

Sir Alexander Fleming Primary School and Nursery

'Belonging, Being, Becoming'



Computing Policy

Updated: January 2024

Review Date: January 2025

Our school values



SAFE – keep ourselves and others safe by making sensible choices within school, online and in the community.



RESPECT – have the social, emotional and nurturing skills to respect ourselves, our families and our communities.



PRIDE – be proud of what we all achieve by aspiring to work hard and become your 'best self'



BRAVERY – to overcome barriers by attempting difficult challenges by being resilient, independent and inquisitive.



SUCCESS – achieving high standards with a belief that with effort anything is achievable.

Rationale

Information and Communications Technology (ICT) is concerned with the storage, processing, presentation and communication of information by electronic means. This includes the measurement, modelling and control of external events. ICT continues to evolve very quickly and has now become firmly entrenched in many aspects of everyday life, both at home and in the workplace.

Within the new National Curriculum, computing replaces ICT by moving away from solely learning how to use technology and towards understanding how computers work. At Sir Alexander Fleming Primary School our aim is for pupils to become digitally literate; using and expressing themselves through information and communication technology by creating and being an active participant in a digital world that is forever changing.

At Sir Alexander Fleming we believe the 3 main strands (Computer Science, Information Technology and Digital Literacy) will:

- Facilitate both individualised and collaborative approaches to learning and provide a safe and non-threatening environment which learning takes place.
- Meet the individual needs and responsibilities of each pupil.
- Improve pupil's motivation, promote perseverance and develop self-esteem.
- Encourage the development of problem solving approaches to learning and present information in new ways that help pupils to understand, assimilate and use it more readily.
- Improve the presentation of work and give the children power to try out different ideas and take risks in their work.
- Compensate for the communication and learning difficulties of children with physical and sensor impairment and support the learning of children with emotional and behavioural difficulties.
- Enable the children to take greater responsibility for their learning and encourage them towards purposeful activities and self-awareness.
- Allow teachers easy access to computers and other tools so that they have opportunities to re-evaluate ways of teaching and learning to encourage and improve the use of IT across the curriculum.

Aims and Objectives

Our main aim is to ensure every child in school has access to a high-quality computing education, which **aspires** them to **achieve high standards**. We aim for our learners to use technology **independently, safely, respectfully** and know how to make **sensible choices** online. We strive to achieve this aim by:

- Computing to be presented as a creative and fascinating process in which children are encouraged to use their own initiative, imagination, reasoning and investigative skills.
- Children appreciate the relevance of IT and computing in our society and that they see it as an essential tool for learning, communication, finding information and for controlling and understanding their environment.
- Children receive equal opportunity to develop their computing capability, being planned for in line with its status as a core National Curriculum subject.
- Adaptive learning is planned for in each area of the computing curriculum so that children achieve to the best of their ability.
- Children learn to work individually and collaboratively.
- Promoting the health and safety of the pupils of this school with regards to using ICT and safe internet access.
- To respond effectively to new developments in technology.
- To ensure pupils are equipped with the skills, confidence and capability to use computing throughout their life.
- Providing opportunities to use technology in a variety of curricular areas.

Resource provision

The school has a wide range of computer hardware including:

- 3 laptop trolleys containing approximately 25 laptops each
- 22 school iPads available for a class (signed out)

Each classroom has an interactive whiteboard and 1/2 networked computers which are networked to the school's photocopier. All computers in school have internet access and iPads can log on to school's network which is password protected.

Sir Alexander Fleming subscribes yearly to eCadets and Rodocodo for KS2. This offers a platform for children to lead online safety in the school and the latter enables children to build a strong understanding of programming.

The school also has access to a range of computing resources to support the teaching of the curriculum:

- Green screen
- Dash Robots
- Micro:bits
- Codebugs
- Cubetto
- Crumble boards
- 3D Printer

To ensure that copyright laws are adhered to, staff, pupils and parents are only permitted to run software brought in from outside of school when it is clear that the copyright allows this.

