



Computing Policy

April 2020

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## Introduction

This policy outlines the teaching, organisation and management of Computing taught and learnt at Roseberry Primary and Nursery School.

The policy has been drawn up as a result of staff discussion and has the full agreement of the governing body. The implementation of this policy is the responsibility of all teaching staff. The responsibility for monitoring and review of the subject lies with the Computing subject leader, Miss C Blakeney.

## Curriculum Intent

The aim of Computing teaching here at Roseberry is to stimulate children's interest and understanding of our modern heavily digitalised world. We want to model and educate our pupils on how to use technology positively and safely and we recognise that the best prevention for a lot of issues we currently see with technology/social media is through education.

It is through our curriculum that children will begin to build awareness of the relevance of coding, our use of the internet, including how to stay safe whilst navigating a realm of online access, and also learn how to communicate via various IT platforms. We teach children how to write simple algorithms to design games, solve problems and control physical systems. A dynamic approach to digital literacy teaching ensures as a school, we are responding to the ever-changing landscape of the online world, giving children the tools to stay safe and enjoy themselves online. We also teach children how to use presentation platforms such as Microsoft Publisher or Powerpoint, which allows them to present information in a modern way.

## **Our curriculum 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

## Early Years and Foundation Stage

Computing is taught in the EYFS as an integral part of one of the seven areas of learning (Understanding the World: Technology).

Children have free access to various forms of IT throughout the school day.

## Key stage 1

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.

## Key stage 2

Pupils should 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.

## Implementation

We recognise that many of our children have access to devices and have keen interest in Computing from an early age. Therefore we encourage use of computing, in its many forms, and teach children how to do this safely, securely and appropriately. We recognise the value of digital communication and the Internet as a crucial tool, which can supplement different learning styles.

We recognise that in all classes children have a wide range of abilities in Computing, and we seek to provide suitable learning opportunities for all children by matching the challenge of the task to the ability of the child.

We achieve this by:

- Setting tasks in which children can work at their own pace independently
- Setting tasks with increasing difficulty with some children not completing all tasks
- Grouping children by ability and pairing them for peer support
- Using teaching assistants to support children individually or in small groups
- Ensuring sufficient challenge is available for greater depth children

Emphasis is placed on the development of computing skills and a variety of teaching approaches are used:

- Teacher presentations, including step-by-step guidance
- Regular question and answer sessions
- Individual and group research
- Peer led teaching
- Self led teaching using media to support their work

The computing curriculum is broadly separated into three strands: ICT, computer science and digital literacy. Due to the differing nature of each strand, lessons are taught in different ways. Some elements are taught in a dedicated weekly morning slot and others are given focused weeks within

each term. Teachers use professional judgement as well as guidance from the Computing subject leader to decide how to implement each strand of the curriculum.

Generally, computer science is blocked (taught three or four lessons a week for two weeks) in order to build upon knowledge daily. Whilst teachers are encouraged to make links to other subjects, such as linking circuits to build a working coded game, coding is usually taught discreetly.

Digital literacy is taught throughout each half term during a dedicated lesson slot each week. It is crucial that children revisit ways to stay safe and navigate the online world in order to reinforce important learning and messages this strand holds. Lessons intersect with our PSHE strand 'living in the wider world'.

ICT, according to the class teacher's discretion, is blocked but can also be revisited weekly. In order to focus on ICT skills for presentation or information purposes, children will use a previous term's learning from subjects such as history, geography or science. This enables teachers and pupils to progress through ICT objectives rather than becoming preoccupied with another subject.

Our Brighter Futures curriculum is based around the following five drivers:

World of work	Our place in the world	Building the basics	Live well, live long	Safety net
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Where appropriate, teachers plan links to these foundations. For example, learning how to find an online/offline balance of activities in order to maintain a healthy lifestyle or reinforcing basic grammar and punctuation skills whilst learning typing and word processing skills.

We seek to develop internationally recognised competencies through our curriculum in order to enable pupils to develop cultural capital, and be successful in their adult and working lives. Computing activities provide opportunities to develop the competencies of communication; problem-solving and critical thinking.

## **Impact**

We encourage our children to enjoy and value the curriculum we deliver. We will constantly ask the WHY behind their learning and not just the HOW. We want learners to discuss, reflect and appreciate the impact computing has on their learning, development and well-being. Finding the right balance with technology is key to an effective education and a healthy life-style. We feel the way we implement computing helps children realise the need for the right balance and one they can continue to build on in their next stage of education and beyond.

We encourage regular discussions between staff and pupils to best embed and understand this. The way pupils showcase, share, celebrate and publish their work will best show the impact of our curriculum. Progress of our computing curriculum is demonstrated through outcomes and the record of coverage in the process of achieving these outcomes.

## Entitlement

All of our children are entitled to a continuous and progressive computing curriculum, which meets their individual needs. The computing curriculum has been planned using National Curriculum guidance and in conjunction with LA advice. Teachers will be encouraged to make cross-curricular links especially in the teaching of IT. However, many aspects of computer science will need to be taught discretely.

### Special Needs and Inclusion

Pupils with special educational needs have the same computing entitlement as all other pupils and are offered the same curriculum. However, particular application/tools are used for:  
Pupils with learning difficulties need to be motivated to practice basic skills regularly and intensively. They will benefit from the use of programs which practise skills is set in the context of an enjoyable and motivating scenario. Pupils of high ability who may be extended through the use of programs which offer challenge and opportunities for investigation.

