



Pennoweth Primary School

Computing Policy

Reviewed by: Miss Blight & Mrs Nicholls (ICT Co-ordinators)

Agreed by the Full Governing Body: 15th March 2019

Next Review Date: March 2020

1. Aims

1.1. Computing has become part of the way we all work and entertain ourselves. Almost everything we do at school now involves the use of computing:

- online lesson research, teaching plans and resource materials
- lesson delivery via either overhead projector or interactive whiteboard
- communication by e-mail
- document distribution and storage
- assessment information analysis
- production and editing of reports

1.2. Through teaching computing we equip children to participate in a world of rapidly changing technology. We enable them to find, explore, analyse, exchange and present information. We also help them develop the necessary skills for using information in a discriminating and effective way. This is a major part of enabling children to be confident, creative and independent learners and to achieve as adults.

1.3. The objectives of teaching computing are to enable children:

- to develop computing capability in finding, selecting and using information
- to use computing for effective and appropriate communication
- to monitor and control events, both real and imaginary
- to apply their computing skills and knowledge to their learning in other areas
- to explore their attitudes towards computing and its value to them and society in general
- to understand the importance of being safe online

2. Teaching and learning style

2.1. An objective of teaching computing is to equip children with the technological skill to become independent learners; therefore, the teaching style that we adopt is as active and practical as possible. Fifty percent of the time we do give children direct instruction on how to use hardware or software (a planned curriculum of discrete lessons), but another equally important emphasis of our teaching in computing is for individuals or groups of children to use technology to help them progress in whatever topic they are following. So, for example, children might research a history topic by using a specific site with games and information that engages them in a highly visual way; they might place themselves in a historical setting by manipulating a digital photograph; they might investigate a particular issue on the Internet; they could be involved in an animation project.

2.2. We recognise that all classes have children with a wide range of computing abilities. This is especially true when some children have access to technology 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:

- setting 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 group
- providing resources of different complexity that are matched to the ability of the child
- using teaching assistants to support the work of individual children or groups of children

3. Computing planning

3.1. The school has a scheme of work called Rising Stars for Computing as the basis for its curriculum planning. The national curriculum gives an informative overview for both Key Stage 1 and Key Stage 2. Where appropriate, teachers plan a Computing topic that links to other areas of the curriculum.

3.2. We carry out the curriculum planning in Computing in three phases (long-term, medium-term and short-term). The long-term plan maps the Computing topics that the children study in each term during each key stage. Our long-term Computing plan shows how teaching units are distributed across the year groups, and how these fit together to ensure progression within the curriculum plan.

3.3. Our medium-term plan give details of each unit of work for each term. They identify the key learning objectives for each unit of work. The Computing subject leader is responsible for reviewing these plans.

3.4. The class teacher is responsible for the short-term plans with the Computing component of each lesson. The class teacher keeps these individual topic plans and s/he and the Computing subject leader can discuss them on an informal basis.

3.5. Parents are required to give signed authorisation before their child can use the Internet, either in guided or in independent schoolwork. The parents are assured that their child's use of the Internet at school is supervised and the provider has a powerful filter. Children in all KS2 classes are required to sign an agreement with the school regarding safe use of the internet, as are teachers/TAs in their professional capacity.

4. The Foundation Stage

4.1. We teach technology in reception classes as an integral part of the topic work covered during the year. As the reception class is part of the Early Years Foundation Stage of the National Curriculum, we relate the technology aspects of the children's work to the objectives set out in the Early Learning Goals (ELGs) and Development Matters. The children have the opportunity to use different types of technology to support their understanding of the world.

5. The contribution of Computing to teaching in other curriculum areas

5.1. The teaching of Computing contributes to teaching and learning in all curriculum areas. It offers ways of impacting on learning which are not possible with conventional methods. Teachers use internet resources like 'Busy Things' to present information visually, dynamically and interactively, so that children understand concepts more quickly. For example, graphics work links in closely with work in art, and work using databases supports work in mathematics, while role-play simulations and the Internet prove very useful for research in humanities subjects. Computing enables children to present their information and conclusions in the most appropriate way. Animations are increasingly used to produce an effective outcome as is the use of coding software such as 'Scratch' and 'Espresso Code'.

