Shepton Mallet Community Infants' School and Nursery

'Where Children Come First'

Computing Policy

VERSION CONTROL

Version	Description of change	Author	Date
1	Policy issued	Katie Purnell	April 2020
2	New Subject Lead	Sam Maddaford	June 2021
3	Policy reviewed – Equipment list updated, assessment recording updated	Sam Maddaford	January 2022
4	Policy reviewed – Teach Computing Curriculum added	Sam Maddaford	September 2023

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Computing Policy

Introduction

This policy expresses the school's purpose for the teaching and learning of Computing. It sets out the aims; planning of the curriculum and assessment and monitoring. It was developed through discussion with teachers and the leadership team and is based on Computing programmes of study (POS): Key Stages 1 and 2 (DfE September 2014).

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 acquire, organise, store, manipulate, interpret, communicate and present information. At Shepton Mallet Infants' School and Nursery we recognise that pupils are entitled to a broad and balanced computing education with a structured, progressive, approach to learning how computer systems work, the use of IT and the skills necessary to become digitally literate and participate fully in the modern world. The purpose of this policy is to state how the school intends to make this provision.

Purpose

We believe that an engaging and motivating Computing curriculum will enable our learners to:
- Use computational thinking and creativity to understand and change the world.
- Make deep links with mathematics, science and design and technology.
- Build knowledge of principles of information and computation, how digital systems work, and how to put this knowledge to use through programming.
- Become digitally literate – able to use, express themselves and develop ideas through information and communication technology.

Aims

- The Computing Subject Leader and leadership team support staff will deliver a high-quality computing education.

- Computational thinking – the ability to solve problems in a creative, logical and collaborative way – is developed through repeated programming opportunities and 'unplugged' opportunities to build understanding and apply the concepts of computer science.

- Pupils become responsible, competent, confident and creative users of information and communication technology.

- Pupils have a growing awareness of how technology is used in the world around them and of the benefits that it provides. They are supported to evaluate and use information technology, including new or unfamiliar technologies.

- Opportunities for communication and collaboration develop understanding of the purposes for using technology and these are used to bring together home and school learning experiences.

- Technology is used imaginatively to engage all learners and widen their learning opportunities.

- Pupils have access to a variety of devices and resources and are encouraged to reflect on the choices they make to use them.

- We expect our pupils to:
  o Develop computing skills, knowledge and understanding
  o Develop an understanding of the wider applications of computer systems and communication technology in society
  o Develop independent and logical thinking through reasoning, decision making and problem solving
  o Develop imagination and creativity
  o Work independently and collaboratively

Objectives

Early years
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.

In the Foundation Stage:
- Pupils build confidence to use technology purposefully to support their learning across all areas of the EYFS
- Pupils in Foundation Stage classes will have experiences using technology indoors, outdoors and through role play in both child-initiated and teacher-directed time.

Key Stage 1
By the end of Key Stage 1 pupils are 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 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.

Curriculum Content and Progression

Planning for Computing is implemented through the National Curriculum Programme of Study for Computing. Long term planning has been developed using the Somerset eLIM New Wessex Planning and the Teach Computing Curriculum and demonstrates coverage and progression of the attainment expectations at the end of Key Stage 1 as identified in the Computing POS. Medium term planning takes account of differentiation and progression and covers Programming, E-safety, Media, Data and Technology in our Lives/Computing systems & networks. Individual lesson plans are taken from the eLIM New Wessex Planning and the Teach Computing Curriculum.

E-safety is developed through PSHE and, together with the threads of Technology in our Lives and Multimedia, builds the skills and understanding of Digital Literacy. ActiveBytes ensures that we have a broad coverage and knowledge and skills are built upon each year.

Assessment

Teachers regularly assess progress through informal observations during lessons and evidence from completed work. Key objectives to be assessed are taken from the National Curriculum. Progress is assessed on an on-going basis using the Somerset and TCC 'I can' statements for each area of Computing. This ensures teachers are aware of individual pupils progress in computer science, information technology and digital literacy. Assessing computing is an integral part of teaching and learning and key to good practice.

Assessment can be broken down into;
- **Formative assessments** carried out during and following whole class and group teaching. Children's confidence and difficulties are observed and used to inform future planning. Children are aware of the 'I can' statements and are encouraged to set success criteria for their work.
- **Summative assessment** should review pupils ability and provide a best fit 'level' and are carried out at the end of each unit.

