

John Fletcher of Madeley
————— *Primary School* —————

Computing Policy



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Rationale

Information Technology (IT) is a vital part in our lives. We depend upon it to help us carry out everyday tasks, from crossing busy roads to washing clothes, cooking food and communicating with friends and family. IT now forms an essential part of the infrastructure of almost every workplace and has enabled global communication in a way that would never have been conceivable 20 years ago.

The rapid evolution of the technology around us has led to the development of a wider range of resources available to the average user. In the school setting and at home, the Computing education curriculum (Computing) opens a wealth of opportunities for our children, capitalising on the growth of online educational resources and allowing children to communicate their ideas over a much wider area.

Aims and Objectives

Children when participating in Computing activities should be able to:

- Experiment with control technology, learning to create code for use on a range of virtual and physical devices in a way that develops their critical and evaluative thinking;
- Create and share their learning using technology in a range of textual and visual contexts - for example, by creating printable documents, web pages, 2D images, 3D models, 360-degree virtual tours, animations, video clips, presentations, podcasts and digital music;
- See everyday technology at its 'grass roots' level, developing a secure understanding of how it works by exploring these systems in a school setting (often overlapping with studies of control technology);
- Learn to respect technology and its capabilities, handling devices in a suitable way and using them responsibly in class and at home;
- Become safe and responsible e-Citizens, ensuring that they conduct themselves in a way that reflects the Christian and core values of our school and wider community.

Our aim at John Fletcher of Madeley School is to ensure that all children have equal access to Computing and to encourage them to use it proactively in their learning. Used to best effect it is an extremely effective method of peer and self-review. The nature of technology - and the ways in which it is accessed - is ever changing and so the School has acquired suitable resources to reflect this. The school has wireless internet connectivity throughout its site, with the signal extending well into the outside areas so that we can make use of our beautiful grounds. At present the School uses:

- Standard Windows laptops in order to access Telford & Wrekin Council's IT infrastructure - this includes a whole class set with a charging station and a group set in each class;
- A set of Chromebooks with its own charging station;
- Android tablets in each KS2 class;
- iPads throughout both Key Stages;
- Lynx CleverTouch boards in each classroom and in the school halls.

Curriculum

A new Computing Scheme of Work, planned by the School's Computing lead, is in development at the time of writing. This acknowledges the children's existing experiences of technology and extends understanding using many principles and initiatives associated with STEM (Science, Technology, Engineering and Mathematics). This Scheme of Work allows opportunities for teachers to make valuable links with other areas of the curriculum whilst developing the children's core IT skills.

The children are encouraged to become confident users of Computing. They will develop a wide range of skills, including:

Basic Skills

- Logging into the Local Authority system and other online resources such as Times Tables Rockstars, NumBots, Scratch and Bug Club;
- Developing mouse and keyboard skills (with support for children with SEND);
- Learning and using gestures to engage different functions of touch-screen devices;
- Locating, launching and closing apps;
- Cutting and pasting text and images;
- Opening, saving and printing work;
- Switching between programs (multitasking);
- Using a search engine to retrieve information;
- Navigating the World Wide Web using a browser;
- Describing the nature and outcomes of a task using appropriate technical vocabulary.

Collecting Information

- Digitising printed images for later use - including using apps such as Scanner Pro;
- Capturing activities undertaken in and out of school, e.g. productions, community activities, sports events, trips, residential visits etc.

- Recording audio for use in a range of contexts, such as recording our own stories and creating soundtracks for our own videos;
- Using sensors to collect information for a science or geography project.

Communicating Information

- Drafting and presenting ideas using word processors, desktop publishers, book creators and presentation software;
- Using a spreadsheet to communicate and interrogate numerical data;
- Using art apps to create pictures, plans or diagrams;
- Sending email messages and replying appropriately using online comment boxes, paying close attention to what they have been taught about responsible e-Citizenship;
- Creating objects for a purpose using Computer Aided Design;
- Communicating ideas through video;
Creating learning objects for other children by combining many of the above resources.

Handling Data

- Searching for specific information using local and online databases, such as census records for the local area;
- Making links between different types of data and questioning their findings;
- Checking data for its accuracy and comparing it with other forms;
- Understanding and explaining how this technology may be used outside of school.

Control Technology

- Using physical devices, such as Robot Mouse, BeeBot, Roamer and ProBot to develop an awareness of simple programming;
- Controlling a sprite onscreen using a series of simple commands;
- Producing code for a sprite using more than one algorithm, for example using Play Lab or Scratch;
- Developing critical thinking by evaluating and debugging their own and others' programs;
- Build and control an object using microcomputers such as BBC micro:bit and Raspberry Pi, often combining digital and non-digital materials.

The new Scheme of Work

The new Scheme of Work allows pupils to develop key skills in the following three strands:

- **Take Control!** - Control technology through coding, with 'tinkering' units designed to encourage children to replicate everyday technology and create innovations of their own.
- **Make and Share!** - Communication of images, 3D modelling, texts, video and audio.
- **Wise Up!** - A combination of e-Citizenship and understanding everyday technology in practice; checking the veracity and reliability of digital information sources.

The children have ample opportunities to use Computing in other areas of the curriculum, for example in exploring a Maths website or making use of the school's digital microscopes and document cameras to examine elements of nature in detail. Some children may work at a class desktop, laptop or tablet as part of a specific activity to improve their spelling or reading skills and to communicate their ideas in print.

Assessment, Recording and Reporting

Assessment takes the form of in-lesson questioning. Children's work is then saved, recorded in photographs, videos, audio recordings or in printed form. Teachers assess pupils' work by keeping check of tasks completed and the level of understanding at which the children work. The new Scheme of Work has been designed to make this process as effective but as manageable as possible.

Celebrating children's work

Our children's work is highly valued and is regularly displayed around school. Where possible and appropriate, it is visible on our School website.

Equal Opportunities

Our resources are available to all children irrespective of age, ability, gender or background. Where appropriate, activities and resources are customised for children with specific educational or physical difficulties or needs.

Safety

Physical Safety

All devices will be checked regularly to ensure that they are safe to use. Teachers report issues with devices to either the Computing lead or to our on-site IT technician. They are PAT tested annually. Adults in classrooms ensure daily that they are working correctly and safely. Cables and electrical wiring for wired devices will be kept neat and tidy and children are taught to ensure that cables are not trailing where they can be a trip hazard.

Security

We do not allow access to the Internet without signed permission from parents. This is sent to all parents and must be completed. The same applies to the inclusion of children's names, photographs or onscreen appearances on our School website or the School's official social media accounts. Permissions are then kept securely on file and are consulted prior to such activities being carried out.

In the interests of security, any software to be installed on school laptops is first checked and approved by the Computing lead and/or on-site IT technician.

If a child has brought in a piece of Computing on removable media to share with others, teachers will check the removable media to ensure that any files are safe to view or send it on to the Computing lead to do so.

We cannot accommodate software that has been brought from home as it may contain harmful program code. We cannot copy software for children to use at home as this is an illegal practice. However, the Computing lead is happy to give advice on suitable alternatives to popular titles, where appropriate.

Home-School links

Our School website which can be viewed at <http://www.johnfletcherofmadeley.co.uk/> and used as a pathway to suitable educational sites and activities. More and more children and their families are using their home devices to explore different areas of their learning, create items and share them with us. These have included:

- PowerPoint presentations;
- 3D houses and other models created using Computer Aided Design software;
- Posters made using desktop publishing;
- Video clips and audio recordings;
- Images created using art packages.

Review

This Policy will be reviewed June 2021