# Elmwood Infant School and Nursery

## Computing Policy

Updated Spring 2020

Article 29 'Education must develop every child's personality, talents and abilities to the full'

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**Date Policy Agreed:** Spring 2020
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## Rationale

The United Nations Convention on The Rights of the Child states:

*All children have the right to an education (Article 28); The purpose of education is to develop every child's personality, talents and mental and physical abilities (Article 29); All children have a right to find out things, and say what they think through speaking, writing, drawing etc. unless it breaks the rights of others (Article 29).*

This policy makes explicit the purposes, nature and management of computing teaching and learning at Elmwood Infant School. It forms part of the overall curriculum policy of the school and has been written by the computing subject coordinator and shared with all staff and the governing body.

## Introduction

The use of computers and computer systems is an integral part of the national curriculum and knowing how they work is a key life skill. In an increasingly digital world there now exists a wealth of software, tools and technologies that can be used to communicate, collaborate, express ideas and create digital content. At Elmwood Infant School, we recognise that it is vital that our young learners are equipped to utilise technology in order to enhance their development as they become confident individuals, successful learners, responsible citizens, effective contributors and facilitate the process of lifelong learning.

## Intent

Through our computing curriculum at Elmwood we aim to provide our children with the life skills that will enable them to embrace and utilise new technology in a socially responsible and safe way. They will develop their understanding of themselves as individuals within their community but also as members of a wider global community and as responsible digital citizens.

We will enable them to find, explore, analyse, exchange and present information. We also focus on developing the skills necessary for children to be able to use information in a discriminating and effective way, using their knowledge of their rights to ensure that children stay safe online. Technology will be used to support learning across the entire curriculum and ensure that our curriculum is accessible to every child. Using our Super Skills children will collaborate on projects and develop the confidence to work independently when using a variety of ICT Equipment.

## Aims

The school's aims are:

- children will experience technology within practice to support them to think more creatively and critically;
- children will use ICT to encourage collaboration;
- children will be enabled to integrate ICT with structured play in the nursery and reception;
- staff and pupils recognise that ICT affects the way in which people live and work;
- staff will provide appropriate ICT learning opportunities which will embrace the 'creative' curriculum.
- all staff will be encouraged to develop confidence and competence in utilising ICT resources;
- staff can select and use ICT appropriate to the task;
- parents will be involved in ICT through the encouragement of accessing the school website.
- to teach pupils to use computing skills to find, explore, analyse, exchange and present information responsibly, creatively and with discrimination.
- to teach computing skills as part of a broad and balanced curriculum relevant to the age and interests of the children.
- to raise standards through the use of computing.
- to enable the pupils to gain access to ideas and experiences to support their learning across the curriculum.
- to equip the pupils to make informed judgements about when and where to use computing effectively.
- to make children aware of age appropriate e-safety issues and ensure that all pupils and staff follow the guidelines for acceptable internet usage.
- to ensure software is planned and progressive for teaching computing skills and for cross-curricular support.
- to ensure maximum use is made of hardware by careful timetabling of resources.

The National Curriculum for Computing aims to ensure that all pupils:

- can understand and apply the fundamental principles of computer science, including logic, algorithms, data representation, and communication
- 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.

## Objectives

**Early years (see also Early Year's Policy)**

It is important in the foundation stage to give children a broad, play-based experience of IT and computing in a range of contexts, including off-computer activities and outdoor play.

Computing is not just about computers. Early years learning environments should feature IT

scenarios based on experience in the real world, such as in role play. Children gain confidence, control and language skills through opportunities such as 'programming' each other using directional language to find toys/objects, creating artwork using digital drawing tools and controlling programmable toys.

Outdoor exploration is an important aspect and using digital recording devices such as video recorders, cameras and microphones can support children in developing communication skills. This is particularly beneficial for children who have English as an additional language.

**By the end of 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 programs
- 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.

