



Computing Policy Seven Stars Primary School

This policy was written by Rachel Warner. It will be reviewed and revisited in November 2023. This Policy covers our approach to Computing throughout our school.

Taken from the Open Doors Curriculum:

Door 1 – Core knowledge and skills

We believe that an effective curriculum for Reading, Writing, Maths and Science is a door for all pupils to enter into a more fulfilling and hopeful life where they can flourish and aspire to reach their full potential having a positive impact on the flourishing of those around them. Computing is part of this because throughout computing children are using the skills they have learnt to fully access the digital world around them. Children can use computing to read an online blog, write and build a website, build a pictogram, use a spreadsheet, making a graph and writing an email.

Door 2 -The World

Provide a curriculum that enables all children to develop a growing knowledge, understanding and appreciation of the world (local and global). Computing supports this by allowing children to learn about others by conducting information searches using the internet.

Door 3 – Healthy body, Healthy Mind, Healthy Lives

We want our children to be healthy; to have a healthy image of themselves as individuals. Computing is strongly linked to future aspirations. Children who are confident with computing will be able to access future learning and high quality jobs. Computing opens a world of skills and knowledge.

Door 4 – Creativity

For our children to enjoy a strong practical curriculum. A curriculum where children will anticipate problems, imagine solutions, evaluate, adjust and problem solve as they go. Computing opens up a world of creative thinking through coding, animation and creating pictures.

Door 5- Communication and Language

Provide a curriculum that gives all pupils the opportunity to develop their communication and language skills acquiring rich, varied and essential vocabulary alongside increasingly sophisticated and mature ways of engaging socially in conversation, presentation and writing appropriate to the audience and context. Computing supports this through presentations, blogging, emails and making posters.

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, design and technology and provides insights into both the natural and artificial systems. The core of computing science in which pupils are taught the principles of 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.

Aims

The national curriculum for computing 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 experiences 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

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 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 computing 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 abilities in information technology. This is especially true when some children have access to IT 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 of the child
- getting the children to work with a mixed ability talk partner.
- providing resources of different complexity that are matched to the ability of the child;
- using classroom assistants to support the work of individual children or groups of children.

Curriculum planning

As a school we have chosen the Purple Mash Scheme of Work from Nursery to Year 6. The scheme of work supports our teachers in delivering fun and engaging lessons which help to raise the standards and allow all pupils to achieve their full potential. We are confident that the scheme of work more than adequately meets the national vision for Computing. It provides immense flexibility, strong cross-curricular links and integrates perfectly with the 2Simple Computing Assessment Tool. In order to ensure our children receive a broad and balanced curriculum, we have also mapped out a progression of skills using additional software to Purple Mash such as Scratch, Kodu, Word, Power Point, Publisher and Excel. Teachers liaise with the ICT Co-ordinator to adapt long term and medium term plans from Purple Mash to link in with our Curriculum topics ensuring that the skills being used during these lessons follow a progression of skills learned in previous Year groups and meet the objectives outlined in the National Curriculum for each Key Stage.



Early Years Foundation Stage

As part of the Foundation Stage children are taught seven areas of learning and development, technology runs throughout the curriculum as well as being explicitly taught through Knowledge and Understanding. Children should be taught to recognise that a range of technology is used in places such as homes and school. They select and use technology for particular purposes. The children have regular access to laptops and iPads in their continuous provision. We aim to provide our pupils with a broad, play based experience of computing in a range of contexts. We believe in the following:

- * Early Years learning environments should feature ICT scenarios based on experience in the real world, such as in roleplay
- * Pupils gain confidence, control and language skills through opportunities to 'paint' on the interactive board / devices or control remotely operated toys.
- * Outdoor exploration is an important aspect, supported by ICT toys such as metal detectors, controllable traffic lights and walkie-talkie sets.

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

Assessment

Pupil attainment is assessed using the 2Simple Computing Assessment Tool for Years 1 to 6. The tool enables staff to accurately identify attainment of pupils through the detailed exemplification it has for each key learning intention.