Each class teacher maintains a record on their medium-term planning, which is updated each half term, indicating pupils that are working beyond or below age-expected attainment. This information is used to plan future work, to provide the basis for assessing the progress of the children and to pass information on to the next class teacher at the end of the year. Teachers judgments are supported through a portfolio of evidence which provides examples of age-expected attainment. At the end of each session teachers record who has achieved and not achieved the LO for that session and this is used to inform support needed for the following session.

The Computing Lead will use the data from medium term planning to track progress across the year groups and highlight groups of children (PP, SEND, EAL, Summer Born).

The children's work is sometimes saved on the school network, may be printed and filed within the subject from which the task was set and kept in the class Computing Record Books.

Monitoring

In order to ensure the Computing curriculum is being planned for and delivered effectively, the Computing Subject Leader will monitor the following:

- The training needs of teachers and teaching assistants to improve subject knowledge and confidence.

- The impact of training already undertaken.

- Planning and assessment documents – taking on board any suggestions from staff on how they could be amended or used more effectively.

- Planning for each year group to ensure it is pitched appropriately, challenging, engaging, uses a range of resources and meets the requirements of the National Curriculum.

- Children's work – This will be done in a variety of ways, including work scrutiny alongside discussion with class teachers, conversations with pupils and pupil skills audits.

- The quality of teaching and learning in Computing lessons through lesson observations and learning walks.

- The impact of the Computing Action Plan and how this can be taken forward to further develop the subject.

- School resources to ensure staff and pupils have access to the appropriate and necessary equipment and software.

Roles and Responsibilities

The school community works together to ensure the implementation of the Computing policy.

The Headteacher and Governing Body

The Headteacher and Governing Body will provide support for the Computing Subject Leader to fulfil their role, as outlined below.

They will:

- Ensure teachers are able to deliver the Computing Curriculum effectively by having access to the appropriate training and resources as necessary.

- Provide opportunities for the Computing Subject Leader to complete monitoring tasks including working with staff to plan and deliver lessons.

- Review policies relating to Computing, E-Safety and Information Security.

The Computing Subject Leader

The school has a designated Computing Subject Leader who is responsible for the implementation of the computing policy across the school.

The Computing Subject Leader will:

- Offer support to all members of staff (including teaching assistants) in their teaching, planning and assessment of computing.

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- Provide colleagues with opportunities to observe good practice in the teaching of computing.

- Maintain resources and advise staff on the use of digital tools, technologies and resources.

- Liaise with the appointed IT technician to ensure that equipment is working and any hardware or software faults are reported. The technician is responsible for the maintenance of computers, printers, the school network and keeping software up to date.

- Monitor curriculum coverage and the impact of learning and teaching; and assist colleagues in its implementation.

- Facilitate the use of IT across the curriculum, in collaboration with other Subject Leaders.

- Stay up-to-date with new technological developments and communicate this information to colleagues.

- Lead staff training on new initiatives.

- Attend appropriate CPD.

- 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 Leonie Hayne to maintain and update the school website.

Class Teachers
The class teacher must:

- Follow the guidelines set out in the Computing, Online Safety, Safeguarding (Child Protection) and Data Protection policies.

- Plan and deliver an effective Computing curriculum integrating this into their planning for other subject areas where this is appropriate.

- Provide diverse opportunities for Computing skills to be applied by pupils in a variety of ways using a wide range of technology and software.

- Plan lessons which will support and/or challenge pupils as appropriate.

- Ensure they have access to a range of necessary resources to be able to deliver the curriculum effectively. This includes liaising with the Computing Lead to ensure that resources are available, ensuring equipment is ready to be used, and returning equipment for others to use. Any breakages or faults must be reported by teaching staff to the Computing Leader and Leonie Hayne in the School Office.

- Support the Computing Lead in monitoring and assessment by completing the relevant planning and assessment grids at the end of each half term.

- Ensure support staff have access to planning and have the knowledge and skills to be able to support and challenge pupils within Computing lessons.

- Subject leaders in other curriculum areas are responsible for recognising the links between computing and English, Mathematics, Science and foundation subjects; and planning to use these to support learning across the school.

Teaching Assistants and Support Staff
Teaching Assistants and Support Staff must:

- Follow the guidelines set out in the Computing, Online Safety, Safeguarding (Child Protection) and Data Protection policies.

- Ensure they have the relevant planning necessary to support and challenge pupils within a lesson.

- Ask for support from the class teacher and/or Computing Subject Leader to ensure their training requirements are met.

Resources

The school has a range of resources to support the effective delivery of the Computing curriculum, the Early Years Framework and learning across all areas of the National curriculum. We maintain a list of resources used in each phase.