## Resources and Access

Elmwood Infant School does not have an ICT Suite. Instead our approach is make use of 15 laptops and 30 iPads housed in two mobile trolleys. A timetable is in place to ensure equality of access for each class to the laptops. This is reviewed and revised regularly. We acknowledge the need to continually maintain, update and develop its resources and to make progress towards consistent, compatible computer systems by investing in resources that will effectively deliver the objectives of the National Curriculum and support the use of IT, computer science and digital literacy across the school. Teachers are required to inform the computing subject leader of any faults as soon as they are noticed. Resources if not classroom based are located in the workroom. Computing network infrastructure and equipment has been sited so that:

- Every classroom from nursery to Y2 has a laptop connected to the school network and an interactive whiteboard with sound, DVD and video facilities.
- There are two desktop computers in each classroom from nursery to Y2.
- There is an iPad Sync & Charge cabinet in school containing 30 iPads.
- There is a laptop charging trolley in school containing 15 laptops.
- Internet access is available in all classrooms.
- Each class has a stereo which can be used as a listening centre
- Beebots are held centrally in the ICT cupboard in the workroom
- Beebot mats are in the stockroom
- Talking pegs and talking blocks are in the ICT cupboard in the workroom and in classrooms
- Large display in the hall and the workroom for use with meetings
- Each class in Y1 and Y2 has an allocated slot per week for teaching computing as a discrete subject.
- Pupils may use IT and computing independently, in pairs, alongside a TA or in a group with a teacher.
- The school has a computing technician who is in school every afternoon.
- A governor will be invited to take a particular interest in computing in the school.

- All pupils must have hands-on experience when working in pairs or small groups. This includes work with floor robots, remote control devices, digital cameras and microscopes etc. as well as classroom computers.

Adequate space must be available for left handed children when working on computers.

As pupils progress through the school they are given increasing control of their use of ICT, gaining independence as they use the appropriate ICT tool to complete any given activity, and in their choice of software required.

Pupils with SEN have the same ICT entitlement as all other pupils and are offered the same ICT learning opportunities. However, particular applications of ICT may be used for pupils with difficulties in learning, who need to be motivated to practise basic skills regularly and intensively, and thus benefit from the use of programs in which skills practice is set within the context of a motivating game

Pupils of high ability (able learners) may be extended through the use of programs which offer challenge and opportunities for investigation.

## Planning

The school uses the Purple Mash Computing scheme of work. Purple Mash fully meets the objectives of the National Curriculum for Computing and allows for clear progression in computing. Pupil progress towards these objectives will be recorded by teachers as part of the school recording system.

We teach ICT in the Early Years as an integral part of the topic work covered during the year. We relate the ICT aspects of the children's work to the objectives set out in the Early Learning Goals (ELGs) which underpin the curriculum planning for children aged three to five. The children have the opportunity to use the computers in a variety of ways.

At KS1 ICT is used cross-curricular to support learning in all subjects as well as explicit skills being taught which include:

| Year One | Year Two |
|---|---|
| Internet and Email | Coding and Computational thinking |
| Communication and Networks | Internet and Email |
| Coding and Computational thinking | Spreadsheets |
| Databases and graphing | Databases and graphing |
| Art and Design | Art and Design |
| Spreadsheets | Music |
| | Writing and Presenting |

A minority of children will have particular teaching and learning requirements which go beyond the provision for that age range and if not addressed, could create barriers to learning. This could include G&T children, those with SEN or those who have EAL. Teachers must take account of these requirements and plan, where necessary, to support individuals or groups of pupils to enable them to participate effectively in the curriculum and assessment activities. During any teaching activities, teachers should bear in mind that special arrangements could be made available to support individual pupils. This is in accordance with the school inclusion policy. These children should be identified and discussed at pupil progress meetings to ensure that appropriate provisions and/or interventions are in place.

