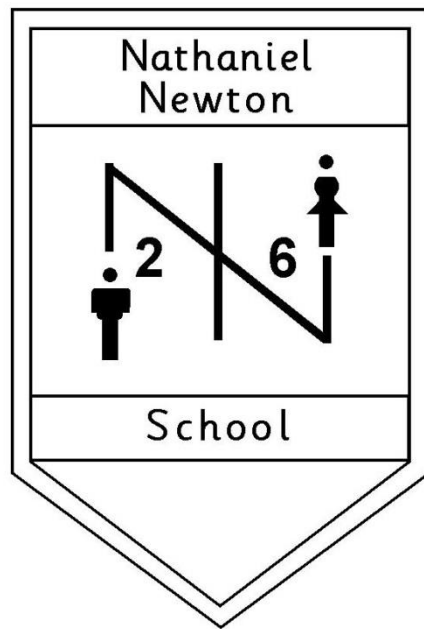


Nathaniel Newton Infant School



Computing Policy

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Computing Policy

1. Aims of Computing in the Curriculum

Throughout the Key Stage, children are entitled to the opportunity to develop their computing capability through activities in other curriculum areas, either in groups or as individuals. Children should use computing to:

- understand and apply the fundamental principles of computer science, including logic, algorithms, data representation, and communication
- analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems
- evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems
- be responsible, competent, confident and creative users of information and communication technology

2. Objectives

1. To deliver a high-quality computing education to equip pupils with an understanding of the ever changing digital world.
2. To encourage children to use their own initiative, imagination, reasoning and problem-solving skills and to develop confidence in handling hardware and software and other computing equipment.
3. To develop the ability to manipulate and present written word, images and sounds so as to convey a message effectively.
4. To help pupils to discuss their use of computing and to appreciate its relevance in society, and see computing as an essential tool for learning, for communication, for finding information, and for controlling and understanding their environment.
5. To give pupils an opportunity to improve presentation skills and to promote computing awareness throughout the school by regular displays of computing work.

3. Guidelines

3.1 Content of computing

Computing is concerned with the implementation of algorithms through programs on digital devices. The storing, manipulating and retrieving of data in a range of digital formats. The safe and respectful use of the internet inside and beyond school.

In the Computing National Curriculum document, the Programmes of Study (PoS) are divided into six areas.

- 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.

3.2 Computing in Early Years Foundation Stage (EYFS)

Through an integrated approach, computing skills are covered through cross-curricular activities relating to a topic in Reception. Children learn the skills required to operate simple computer programs on a variety of computer hardware including tablets, interactive touch screens and through interaction with a range of technology commonly used in homes and schools eg. cameras and remote controlled toys so they learn to select and use technology for particular purposes. This underpins the achievement of the Early Learning Goal (ELG) explicit within EYFS Understanding the World – Technology strand.

3.3 Planning

Long term plans are based on Computing National Curriculum guidelines twinned with Warwickshire Computing Development Service Computing Scheme of Work for Primary Schools.

Medium-term planning allows teachers to identify the activities which pupils will be involved in over a period of time, such as a term or half term. Links are made between computing and other subjects. In medium term planning the purpose of the activity is specified and, where appropriate, skills which are to be developed.

3.4 Work styles

At present teacher PC's, iPads and interactive touch screens displays are used to assist teaching in the classrooms. Children have access to a set of 30 iPads, 30 iPad minis and 15 chrome books as well as a selection of control devices. These technologies provide the flexibility to teach a whole class, groups and individuals computing knowledge, skills and understanding and to enhance the teaching of other subject areas.

All children have equal access to computing equipment in order to learn and consolidate their skills and techniques.

Children will have opportunities to work both collaboratively and individually as appropriate to the planned activity and their needs.

Teachers and classroom assistants will support the schools online safety policy by regularly reminding children of our online safety rules when relevant.

3.5 The contribution of Computing to teaching in other curriculum areas

Computing contributes to teaching and learning in all curriculum areas. For example, graphics work links in closely with work in art, and work using databases supports work in mathematics, while CD ROMs 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. It is the responsibility of each Subject Leader to ensure that computing is being used to support their subject.

English

Computing is a major contributor to the teaching of English. Through the development of keyboard skills and the use of chrome books, children learn how to edit and revise text. They learn how to improve the presentation of their work by using desktop publishing software and app's such as Book Creator to produce written work. Further to this developing instructional language in unplugged coding activities such as an algorithm for making a jam sandwich.

Mathematics

Many computing activities build upon the mathematical skills of the children. Children use computing in mathematics to collect data, make predictions, analyse results, and present information graphically. They can also use appropriate iPad Apps to consolidate learning. Further to this computing resources such as Beebots can be used to support the teaching of positional language and direction.

Personal, social and health education (PSHE) and citizenship

Computing makes a contribution to the teaching of PSHE and citizenship as children learn to work together in a collaborative manner in pairs or small groups. They develop a sense of global citizenship by using the Internet. Through the discussion of moral issues related to electronic communication, children develop a view about the positive use of computing and also how to deal with issues that arise when using technologies, covered through discrete Online Safety sessions as part of PSHE learning and through a cross curricular approach.

History and Geography

Computers and iPads support research skills as an additional source of information to develop and expand children's knowledge in both history and geography.

3.6 Monitoring and assessment

It is the responsibility of the Subject Leader to ensure the coherence, continuity and progression of all pupils in computing and to ensure that the subject is implemented in and across the curriculum.

Teaching of computing will be monitored half-termly through foundation assessments by each class teacher in line with KS1 curriculum monitoring. These will take into account children's knowledge and understanding of computing evaluated through examination of work produced, through questioning and practical application of computing skills. Assessment of identified tasks should give the teacher information on children's understanding and aptitude across all strands of the curriculum. Feedback to children in terms of their attainment and effort is ongoing.

3.7 More able children

The school encourages children to extend their work where appropriate in order to reach their full potential. The class teacher, in conjunction with the Computing Subject Leader, identifies more able children for computing. It is recognised that such needs may be in all or in one specific area of learning. Learning will be differentiated by task or by outcome, in order to provide challenges to match the child's ability and experience.

3.8 SEN

The school strives to enable all pupils to reach their full potential. Staff will plan for those needing extra support where needed and structure learning appropriately. The pupils are supported by teachers, teaching assistants and involved outside agencies involved.

4. Equal Opportunities

The Policy reflects the school policy on equal opportunities where all children, irrespective of religion, age, gender, ethnicity, language or disability have an equal entitlement to receive a quality of education, covering the full extent of the curriculum.

5. Health and Safety

5.1 Internet

The ever increasing access to technology and the digital world has had a huge impact upon the teaching and use of Computing within schools. Nathaniel Newton Infant School has taken full advantage of this revolution whilst ensuring, wherever possible, its safe use. In order to do this the school will follow the guidelines set out in the Online Safety Policy.

5.2 Use of Computing equipment

Best advice from the Local Authority has been taken in the purchasing of all computing equipment, including cabling, and the school ensures:

- An annual electrical safety check (PAT test)
- All hardware is maintained
- Fire extinguishers are accessible
- COSHH Regulations are followed
- Pupil are supervised whilst working
- Children follow safety rules when using iPads.

6. Monitoring and Evaluation of policy and practice:

The effectiveness of this policy will be based upon the following criteria:

- Classroom observations undertaken by the Computing Subject Lea and members of the SLT throughout the year. (Leader?)
- Policy and practice review
- Reports to governors
- Safety aspects will be looked at as part of the governor Health and Safety review.

Review dates for policy

Written by Miss T Ford

This policy was approved by the governing body in: May 2020

To be reviewed: May 2021