5.2. English: Computing is a major contributor to the teaching of English. Children's reading development is supported through reading on computers using 'Bug Club' and 'Busy Things'. As the children develop mouse and keyboard skills, they learn how to edit and revise text on a computer. They have the opportunity to develop their writing skills by communicating with people via e-mail (Y3+). Children will be able to contribute to the school website and blogs. They also learn how to improve the presentation of their work by using Google documents. There is in addition a variety of software, which targets specific reading, grammar and spelling skills, particularly on the iPads.

5.3. Mathematics: Children use Computing in mathematics to collect data, make predictions, analyse results, and present information graphically. Screen robots allow pupils to give exact instructions for a particular route, or to use their knowledge of angles to draw a range of polygons. Maths skills are greatly enhanced through online websites such as 'Busy Things' as well as times table apps.

5.4. Science: Software is used to animate and model scientific concepts, and to allow children to investigate processes which it would be impracticable to do directly in the classroom. Data loggers are used to assist in the collection of data and in producing tables and graphs.

5.5. Personal, social and health education (PSHE) and citizenship: Computing makes a contribution to the teaching of PSHE and citizenship in that children in computing classes learn to work together in a collaborative manner. They also develop a sense of global citizenship by using the Internet and writing blogs. Teachers are expected to deliver online safety lessons termly in every class. Assemblies are also delivered to each Key Stage on online safety and cyber bullying. Through discussion of safety and other issues related to electronic communication, the children develop their own view about the use and misuse of Computing, and they gain an insight into the interdependence of Computing and technology around the world.

6. Computing and inclusion.

6.1. At our school, we teach computing to all children, whatever their ability and individual needs. Computing forms part of the school curriculum policy to provide a broad and balanced education

to all children. Through our Computing teaching we provide learning opportunities that enable all pupils to make good progress. We strive hard to meet the needs of those pupils with special educational needs, those with disabilities, those with special gifts and talents, and those learning English as an additional language, and we take all reasonable steps to achieve this.

6.2. In some instances the use of technology has a considerable impact on the quality of work that children produce, by increasing their confidence and motivation. Basic skills are supported in this way for children with additional needs.

6.3. We enable pupils to have access to the full range of activities involved in learning Computing. We have a range of software which is designed to include all learners.

7. Assessment for learning

7.1. Teachers will assess children's work in Computing by making informal judgements during lessons. On completion of a piece of work, the teacher assesses the work, and uses this assessment to plan for future learning. Written or verbal feedback is given to the child to help guide his/her progress. Older children are encouraged to make judgements about how they can improve their own work as well as their peers work.

8. Resources

8.1. Our school strives to keep the appropriate computer-to-pupil ratio, and Broadband Internet access. Children have access to laptops, interactive whiteboards, beebots, chromebooks and iPads with relevant software installed for appropriate use.

8.2. We employ a technician weekly to keep our equipment in good working order. Members of staff report faults on a reactive board or by email for that purpose. The technician will also set up new equipment and install software and peripherals.

8.3. In order to keep our school computers virus-free, no software from home will be installed on school computers. Pupils bringing in work on portable storage disks must first have it scanned, but it is easier if the work is e-mailed, or added to Google Docs, to the teacher concerned. Where teachers are transferring files between their home and school, they must have up-to-date virus protection software on their home computers. The network manager is responsible for our antivirus protection and liaises with the subject leader. Google Drive is encouraged to be used by all staff in the school.

8.4. Along with some classroom desktop and teacher laptops, the school has the following:

Hardware

- network, including switch, router and server PC
- network shared resources, including printers and photocopiers
- interactive whiteboards and screen projection equipment
- scanner / photocopier
- digital stills and digicams and a web cam
- digital microscopes
- data logger and sensors

- digital sound recorders
- calculators
- floor robot - beebots & bluebots
- headphones and microphones
- overhead projector
- external harddrives
- USB drives for portable storage
- keyboards (musical)
- iPads (32)
- Chrome books
- Google Drive resources

Online material

- online content subscriptions
- ESPRESSO Code
- Bug Club
- Mathletics
- Testbase
- school website and Broadband
- school e-mail accounts
- Busy Things
- Twinkl

9. Monitoring and review

9.1. The monitoring of the standards of the children's work and of the quality of teaching in Computing is the responsibility of the subject leaders. The Computing subject leader are also responsible for supporting colleagues in their teaching of Computing, for keeping informed about current developments in the subject, and for providing a strategic lead and direction for Computing in them school. The subject leader gives the headteacher (Mr. R. Adams) regular summary reports in which he evaluates the strengths and weaknesses in the subject, and indicates areas for further improvement through an action plan.

9.2. This policy will be reviewed each year.