Teaching and Learning

At Sir Alexander Fleming we believe that there are three aspects to the teaching of computing:

1. Computer Science – the core of computing where pupils are taught how digital systems work and how to use this knowledge to program. Pupils learn the principles of computation and information.
2. Information Technology – the application of using their computer science knowledge to create programs, systems and content.
3. Digital Literacy – to use and develop their ideas through IT; use technology safely, respectfully and responsibly; and understand computer networks including the internet. This will enable them to become active members of the future workforce.

All these three strands are of equal importance.

At Sir Alexander Fleming teachers follow and adapt the NCCE teaching units to ensure all three areas are covered. We recognise that all classes have children with widely differing computing abilities. This is especially true when some children have access to 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 in mixed ability groups to encourage peers to support each other
- Providing resources of different complexity that are matched to the ability of the child
- Using adult support to support the work of individual children or groups of children.

Within the Computing timetable, every class has a weekly 1-hour slot with the laptops and the class teacher signs out any other available slots.

All staff members have access to the school iPads (22), which can be signed out for use in the classroom. iPads have enabled computing to be fully incorporated within all other areas of the curriculum to support and extend learning.

The class teacher will be responsible for the management and delivery of the weekly computing lessons to their own class. The ICT technician is available to support lessons on their day in school. The Computing Co-ordinator will offer support and INSET training to ensure staff are confident to use the hardware and software available and also to ensure that they understand the learning objectives and concepts being taught. We also have the support of Paul from Amazing ICT who supports every class in school over the year, with the main aim to upskill the teachers he works with.

Assessment and Record Keeping

Teachers constantly assess capability through observations and assessment of completed work at the end of each unit. Assessing computing work is an integral part of teaching and learning and is central to good practice. It is part of the learning process and essential that pupils are closely involved. Assessment is generally in the form of formative assessments, which are carried out during the and following short, focused tasks and activities. They provide pupils and teaching staff the opportunity to reflect on their learning in the context of the agreed success criteria. This feeds into planning for the next lesson or activity. All computing work is evidenced either in STEM exercise books, saved on the school network in an accessible and identifiable location or through our online learning journals on Seesaw.

Our Formative assessment includes:

AfL – informs future planning
Addressing misconceptions
Adaptive teaching
Teacher feedback- verbal
Self/Peer assessment

Our Summative assessment includes:

Work saved on Seesaw / STEM books
KS2 End of unit projects using NCCE materials
Assess using the progression document
Pupil voice

Monitoring and Evaluation

The subject leader is responsible for monitoring the standard of the children's work and quality of teaching. The subject leader is also responsible for supporting colleagues in the teaching of computing, for being informed about current developments in the subject, and for providing a strategic lead and direction for the subject in the school. The subject leader will carry out termly feedback from pupils about their learning in computing.

Entitlement to the Computing Curriculum

All children should have access to the use of ICT regardless of gender, race, cultural background or physical or sensory disability. Where use of a school computer proves difficult for a child because of a disability, the school will endeavour to provide specialist equipment and software to enable access. Children with learning difficulties can also be given greater access to the whole curriculum

through the use of ICT. Their motivation can be heightened and they are able to improve the accuracy and presentation of their work. This in turn can raise self-esteem.

Planning for Computing in the early years needs to be considered carefully if children are to begin to gain confidence in the use of computing as soon as they start attending Nursery. A range of appropriate hardware, software and activities needs to be offered. This should include plenty of hands-on experience and role-play such as using interactive software programmes/apps as well as relevant hardware such as Cubetto.

Quite often there are huge differences in ability between children who have access to home computers and those who do not. Adaptive learning strategies may include provision of different software, varying the amount/type of support given, varying the tasks, varying the groupings etc.

Health and Safety

Children should not be responsible for moving heavy equipment around the school. Children should be encouraged to load software but should not be given the responsibility of plugging in any electrical equipment. Children should not switch on machines without a member of staff being present.

Food and drink should not be consumed near to any electrical device.

It is the responsibility of staff to ensure that computing equipment is stored securely, cleaned regularly and that their class or themselves leave any equipment clean and tidy after use.