## Assessment

Teachers regularly assess progress through observations and evidence. Key objectives to be assessed are taken from the National Curriculum to assess computing each term. Assessment should be process orientated - reviewing the way that techniques and skills are applied purposefully by pupils to demonstrate their understanding of computing concepts. As assessment is part of the learning process, it is essential that pupils are closely involved. Assessment can be broken down into;

- Formative assessments are carried out during 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.
- Summative assessment should review pupils' ability and provide a best fit 'level'. Independent tasks provide a number of opportunities and scope for pupils to demonstrate their capability throughout the term. There should be an opportunity for pupil review and identification of next steps.

We assess the children's work in computing by making informal judgments as we observe the children during lessons. Once the children complete a unit of work, we make a summary judgment of the work for each pupil as to whether they have yet to obtain, obtained or exceeded the expectations of the unit.

We record the results in our assessment files and we use these to plan future work, provide the basis for progress and to communicate with the pupil's future class teacher(s).

The subject leader is responsible for monitoring the standard of the children's work and the quality of teaching in line with the schools monitoring cycle. This may be through lesson observations, pupil discussion and evaluating pupil work.

Reporting to parents is undertaken through interviews, and annually through a written report. Reporting on ICT use will focus on each child's ability to use a computer with confidence and competence across a variety of applications and in a range of contexts with reference to the national curriculum.

## Pupils with special educational needs (see also SEN policy)

We believe that all children have the right to access IT and computing. In order to ensure that children with special educational needs achieve to the best of their ability, it may be necessary to adapt the delivery of the computing curriculum for some pupils.

We teach IT and computing to all children, whatever their ability. Computing forms part of the national curriculum to provide a broad and balanced education for all children. Through the teaching of computing we provide opportunities that enable all pupils to make progress. We do this by setting suitable challenges and responding to each child's individual needs. Where appropriate IT can be used to support SEN children on a one to one basis where children receive additional support.

## Equal opportunities (see also Equal Opportunities Policy)

We will ensure that all children are provided with the same learning opportunities regardless of social class, gender, culture, race, disability or learning difficulties. As a result, we hope to enable all children to develop positive attitudes towards others. All pupils have equal access to computing and all staff members follow the equal opportunities policy. Resources for SEN children and gifted & talented will be made available to support and challenge appropriately.

## Staff and Pupils Using ICT

Staff are encouraged to use computers in school in order to prepare resources or to develop personal competence and confidence in the use of ICT. Each staff member has their own email account and are strongly encouraged to regularly check and respond to emails on a daily basis. All correspondence related to children must be sent through a staff mail account.

In the Nursery and Reception all staff use iPads to access 2 Simple 'Evidence Me' to add photographs and notes which are then printed off and added to the Learning Journals.

## Beyond the Classroom

ICT is used in supporting extra-curricular activities such as in the use of digital cameras/iPads to record visits outside of school. There are also links to suitable educational websites on the school website, these also include paid for content and the children have been given usernames and passwords as well as detailed information on how to access.

In Years 1 and 2, 'Seesaw' is used to communicate with parents. It allows us to share what the children are working on throughout the school day. Parents who have signed up with their email address, have instant access to this learning. Reception parents can receive this through 'Evidence Me'.

## The role of the Subject Leader

There is a computing subject leader who is responsible for the implementation of computing policy across the school. Their role is to:

- offer help and support to all members of staff (including teaching assistants) in their teaching, planning and assessment of computing.
- provide colleagues opportunities to observe good practice in the teaching of computing.
- maintain resources and advise staff on the use of digital tools, technologies and resources.
- monitor classroom teaching or planning following the schools monitoring programme.
- monitor the children's progression in computing, looking at examples of work of different abilities.
- manage the computing budget.
- keep up-to-date with new technological developments and communicate information and developments with colleagues
- lead staff training on new initiatives.
- attend appropriate in-service training
- have enthusiasm for computing and encourage staff to share this enthusiasm.
- keep parents and governors informed on the implementation of computing in the

school.
- liaise with all members of staff on how to reach and improve on agreed targets
- help staff to use assessment to inform future planning.

