Nelson Infant and Wensum Junior Schools

Evolution Academy Trust

Head teacher: Ms. V McConnell

Computing Policy

Policy agreed/reviewed by:	Date:
Head teacher signature: 	September 2020
Chair of Governor signature: 	September 2020

	Date of action:
Policy produced by: Anna Catlin/Alix Lewis	December 2019
Policy agreed/last reviewed by: HT and LGB	September 2020
To be reviewed by: HT and LGB	September 2021

Non-negotiables

- E-Safety must be taught within the first few weeks of each term (Suggested planning and resources by Miss Lewis)
- Children must understand how the equipment must be handled in order to avoid damage and injury. This will need to be revisited every year.
- Ensure children are taught to sit appropriately when using computer and that adjustments are made to avoid neck/ back/ shoulder injury.
- Lessons should start with a typing starter-allowing children to try typing with both hands.
- Children should not be on the computer for longer than 1 hour at a time. If time goes over this break activity into pieces to ensure children have 15 mins (minimum) break.
- All equipment not needed and water bottles be removed from tables before use.
- Office software and research can be taught in order to fit in with REAL projects.

Aims & Objectives

There are three aspects of the computing curriculum: computer science, information technology and digital literacy. The core of computing is computer science, in which pupils are taught the principles of information and computation. Computational thinking allows us to solve problems and is a skill that empowers. Pupils who can think computationally are better able to conceptualise, understand and use computer-based technology, and so are better prepared for today's world and the future.

"A high-quality computing education equips pupils to use computational thinking and creativity to understand and change the world". (NC 2014 Computing)

Pupils will learn how computers and computer systems work, and how they are designed and programmed. They will put this knowledge to use through programming, discovering how to design and build programs, develop their ideas using technology and create a range of content.

Computing also ensures that pupils become digitally literate. They will be able to use, and express themselves and develop their ideas through, information and communication technology – "at a level suitable for the future workplace and as active participants in a digital world". (NC 2014 Computing)

The national curriculum for computing aims to ensure that all pupils:

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

Teaching & Learning

This section sets out the essential knowledge that all children should acquire. It gives schools and teachers more freedom to decide how to teach this most effectively and to design a wider school curriculum that best meets the needs of their pupils. See separate curriculum coverage and provision planning for detailed objectives.

EYFS

Children recognise that a range of technology is used in places such as homes and schools. They select and use technology for particular purposes.
Our best practice for Computing in the Early Years (EYFS computing) is where activities:

- are imaginative and fun
- challenge
- involve being creative
- require collaboration and sharing
- involve listening, understanding, following and giving instructions
- encourage describing, explaining and elaborating
- encourage investigation
- involve problem solving
- include lots of 'unplugged' activities: computing without computers

Key stage 1

Pupils will be taught to:

- 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.

Key stage 2

Pupils will be taught to:

- design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts
- use sequence, selection, and repetition in programs; work with variables and various forms of input and output
- use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs
- understand computer networks including the internet; how they can provide multiple services, such as the World Wide Web; and the opportunities they offer for communication and collaboration
- use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content
- select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information
- use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.

Planning

Delivery of the current ICT curriculum supports the development of a clear progression of skills from Year 1 to Year 6. This ensures coverage of the 2014 programmes of study.

Curriculum links

Computing has deep links with mathematics, science, and design and technology. The units covered by the computing scheme are also designed to link with other curriculum areas through our REAL curriculum.

Monitoring and Evaluation

The subject leader is responsible for monitoring standards in computing. This will be through the monitoring of planning and pupils work, end of unit teacher assessments and undertaking pupil self-assessments and analysing responses through pupil voice.

Assessment

Children will be teacher assessed against the statements in the Computing Programme of Study. In addition, opportunities will be provided for other forms of assessment including self and peer assessment, using open questioning and discussion. Next steps will be identified for groups and individuals through pupil voice.

Equal opportunities

All pupils, regardless of gender, race or learning needs will be given equal access to the Computing curriculum. The Computing curriculum will be differentiated according to the needs of the pupils. Resources will reflect the needs of all our students and the subject co-ordinator will work with our Inclusion Manager to develop the provision of those resources required to support the needs of specific children in the school.

There are many opportunities for enrichment in computing. Pupils may choose or be provided with different sets of tools to accomplish programming tasks. Where appropriate ICT and computing are used to support children on a one to one or small group basis where children receive additional support e.g. Mathletics, Arrow and Lexia groups.

Health and safety

At Nelson and Wensum we recognise the importance of e-Safety in all aspects of the Computing Curriculum. We strive to protect and educate pupils and staff in their use of technology and to have the appropriate procedures to intervene and support any incident where appropriate. (see additional E-Safety policy)

Homework/parent partnership

There are many opportunities for independent study outside of school. We aim to support and encourage by celebrating achievements and providing opportunities for pupils to pursue their interests.

Appendix 1
Useful Links

Computing in the national curriculum: A guide for primary teachers (Naace)
http://www.computingatschool.org.uk/data/uploads/CASPrimaryComputing.pdf

Switched on Computing KS2 Units
http://www.risingstars-uk.com/uploads/publications/1255.pdf

Computing programmes of study key stage 2
https://www.gov.uk/government/publications/national-curriculum-in-england-computing-programmes-of-study

www.computingatschool.org.uk

www.naace.co.uk