### Equal Opportunities

Staff must be aware of, and guard against any bias based on gender, racial or any other stereotypes. All pupils should have equal access to Computing.

### Marking and feedback

Children are assessed according to whether they are 'working towards', 'expected and 'greater depth' within year group expectations.  
In order to make judgements, teachers use the National Curriculum Progression Guidance. Evidence to support teacher judgements is stored electronically in individual student folders and samples of work are taken for a class portfolio. Teachers make notes on objectives in order to reach a judgement about each child. Observations will take place to ensure effective and meaningful teaching and learning is taking place. Wherever possible, feedback is given verbally and in a timely manner, in keeping with our marking and feedback policy.

### Reporting

Information about children's progress with regard to computing is communicated to parents at parents' evenings and in their individual annual reports.  
Assessment data is stored on One Drive and related assessment documents, in assessment folders.

## Resources

Hardware and software resources are reviewed annually. Teachers report any resource shortfalls or possible extension requirements to the Computing Coordinator

## Responsibilities

Class teachers are responsible for:-

- Differentiating and adapting lessons to cater for all ability levels, ensuring SEN (Special Educational Needs), GD (Greater depth) and EAL (English as an Additional Language) are suitably challenged to meet their needs.
- Incorporating IT, where appropriate, when planning classroom activities.
- Understanding and utilising the range of software available in school and its use in relation to cross curricular activities.
- Using computer peripheral devices.
- Recognising and dealing with common faults and mistakes that can arise when using computing hardware and software.
- Maintaining own knowledge and skills of computing in accordance with educational developments.
- Ensuring children are responsible, respectful and safe when using IT.
- Reporting problems or faults to ITSS.

The Computing coordinator is responsible for:-

Assisting Senior Management with coordinating, developing and implementing the school's policy on computing.

Promoting and overseeing staff INSET activities relating to computing development.

Developing strategies for the efficient deployment of existing computing resources in the school.



Consultation with the Head Teacher and staff regarding computing objectives.

Keeping abreast of and understanding and current technology, developments and trends relating to Computing and its use in Education by attending network meetings.

Liaising with Durham County staff and other educational establishments on matters relating to computing.

Arranging for the upgrading or replacement of hardware and software as appropriate.

Organising/managing the duties of the technician who visits school fortnightly.

Completing school action plans and evaluations.

Updating school policies relating to the teaching of Computing.

The Head Teacher (J. Lee) is responsible for the school's compliance with the Data Protection Act and the Deputy Headteacher (Mrs Dunn) acts as Senior Information Risks Officer (SIRO), dealing with management of information and the schools data protection policy.

The Computing Co-ordinator also has the role of Online Safety Co-ordinator and is responsible for Online Safety in school along with the SLT.

All staff are responsible for Data Protection and have signed the 'Staff Acceptable Use Policy 2020'.

Digital literacy/online safety is firmly embedded in the curriculum and ethos of Roseberry Primary School. See Online Safety policy.

### Maintenance

Maintenance is carried out by the school's technician who visits the school once a fortnight to give technical support and maintain the network to its optimum capability. In addition, he completes network tasks as designated by the Computing Co-ordinator. Any issues arising from use of Computing equipment/software need to be recorded on the school gateway.

The Computing Co-ordinator will decide on whether issues can be dealt with using coordinator knowledge or by the technician.

## Health and Safety

When working with tools, equipment and materials, in practical activities and in different environments, including those that are unfamiliar, pupils should be taught:  
to never look into the projector lens the appropriate and safe use of all equipment, especially scanners and photocopiers due to the bright lights.

## Staff Development

To implement this vision effectively, all staff need to be confident in all areas of the computing curriculum. Staff who have identified areas of development in computing will be identified and through communication between the Computing Co-ordinator and the Headteacher, relevant courses will be located or training brought into/held at school.

Training will also be offered on new hardware and software purchased. In addition, the Computing Co-ordinator and/or other staff will be able to support staff members in using various programmes. The Computing Co-ordinator keeps up to date with the latest technological advancements and curriculum developments by attending conferences, network and school cluster meetings. Information is then fed back to the rest of the school during staff meetings.

## Legislation in Computing

When appropriate legislation appertaining to the use of IT changes, the Computing Coordinator will discuss this with all members of staff. Software copyright is a serious issue and is taken seriously by Roseberry Primary School.

Only software in which we have purchased the correct user site licence will be loaded onto all hardware so that staff know it is acceptable to use on all machines.

The school has a Voluming Licence, which all Apps are purchased through.

We adhere to 2018 GDPR guidelines, please see our Data Protection policy for further details.

*Legislation covering computing in schools includes :-*

*The Copyright, Designs and Patents Act 1988*

*The Computer Misuse act 1990*

*The Data Protection Act 2018*

*The Freedom of Information Act 2000*

*The Protection from Harassment Act 1997*

*The Malicious Communications Act 1988 Section 127 of the Communications Act 2003*

*Public Order Act 1986 The Defamation Acts of 1952 and 1996*

## Home/ School Links

To foster these links, the school has set up its own website to promote the school, showcase the children's work and inform the parents of termly dates etc.

In addition, Class Dojo is used to share children's work, keep parents up to date with school activities and as a way of communicating with parents about their child's progress. This should be used by staff and pupils to enhance learning at both home and school.

The school posts newsletters on the school website as well as sending paper copies home to parents.

When taking children on residential visits, parents are updated via SMS using a school mobile phone and updates are given via Class Dojo.

Related Policies:

- E-Safety
- Anti – Bullying

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