Grange Primary School

Computing Policy

Purpose
Computers are now part of everyday life. For most of us, technology is essential to our lives, at home and at work. 'Computational thinking' is a skill children must be taught if they are to be ready for the workplace and able to participate effectively in this digital world. The new national curriculum for computing has been developed to equip young people in England with the foundational skills, knowledge and understanding of computing they will need for the rest of their lives. Through the new programme of study for computing, they will learn how computers and computer systems work; they will design and build programs, develop their ideas using technology and create a range of content. This policy sets out how the new subject will be taught, assessed and monitored in our school.
This policy should be read in conjunction with the scheme of work for Computing which sets out in detail what pupils in different classes and year groups will be taught, the E-Safety Policy and Acceptable use Policy.

This document is intended for:
- All teaching staff
- All staff with classroom responsibilities
- School Governors
- Parents
- Inspection Teams

Copies of this policy are kept centrally on the server and can also be found on the school website.

1. Introduction

1.1 The 2014 national curriculum introduces a new subject, computing, which replaces ICT. This represents continuity and change, challenge and opportunity. It gives 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 technologically rich world in which we live.

1.2 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.

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 programs, systems and a range of content. Computing also ensures that pupils become digitally literate– 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.

3. Entitlement

3.2 In the Foundation Stage, the Information Communication 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.

3.2 The new National Curriculum states that pupils should be taught to:	**Key Stage 1**	**Key Stage 2**
Computer Science	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.	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. Appreciate how [search] results are selected and ranked.
Information Technology	Use technology purposefully to create, organise, store, manipulate and retrieve digital content.	Use search technologies effectively. 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.

Digital Literacy	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.	Understand the opportunities [networks] offer for communication and collaboration. Be discerning in evaluating digital content. Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.

4. Implementation and Organisation

4.1 At Grange Primary School, Computing will be taught both as a discrete subject and in a cross-curricular way when the opportunity presents itself.

4.2 At the time of writing we have a range of equipment to support the subject. There are interactive whiteboards in the library, ICT Suite and in every classroom and an iMac computer together with a projector and screen in the hall. We also have 60 iPads, 30 PCs and 30 net books, which are available as a bookable resource throughout the school. In addition to this there are cameras and other peripheral items such as Bee Bots, which the children can use throughout the day. We also have a media suite which is used for video editing, podcasting and a twice weekly radio show, which is broadcast to the whole school

4.3 The Computing subject leader, Headteacher and specialist IT technician will continually monitor the resources required to deliver the Computing element of the new National Curriculum.

5. Health and Safety

5.1 To avoid continuous focus on the screen, teachers should model at regular intervals.

5.2 Staff and pupils should avoid standing directly in front of the whiteboard projector.

5.3 The projector beam should not be looked at directly.

6. Assessment and Review

6.1 The monitoring of the standards of the children's work and of the quality of teaching in Computing is the responsibility of the Computing subject leader and the Leadership Team.

6.2 The Computing subject leader is also responsible for supporting colleagues in the teaching of ICT, for keeping informed about current developments in the subject and for providing a strategic lead and direction for the subject in the school.

6.3 The Computing subject leader regularly discusses the situation with the Headteacher and will provide regular summary reports through Curriculum Priorites in which s/he evaluates the strengths and weaknesses in the subject and indicates areas for further improvement.

6.4 During the year, the subject leader has specially-allocated time for carrying out the vital task of reviewing planning, samples of the children's work and for visiting classes to observe the teaching of Computing.

6.5 Children's work will be saved on the server and kept throughout their time at Grange Primary.

7. Equal Opportunities

7.1 We incorporate ICT into a wide range of cross-curricular subjects. All children have equal access to the curriculum regardless of their gender, race and ability. This is monitored by analysing pupil performance to ensure that there is no disparity between groups.

Date December 2014

Signed (Chair of Governors):