At present we have:

- A computer suite containing 15 Think Pads. Every class has a weekly dedicated Computing slot in the ICT Suite. Staff can sign-up for additional slots each week to fit in with their Computing needs.
- 1 staff laptop per classroom.
- 1 iPad per class in KS1, 2 iPads per class in Reception
- 1 visualiser per KS1 class – This can be used to project objects, images and even pupils work on to the interactive LCD Monitor or Smartboard.
- 1 interactive white board per class – to be used as a teaching tool by staff or to aid learning in group work by children.
- 12 Beebot robots and mats
- 6 Code-a-pillar Caterpillar robots

The Computing Subject Leader keeps up to date with new technologies and reviews the school's provision, as well as maintaining the existing resources in partnership with the school's technology support provider. Any hardware and/or software faults are logged by staff to the Computing Lead and Leonie Haynes. The Computing Action Plan expresses the school's priorities for future expenditure and is reviewed by the Computing Subject Leader, Governors and Senior Management who consider its impact on all learning. Governors and Senior Management ensure that they achieve value for money by implementing the principles of best value in evaluating, planning, procuring and using technology. Old resources are disposed of in line with Somerset County Council's environmental disposal policy and the school's data protection policy where these are applicable.

A school network enables internet access to all devices in the school building, including mobile devices via Wi-Fi. The school network is secure and can only be accessed by username and password. The network also offers access to a shared area in which documents are stored and accessed. Please refer to the Online Safety and Data Protection policies for further details.

Online Safety

Internet access is planned to enrich and extended learning activities. The school has acknowledged the need to ensure that all pupils are responsible and safe users of the internet and other communication technologies. We aim to provide a progressive Online Safety Curriculum to ensure that all pupils are able to develop skills to keep them safe online and when using other technology. Opportunities for learning about online safety are part of RHE and are reinforced whenever technology is used. Clear rules for online safety are agreed by each class at the beginning of every year. Parents and pupils sign an acceptable user policy together when a pupil first starts at the school.

The Somerset ActiveBYTES scheme is used to ensure progression and coverage and provides positive rewards for responsible use of technology. The school supports the international Safer Internet Day each February and provides opportunities for pupils to consider cyberbullying as part of Anti-Bullying week in the autumn term. Opportunities are taken whenever possible to reinforce messages of a healthy life style. We also have a whole school Online Safety Assembly at least 3 times a year.

Access to the internet for pupils is always under direct adult supervision using only pre-checked, specific, approved online materials. We use a safe online environment through filtered internet access. The school has an Online Safety Policy in place that details how the principles of online safety will be promoted and monitored.

Health and safety

From Foundation Stage, pupils are taught to respect and care for technology and equipment. Pupils are directly supervised at all times when using any computing equipment. The school is aware of the health and safety issues involved with children's use of ICT and computing.

- All electrical equipment is maintained to meet agreed safety standards. All fixed and portable electrical equipment is subject to regular testing by external contractors. Staff should not bring their own electrical equipment in to school but, if this is necessary, the equipment must be PAT tested before being used in school.

- Damaged equipment should be reported to the Headteacher, School Office, Computing Lead and the IT technician who will arrange for repair or disposal.

- Children should not put plugs into sockets or switch the sockets on.

- Any trailing leads should be made safe behind equipment.

- Liquids must not be taken near any electrical equipment in the classroom or ICT Suite.

- Age appropriate class and safety rules will be clearly displayed in the learning environment.

Further guidance can be found in the school's Health and Safety Policy

Equal Opportunities

The school maintains its policy of equal opportunities as appropriate for Computing. We will ensure that computers and related technology are made available to all pupils regardless of their gender, social class, culture, race or abilities. As a result, we hope to enable all children to develop positive attitudes towards others. All pupils have equal access to IT and computing and staff members follow the equal opportunities policy. The class teacher will differentiate work by task, resources and/or support, to ensure the individual needs of more able, EAL and SEND pupils are met. The school is aware that not all pupils have the same access to computers at home and this is considered by staff in the planning and delivery of the curriculum.

Parental Involvement

Parents are encouraged to support the implementation of IT and computing wherever possible by encouraging the 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. Information is shared with the school community through the school website, Class Dojo, display, celebration events, newsletters and end of year reports.

Additional Documents

Please also refer to the following documents for further and supporting information:
- Online Safety policy
- Data Protection policy
- Health and Safety policy
- Safeguarding (Child Protection) policy

This policy will be reviewed annually by the Computing Subject Leader and Senior Leadership team and shared with the school community.

Policy date: September 2023

Review date: September 2024