



Milecastle Primary School

Computing Curriculum Policy

Reviewed September 2018



Rationale

At Milecastle 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. The teaching and learning of computing will incorporate the objectives of the National Curriculum. Teachers will also provide learning opportunities from other areas of computing which teach the children new skills, stretch their abilities and consolidate their knowledge. The children will use PCs, ipads, digital cameras and programmable toys. These are a few of the tools that can be used to acquire, organise, store, manipulate, interpret, communicate and present information. Through puzzles and challenges the children will gain an insight into how computers work and how we program them. Children will learn that it is a positive learning experience to experiment, find difficulties, and to then overcome such problems by refining their designs or programs.

Aims and Objectives

- Provide a relevant, challenging and enjoyable curriculum for computing for all pupils.
- Meet the requirements of the national curriculum programs of study for computing
- Use computing as a tool to enhance learning throughout the curriculum.
- To respond to new developments in technology.
- To equip pupils with the confidence and capability to use computing throughout their later life.
- To enhance learning in other areas of the curriculum using computing
- To develop the understanding of how to use computing safely and responsibly

Role of the Computing Coordinator

- Manage the computing budget, and keep appropriate records of expenditure in order to review them and make suggestions for the future.
- Secure and maintain computing resources, and advise staff on the correct use of digital technologies.
- Offer help and support to all members of staff in their planning, teaching and assessment of computing.
- Keep up-to-date with new developments in computing and communicate such information and developments to colleagues.
- Attend appropriate training courses and meetings
- Monitor and encourage effective use of 360 zone and offer support to staff when using it
- Ensure that all staff and pupils are aware of and comply with E-Safety Policy

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 experience in the real world, such as in role play. Children gain confidence, control and language skills through opportunities to 'paint' on the whiteboard or program a toy. Recording devices can support children to develop their communication skills.

Key Stage 1

In 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 a sequence of instructions.
- Write and test simple program.
- Use logical reasoning to predict and computing the behaviour of simple programs.
- Organise, store, manipulate and retrieve data in a range of digital formats.
- Communicate safely and respectfully online, keeping personal information private, and recognise common uses of information technology beyond school.

Key Stage 2

In 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.

Planning and Delivery

All teachers have been provided with a year group specific planning guide from Purple Mash. This was written using the curriculum objectives for computing and therefore provides structure and progression throughout school.

Each class in KS1 and KS2 has been given a designated time slot in the computer suite to use the PCs. The children will have the opportunity to use the computers in different areas of the curriculum for research and processing as well as to meet the computing curriculum aims. It is also expected that teachers will utilise the 60 iPads to enhance other areas of the curriculum wherever possible.

Resources

- Every classroom has a computer connected to the school network and interactive whiteboard with audio, DVD and video facilities
- Each classroom has a visualiser camera
- The computer suite has 31 PCs
- There are 60 iPads with Wi-Fi access available for use in school
- Each class from Y1-Y6 has an allocated slot across the week for teaching of specific computing skills
- The computer suite and iPads are available throughout the week for additional sessions (timetable in staffroom)
- 15 digital cameras are available for use in school and on visits
- There are a selection of programmable toys available; beebots, constructabots and crumble bots.
- A wide range of software is available to staff and pupils on the network

Assessment and Monitoring

Computing based activities and experiences within the Foundation Stage will be recorded and assessed using the Foundation Stage Profile. In years 1- 6 the teachers will ensure that work completed in computing lessons will be saved in a pupils individual folder in Purple Mash.

Teachers will assess the children in their class using an electronic assessment tracker which is saved on the network as an excel spreadsheet. This tracker assesses the objectives taught in the Purple Mash scheme of work and should be completed after each unit of work.