## The role of the Computing Technician

There is a computing technician who is responsible for maintaining computer systems and servers, repairing computer hardware, and providing technical support across the school. Their role is to:

- Create network shares and manage access rights and monitor systems log.
- Install new software, hardware, peripherals, upgrades and components.
- Secure, security code and ensure the safe set up of new equipment.
- Set up equipment such as laptops, data projectors, interactive whiteboards, sound systems and other specialist ICT equipment, ensuring that systems are ready for use and operating correctly.
- Install new software, hardware, peripherals, upgrades and components.
- Deliver hardware and resources to work areas and classrooms as required.

## The role of the class teacher

Individual teachers will be responsible for ensuring that pupils in their classes have opportunities for learning computing and using their knowledge, skills and understanding of computing across the curriculum.

They will plan and deliver the requirements of the National Curriculum for Computing to the best of their ability. We set high expectations for our pupils and provide opportunities for all to achieve, including girls and boys, pupils with educational special needs, pupils with disabilities pupils from all social and cultural backgrounds, and those from diverse linguistic backgrounds.

The class teacher's role is a vital role in the development of computing throughout the school and will ensure continued progression in learning and understanding, and create effective learning environments.

The class teacher will also:

- secure pupil motivation and engagement
- provide equality of opportunity using a range of teaching approaches and techniques
- planning, teaching and assessment of ICT skills.
- ensuring opportunities are provided to embed ICT across all curricular areas and utilise it to enhance learning and teaching;
- ensuring ICT is used for administrative tasks e.g. preparation/monitoring of support plans and reports
- the recognition of data protection, computer misuse and copyright legislation within their own classroom setting.

## Health, Safety and ICT

The school is aware of the health and safety issues involved in children's use of IT and

computing and all portable electrical equipment in school is tested by an external contractor every twelve months.

It is advised that staff should not bring their own electrical equipment in to school but, if this is necessary, equipment must be PAT tested before being used in school. This also applies to any equipment brought in to school by, for example, visitors running workshops, activities, etc. and it is the responsibility of the member of staff organising the workshop, etc. to advise those people.

All staff should visually check electrical equipment before they use it and take any damaged equipment out of use. Damaged equipment should then be reported to the computer technician, the computing co-ordinator or head teacher who will arrange for repair or disposal.

In addition, to maintain and protect hardware and software and ensure the safety of pupils:

- children should not put plugs into sockets or switch the sockets on.
- trailing leads should be made safe behind the equipment.
- liquids must not be taken near the computers
- magnets must be kept away from all equipment
- e-safety guidelines will be set out in the e-safety policy & Acceptable Use Policy
- Computer systems must not be placed in direct sunlight, near radiators or chalk boards.
- Electric plugs must not be near any water sources.
- Pupils should not work on the computer for excessively long periods.
- All pupils should sit directly in front of the screen on the correct size chair to ensure the correct posture and in order that two hands can be used on the keyboard.
- Children are supervised at all times when using Interactive White Boards.
- Staff and pupils will demonstrate an appropriate respect for equipment thereby being appropriate role models to ensure bad habits are not embedded at an early age.
- Where possible consider the use of mini mice for pre-school children.
- All PCs, laptops and netbooks should be turned off at the end of the school day.
- Staff mobile phones should be switched off during school hours. No photographs or video footage of children should be taken on staff's mobile phones. Staff should not give out their personal mobile phone numbers to parents or children.

## Security

We take security very seriously. As such:

- the computing technician will be responsible for regularly updating anti-virus software.
- use of IT and computing will be in line with the school's 'acceptable use policy'. All staff, volunteers and children must sign a copy of the schools AUP.
- parents will be made aware of the 'acceptable use policy' at school entry.
- all pupils and parents will be aware of the school rules for responsible use of IT and computing and the internet and will understand the consequence of any misuse.
- the agreed rules for safe and responsible use of IT and computing and the internet will be displayed in all computing areas.