Staff should ensure that the children are seated at the computers comfortably and be aware of the dangers of continuous use (e.g. eye/wrist strain etc).

Safe use of ICT

An adult should always supervise children when they are accessing information via the Internet. The service provider does filter information but staff are ultimately responsible for information accessed by pupils. If staff or children do inadvertently visit inappropriate sites please see advise ICT team and inform a member of the Senior Management Team.

The school uses Senso as a classroom management tool to ensure any inappropriate searches are picked up straight away.

iPads use Cleanbrowsing DNS and Sophos for filtering. Access to SAFARI is filtered yet strict adult supervision is recommended. iPads are also set to restrictions that limit adult content and that YouTube is blocked.

Staff always keep passwords secure and limited to those on a "need to know" basis. Wherever possible, good practice would be to lock the computer by pressing Ctl-Alt-Del and enter or more appropriately, hold down the windows key and press L.

All staff should be aware of the list of children who are not to appear in photographs or on the website. (List held in School Office and on T drive) Images of children can be stored centrally on the workgroup in teacher's digital file for assessment purposes.

In addition to the day-to-day protection given to pupils about being safe online, the whole school will participate in Safer Internet Day. Parents will have the opportunity to attend an open session to find out the latest information regarding how important it is to learn, play and socialise safely.

The school runs an Online Safety group called E-Cadets. These are students chosen from Yr 1-6 who are empowered to deliver Online Safety messages, activities and assemblies to their peers. They work closely alongside the computing coordinator, completing tasks set on the E-Cadets website.

Links to the school development plan

- The Computing Coordinator produces an action plan each year outlining priorities for that year.
- An audit of resources is undertaken yearly to ensure that hardware and software are kept as up to date as possible and that obsolete or broken machines are scrapped or repaired.

Staff training needs will be met by:

- Informing staff of relevant courses that will improve their skill base. These are emailed or hard copies distributed.
- The Computing Co-ordinator should attend courses and support and train staff as far as possible.
- Close liaison with ICT technician

Roles and Responsibilities:

Head Teacher and Governing Body

- support the use of appropriate teaching strategies by allocating resources effectively.
- monitor teaching strategies in the light of health and safety regulations.
- monitor how effective teaching and learning strategies are in terms of raising pupil attainment.
- ensure that staff development and performance management policies promote good quality teaching.

Computing/Online Safety Subject Lead

- ensures the effective implementation of the National Curriculum for Computing.
- completes a subject action plan which addresses key areas for development based on analysis of data and key messages from monitoring.
- supports colleagues in the teaching of Computing and Online Safety and identifies any training needs.
- maintains the availability of high-quality resources.
- maintains an overview of current trends and developments within the subject.
- ensures, together with the SLT, a rigorous and effective programme of monitoring and evaluation including planning reviews; lesson observations, learning walks, pupil voice interviews and book looks.
- gives feedback following monitoring and evaluation to individuals and teams as necessary to ensure teaching and learning improves/develops.

Class Teachers

- ensure the effective implementation of the National Curriculum for Computing.
- follow this agreed policy and related policies.
- teach high quality Computing lessons.

- demonstrate a love of Computing.
- seek advice and/or training to develop subject and pedagogical expertise.

ICT Technician

- ensures ICT resources (iPads, Laptops, Desktops and Kindles) are functioning correctly each week.
- Performs a 'resource check' walk once a week when present, to ensure ICT teaching resources are functional.
- when required, assists teachers with ICT resource preparation and ensures effective functioning of resources during lessons
- keeps an inventory of all ICT resources for auditing purposes.
- ensures disposal of defunct ICT equipment according to national WEEE guidelines.

Review and evaluation procedures

The everyday use of ICT is developing rapidly, with new technology being produced all the time. This policy therefore will be reviewed and revised on a yearly basis. The computing coordinator will liaise regularly with staff, both at staff meetings and informally, to monitor the effectiveness of the policy and the transition to the new curriculum. Meetings with subject co-ordinators will also ensure that the use of ICT/computing across the curriculum is planned for and evaluated.