to apply new skills in all subject areas. However, computing is also taught explicitly to allow children to gain specific disciplinary knowledge. Our progressive and sequential curriculum allows for opportunity for pupils to frequently recap knowledge to ensure foundations upon which to gain new knowledge are secure. The activities are purposeful and deliberate, and throughout lessons, pupils collaborate and discuss ideas with their peers and are encouraged to ask questions. Children are emersed in relevant age-specific vocabulary to support their learning. We strive for pupils to be fluent with a range of software and hardware to best express their understanding.

Our Key Teaching Principles

- High quality computing lessons engage and inspire children in the three areas of digital literacy, information technology and computer science.
- Teachers have expert knowledge and skills of computing in accordance with educational and technological developments.
- Cross-curricular links are made especially in the teaching of IT. However, many aspects of computer science are taught discretely.
- Lessons are differentiated and adapted to ensure the needs of all children are met.
- Teachers refer back to what children have learnt in the past to ensure knowledge becomes embedded in long term memory. Therefore, are mindful as to what has been covered in previous years and units.
- Teachers take full ownership of planning and expose children to a variety of resources.
- Children are shown how to use technology safely by following correct health and safety procedures.
- Evidence of work is stored electronically.
- Teachers use formative assessment to check pupils understanding in order to inform teaching.
- Displays aim to support, develop and celebrate computing skills and achievements.
- The range of hardware/software available in school is fully understood and utilised well.

Inclusion and Equal Opportunities

Pupils with special educational needs have the same computing entitlement as all other pupils and are offered the same curriculum. However, particular application/tools are used for:

- Pupils with learning difficulties who need to be motivated to practice basic skills regularly and intensively. They will benefit from the use of programs which practice skills is set in the context of an enjoyable and motivating scenario.
- Pupils with physical disabilities and communication difficulties.

Staff must be aware of, and guard against any bias based on gender, racial or any other stereotypes.

Staff Responsibilities

The staff are responsible for:

- Reporting technical issues promptly to ITSS/school technician
- Reporting resource shortfalls to the Computing Coordinator.
- Following data protection protocaul
- Signing the 'Staff Acceptable Use Policy'.

Coordinator Responsibilities

The Computing Coordinator is responsible for:

- Assisting Senior Management with coordinating, developing and implementing the school's policy on computing.
- Promoting and overseeing staff INSET activities relating to computing development.
- Developing strategies for the efficient deployment of existing computing resources in the school. Resources are reviewed annually.
- Consultation with the Head Teacher and staff regarding computing objectives.
- Keeping abreast of and understanding current technology, developments and trends relating to computing and its use in education by attending network meetings.
- Liaising with Durham LEA Advisory Team and other educational establishments on matters relating to computing.
- Arranging for the upgrading or replacement of hardware and software as appropriate.
- Organising/managing the duties of the technician who visits school weekly.
- Completing school action plans and evaluations.
- Updating school policies relating to the teaching of computing.
- Carrying out lesson observations.
- The Computing Co-ordinator also has the role of Online Safety Co-ordinator and is responsible for Online Safety in school along with the SLT. The Head Teacher (Bethan Smith) is responsible for the school's compliance with the Data Protection Act and

also acts as Senior Information Risks Officer (SIRO), dealing with management of information and the schools data protection policy.

Staff Development

To implement this vision effectively, all staff must be be confident in all areas of the Computing Curriculum. Staff who have highlighted areas of development in computing will be identified and through communication between the Computing Co-ordinator and the Headteacher, relevant courses will be located or training brought into/held at school. Training will also be offered on new hardware and software purchased. In addition, the Computing Co-ordinator and/or other staff will be able to support staff members in using various programmes.

The Computing Co-ordinator keeps up to date with the latest technological advancements and curriculum developments by attending conferences, network and school cluster meetings. Information is then fed back to the rest of the school during staff meetings.

Maintenance

Maintenance is carried out by the school's technician who visits the school once a week to give technical support and maintain the network to its optimum capability. Any issues arising from use of hardware/software are logged using the SSE Portal .

School Liaison Transition

The school will regularly use IT to transfer information from school to school and will follow data protection legislation when doing so. However, it is appreciated that paper-based mail still has to be used and is, on occasion, the only acceptable method to use.

Legislation in Computing

When appropriate legislation appertaining to the use of IT changes, the Computing Co-ordinator will discuss this with all members of staff

Software copyright is a serious issue and is taken seriously by Framwellgate Moor Primary School. Only software which we have purchased the correct user site license will be loaded onto all hardware so that staff know it is acceptable to use on all machines. The school has a Volume License which all Apps are purchased through.

We are aware of Data Protection issues and the Freedom of Information Act.

Legislation covering computing in schools includes:

The Copyright, Designs and Patents Act 1988

The Computer Misuse act 1990

The Data Protection Act 1998

The Freedom of Information Act 2000

The Protection from Harassment Act 1997

The Malicious Communications Act 1988

Section 127 of the Communications Act 2003

Public Order Act 1986

The Defamation Acts of 1952 and 1996

Home/School Links

To foster links, the school has set up its own website to promote the school, showcase the work of children and inform the parents of termly dates etc. In addition, DB Primary should be used by staff and pupils to enhance learning at both home and school.

The school posts newsletters on the school website and also e-mails them to parents who have requested this facility.

The school uses Parent Mail app to inform parents (whom have opted to use this service) of special events, urgent notices and other school related information.

When taking children on residential visits, parents are updated via SMS using a school mobile phone (See Online Safety Policy and the privacy notice).

3. Impact

Progress is demonstrated by children knowing more and remembering more. They will recall and apply knowledge from prior learning in context and build upon this across units, year groups and keystages. Teachers quickly identify misconceptions and gaps in learning and respond by tailoring planning to best suit the needs of those pupils.

Children are assessed according to whether they are 'emerging', 'developing', 'secure' or 'mastery' within year group expectations. In order to make judgements, teachers make use of assessment documents which break down National Curriculum requirements into individual statements with 'what to look for' guidance to help teachers identify gaps in children's knowledge and understanding.

Evidence to support teacher judgements will include pupil interviews, lesson observations and scrutinies of electronic folders/cloud-based storage systems.

All staff are required to highlight county progression documents to ensure all aspects of the National Curriculum are being covered.

Reporting

Information about children's progress with regard to computing is communicated to parents at parents evenings and in their individual annual reports.

Related Policies:

- Online Safety
- Data Protection
- Anti – Bullying

- Acceptable use Policies