Resources

- All resources are procured with the underlining considerations of value: the extent at which the resources impacts on learning and the material cost of this. Protocol details for procurement can be found in the school finance policy.
- A range of resources are available which successfully supports delivering the Computing curriculum and enables all learners to reach their full potential.
- Resources are suitably maintained and replenished when needed, which is overseen by the Computing Leader.
- An itemised list of all resources is shared with staff and kept up to date by the Computing Leader (need to do this)
- Audits of school resources is shared with staff and kept up to date by the Computing Leader which informs bidding for budget allocations.
- The Computing Leader keeps up to date with the latest technology resources and will make informed decisions about possible procurement of them through their own research.
- Suggestions for getting the very best out of the resources are made available to teaching and support staff by Computer Leader.
- The Computing Action Plan details foreseen future resources procurement which is shared with senior leaders before the budget setting period.

Inclusion

At Seven Stars Primary School, we aim to enable all children to achieve to their full potential. This includes children of all abilities, social and cultural backgrounds, those with disabilities, EAL speakers and *SEN statements and non-statemented* . We place particular emphasis on the flexibility technology brings to allowing pupils to access learning opportunities, particularly pupils with SEN and disabilities. With this in mind we will ensure additional access to technology is provided throughout the school day and in some cases beyond the school day.

Monitoring, evaluation and feedback

Monitoring standards of teaching and learning within Computing is the primary responsibility of the Computing Leader. All teachers are expected to keep an online portfolio or track children's work using Purple Mash. This portfolio must contain work samples from all areas of the curriculum taught for the year group. Details of monitoring and evaluation schedules can be found in the Computing Action Plan and School Monitoring Schedule.

Monitoring will be achieved through:



- Work scrutiny
- Learning walks
- Observations
- Pupil voice
- Teacher voice
- Reflective teacher feedback
- Learning environment monitoring
- Dedicated computing leader and assessment leader time.

Evaluation and feedback will be achieved through:

- Dedicated computing leader assessment leader time.
- Using recognised standard documentation for end of year expectations.
- Using recognised national standards for benchmarking computing provision in primary schools.
- Written feedback on evaluation of monitoring activities to be provided by the computing leader in a timely manner.
- Feedback on whole school areas of development about computing to be fed back through inset or staff meetings.

Roles and responsibilities

Head teacher

- Monitoring the implementation of the computing policy and its associated policies such as the safeguarding and SEND policies
- Ratifying (In conjunction with the governing body) the computing policy, safeguarding policy and computing leader's action plan.
- Securing technical support service contracts and infrastructure maintenance contracts.
- Approving CPD and training which is in line with the whole school's strategic plan.
- Approving budget bids and setting them.
- Creating in conjunction with computing leader in respect to their specific job role description for computing.
- Ensuring any government legislation is being met.

Computing leader / coordinator

- Raising the profile of computing
- Monitoring the standards of computing and feedback to staff in a timely fashion so they can act on areas for development
- Ensuring assessment systems are in place for computing
- Maintaining overall consistency in standards of computing across the school.
- Reporting on computing at specific times of the year to the governing body, head and staff.
- Auditing the needs of the staff in terms of CPD training.
- Seeking opportunities to inspire staff in developing their practice through modelling and sharing new ideas, approaches and initiatives.
- Attending training and keeping abreast with the latest educational technology initiatives.
- Using nationally recognised standards to benchmark computing.
- Creating Action Plans for Computing and supporting a long term vision which feeds into the whole school development plan.
- Creating bids for the annual budget and monitoring budget spend.
- Keeping an up to date log of all resources available to staff.



- Procuring physical and online resources available to staff.
- Reviewing the computing curriculum and developing it as needed
- Overseeing effectiveness of the technician
- Working as needed with the SENCO / headteacher to ensure online safety provision is above adequate and all legislation is in place.

Technician

- Conducts routine scheduled maintenance / Updates on systems.
- Supports the administration and set-up of online services including the school website.
- Fixes errors / issues with hardware and software set-up, prioritising as needed.
- Routinely checks schools filtering, monitoring and virus protection.
- Sets up hardware and installations.
- Maintains network connectivity and stability.
- Supports the computer leader and head teacher with future infrastructure needs and associated projected costs.

Administration staff

- Maintains the school website content
- Posts approved requests to the school's social media accounts.
- Supports procurement of resources and technical services.
- Supports the technician with some data managements.

Health and safety

Seven Stars takes all necessary measures to ensure both staff and pupils are aware of the importance of health and safety.

Both staff and pupils are trained to handle electrical equipment correctly including how to power off and on. Pupils are reminded about the dangers of electricity and the danger signs to look out for.

Adequate displays and warning signs are strategically placed around the school to reinforce health and safety.