## Cross curricular links

As a staff we are all aware that IT and computing skills should be developed through core and foundation subjects. Where appropriate, IT and computing should be incorporated into schemes of work for all subjects. IT and computing should be used to support learning in other subjects as well as developing computing knowledge, skills and understanding. Our school provides pupils with opportunities to enrich and deepen learning using cross-curricular approaches.

## Parental involvement

Parents are encouraged to support the implementation of IT and computing where possible by encouraging use of IT and computing skills at home for pleasure, through home-learning tasks and use of the school website. Parents will be made aware of issues surrounding e-safety and encouraged to promote this at home.

## Strategies for Ensuring Progress and Continuity

Planning for the use and improvement of Information and Communications Technology is a process in which all teachers are involved, wherein:

- suggestions for ICT activities integrated with the curriculum are developed by the ICT co-ordinators in collaboration with all colleagues.
- training is offered within Elmwood Infant School according to the ICT coordinator's action plan and the School's Improvement Plan and relevant quality assurance, in addition to the individual needs of staff members.

## E- Safety and Internet access (see E-Safety Policy)

The Internet is an essential element in 21st century life for education, business and social interaction. Internet use is a part of the statutory curriculum and as such the school has a duty to provide students with quality Internet access as part of their learning experience.

The benefits of Internet usage include:

- Access to a wide variety of educational resources
- Developing key skills
- Rapid and cost effective worldwide communication
- Gaining an understanding of people and cultures around the globe
- Staff professional development through access to new curriculum materials, experts' knowledge and practice
- Exchange of curriculum and administration data with LA / DFE
- Social and leisure use

E-safety is the responsibility of all staff. The e-safety message should be taught through all subjects to ensure the children have frequent and reminders about staying safe online. The school believes that the benefits of access to the resources, and related technologies, of the Internet far exceed potential disadvantages. The responsibility for setting and conveying the standards that children are expected to follow, when using media and information resources, is one that the school shares with parents and guardians. The school will provide information

to assist parents in providing safe access. No filtering system is 100% secure but our policies and procedures are in place to ensure maximum support for safe access to the Internet.

## Pupils' access to the Internet

All staff will review and evaluate resources available on web sites appropriate to the age range (3 – 7) and ability of the pupils being taught, prior to use with children.

The school uses a 'filtered and monitored' Internet service, which minimises the chances of children encountering undesirable materials. The provider is the London Grid for Learning. (http://www.lgfl.org.uk/)

Children's internet usage is always supervised by a responsible adult.

Parents are made aware of these guidelines and asked to discuss them with their children. They are required annually to confirm that their child can use the Internet for educational purposes in school.

## Legislation and Data Protection

Access to web sites will be filtered by Lgfl and locally by the school and parents must agree to the Acceptable Use Policy.

The Data Protection Act 2018 controls how your personal information is used by organisations, businesses or the government. The Data Protection Act 2018 is the UK's implementation of the General Data Protection Regulation (GDPR). We must make sure the information is: used fairly, lawfully and transparently. Under the Data Protection Act 2018, you have the right to find out what information the government and other organisations store about you. These include the right to:

- be informed about how your data is being used
- access personal data
- have incorrect data updated
- have data erased
- stop or restrict the processing of your data
- data portability (allowing you to get and reuse your data for different services)
- object to how your data is processed in certain circumstances

## School Website

The website exists to celebrate good work, promote the school and provide links to other useful sites for supporting learning at home. It also provides information to parents about the curriculum, staffing, diary dates and other key documents. Images of children on the website will have no names attached. For safeguarding reasons, all parents are required confirm at the point of their child joining the school whether or not images of their child/ren can be used.

## Quality Assurance

The Management Team is responsible for monitoring ICT in the school. Any school development of ICT is documented within the School Improvement Plan, which addresses the priorities for ICT within the school and also takes account of CPD opportunities required by staff. The results of audits will be used to inform and substantiate developments.