



Hillocks Primary and Nursery School

Policy for Computing

1. Introduction

- 1.1 This policy reflects the values and philosophy of Hillocks in relation to the teaching and learning of computing. It sets out a framework within which teaching and non-teaching staff can operate, and gives guidance on planning, teaching and assessment.
- 1.2 The 2014 national curriculum introduces a new subject, computing, which replaces ICT. This represents continuity and change, challenge and opportunity. It gives the schools the chance to review and enhance current approaches in order to provide an even more exciting and rigorous curriculum that addresses the challenges and opportunities offered by the technology rich world in which we live.
- 1.3 Computing is concerned with how computers and computer systems work and how they are designed and programmed. Pupils studying computing will gain an understanding of computational systems of all kinds, whether or not they include computers. Computational thinking provides insights into many areas of the curriculum and influences work at the cutting edge of a wide range of disciplines.
- 1.4 The E safety policy should also be read in conjunction with this policy.

2. The Nature of computing

- 2.1 The new National curriculum presents the subject as one lens through which pupils can understand the world. There is a focus on computational thinking and creativity, as well as opportunities for creative work in programming and digital media. The introduction makes clear the three aspects of the computing curriculum: **computer science (CS)**, **information technology (IT)**, and **digital literacy (DL)**.
- 2.2 The core of computing is computer science, in which pupils are taught the principles of information and computation, how digital systems work and how to put this knowledge to use through programming. Building on this knowledge and understanding, pupils are equipped to use information technology to create programmes, systems and 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 an active participant in a digital world.
- 2.3 In the foundation stage, the information, communication and technology requirements stated in the knowledge and understanding of the world element of the early learning goals foundation curriculum, are covered in continuous and blocked units.

2.4 By the end of KS1 pupils should 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.

2.5 By the end of Key Stage 2 children should be able 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.

3. Implementation

3.1 At Hillocks we aim:

- To be consistent with our School aims.
- To commit Hillocks to continuing professional staff development with training as appropriate in classroom delivery of computing.
- To develop staff usage of ICT as a tool in the preparation, gathering and presentation of teaching materials as well as record-keeping and assessments where appropriate.
- To follow National Curriculum Policy Guidelines in computing as well as across the whole curriculum where appropriate.

- To develop and reinforce a cross-curricular approach to computing within classroom teaching.
- To ensure appropriate and equal access to computing for all children regardless of age, gender, ethnicity or ability.
- To provide and ensure safeguards in relation to children's access to information across the Internet by filters which prevents access to inappropriate materials.
- To provide and maintain high quality computing tools to fulfil National Curriculum requirements.
- To provide pupils with an educational basis of understanding in computing and its uses as part of everyday life at present and in the future.
- To develop pupil's overall competency and confidence in computing whilst promoting children's motivation and self-esteem.
- To support the pupil's development of literacy and numeracy skills and other areas of the curriculum in a cross curricular way when the opportunity presents itself.

3.2 The laptops, iPads and the PCs distributed around school will be used to help pupils access the computing curriculum.

3.3 The computing subject leader will continually monitor the resources required to deliver the computing element of the new National Curriculum.

4. Planning and teaching

4.1 Each year group will follow a scheme of work that is adapted to suit the needs of the class. Class teachers will look to adapt rather than adopt the scheme of work set out for their year group. Certain areas of the computing curriculum will be taught in a cross curricular way where suitable. However, we realise that due to the discrete subject knowledge expectations, this may not always be possible. Each year group will follow a scheme of work that includes:

- Topic title
- Curriculum coverage
- Outline of activities
- Resources
- Cross curricular links
- Assessment opportunities

Laptops and iPads will be used on a weekly basis to teach the necessary skills in line with the National Curriculum. These will also be in the classroom to integrate computing into all areas of the curriculum. All teachers will be given every opportunity to develop their ICT skills through relevant training sessions.

5. Special needs

- 5.1 Computing should be implemented in accordance with any Individual Education Plan or other specialist provision plan. As with all other curriculum areas, material may be selected from earlier or later parts of the key stage scheme of work as appropriate, where this is necessary and suitable, to enable pupils to progress and demonstrate achievement. Such materials should be presented in a context appropriate for the age and maturity of the pupil.

6. Equal opportunities

- 6.1 At Hillocks we seek to ensure appropriate and equal access to computing for all children regardless of age, gender, ethnicity or ability. We deem 'appropriate' to mean that which is educationally beneficial to our children. Access to certain areas of computing will be deliberately restricted, especially in relation to the access of certain materials on the Internet.

7. Assessment

- 7.1 Children are to be assessed in line with the National Curriculum for computing as with all other subjects. Because computing is cross-curricular, care will be taken to assess and record specific achievements rather than the success or otherwise of the subject through which computing is being taught. Reporting will be derived from the objectives formulated within the school scheme of work and a given child's strength, weakness and way forward will be identified. Teachers will record the children's ICT levels at the end of each year and pass them on at the end of the academic year.

8. Health and safety

- 8.1 At Hillocks we recognise the importance of health and safety issues for all in regard to the use of computers and related equipment in and outside of the classroom. As such, computers are placed on trolleys/low tables at the correct and appropriate height and position for the children in the classroom. It is important to adjust the position of seating and monitors appropriate to the user at all times to avoid potential strain related injuries.

The environment for the computer systems themselves are to be, where possible, away from dust areas. They are to be in a position to allow staff to monitor their safe usage as they would do with all electrical hardware. Teachers are responsible for ensuring that the hardware and software are used correctly and safely on a day-to-day basis. Any problems should be reported to the computing coordinator and the relevant hardware/software form updated. Machines should not be moved, disconnected or exchanged without prior consultation with the computing coordinator. In line with Electricity at Work Regulations 1989, all computers will be tested to ensure they are compatible with these regulations. This normally follows a formal inspection every 12

