

Harewood Primary School

Computing Policy

Reviewed: September 2019

Harewood Primary School

Computing Policy

This policy should be read in conjunction with the Computing Programmes of study key stages 1 and 2 September 2013.

What are the Aims of the Subject?

“A high-quality computing education equips pupils to use computational thinking and creativity to understand and change the world.”

Department for Education Computing programmes of study – Published September 2013

Our aim in computing is to present it as a creative and fascinating process in which children are encouraged to use their own initiative, imagination, reasoning and investigative skills.

Pupils are taught to understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation.

We offer an interesting and broad computing curriculum. Cross-curricular links are used in the teaching of computing as appropriate, these units are taught according to when the linked lessons are being taught in class.

We offer our children access to a range of devices that they may not have at home. Many of our children do not have access to IT and we aim to compensate to prevent a technological divide by allocating a considerable percentage of our curriculum budget to computing.

Pupils have the opportunity to analyse problems in computational terms and have repeated practical experience of writing computer programs in order to solve such problems. Pupils evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems.

We want our children to remember what they have learned in order that they can apply that learning to future tasks. Our curriculum is structured to give the children opportunities to re-visit programs and skills. Our aim is that our children are taught skills in Nursery and KS1 which they will go onto develop and use independently in KS2 and beyond.

Pupils appreciate the relevance of computing in our society, and they see it as an essential tool for learning, for communication, for finding information and for controlling and understanding their environment.

Pupils are given the opportunity to describe, illustrate, interpret, predict and explain. Self-evaluation and peer evaluation are an important part of their learning and this is built into each lesson. Children also have the opportunity to express their views at the end of each topic.

E-safety and E-security are taught as part of the computing scheme of work. Pupils are taught that the Internet can be used as a way to influence and persuade people. They learn that they need to be aware of the risk of online radicalisation and that organisations seek to radicalise young people through the use of social media and the internet. They are taught how to build their resilience to radicalisation and who to report to if they are concerned by anything they have seen or heard on the internet.

We ensure that every child receives the equal opportunity to develop their computing capability.

How is the Subject Organised and Implemented within School?

Subject Time Allocation

All children have the equivalent of at least 45 minutes of computing discrete skills teaching per week in the computer suite. Computing is accessed in the Foundation stage as one of their independent learning choices. In addition to this all children have access to computing delivered through links with other subjects; this may be in the computer suite or through the use of classroom computers, laptops and ipads based in classrooms.

Units of Work

These units form the Scheme of Work for computing and are reviewed annually, cross curricular links are used in the teaching of computing as appropriate.

HAREWOOD PRIMARY COMPUTING SCHEME OF WORK 2019-20

Yr Gp	Autumn 1 (7)	Autumn 2 (7)	Spring 1 (5)	Spring 2 (6)	Summer 1 (5)	Summer 2 (6)
Nursery	<u>USING THE MOUSE</u> Tizzy's Toy Box	<u>GRAPHICS</u> 2Paint	<u>FOUNDATIONS OF MODELS AND SIMULATION</u> 2 Simple Modelling Toolkit	<u>CODING – CONTROL</u> Beebot and Roamer	<u>GETTING TO KNOW THE COMPUTER</u> Early Years ICT	<u>DIGITAL MEDIA SOUND/MUSIC</u> 2 Simple Music toolkit
<u>CODING – CONTROL – also running alongside other topics throughout year - Beebot and Roamer</u>						
Rec.	<u>MODELS AND SIMULATIONS AND MOUSE SKILLS</u> 2 Simple Modelling Toolkit 2 Simple City	<u>DIGITAL ART</u> Topic link: RE – Christmas pictures Colour Magic and 2Paint	<u>TEXT AND GRAPHICS AND KEYBOARD SKILLS</u> Topic link: 2 Create a story	<u>CODING - CONTROL</u> Beebots Roamer 2Go software	<u>DIGITAL MEDIA SOUND/MUSIC AND PUBLISHING</u> 2 Simple Music and 2 Publish	<u>CODING -INTRODUCTION TO MAKING COMPUTER GAMES</u> 2DIY PLUS PRACTISING LOGING ONTO COMPUTER
Year 1	<u>TEXT AND GRAPHICS</u> (7 weeks) Topic links: Literacy – Little Red Riding Hood and Teddies old and new Science - Plants DT – Veg soup 2 Create a story	<u>INTRODUCTION TO DB LEARNING PLATFORM And E-SAFETY</u> (4 weeks) <u>DIGITAL ART</u> (3 weeks) Topic link: RE – Christmas pictures Colour Magic	<u>DIGITAL MEDIA MAKING MUSIC</u> (2 weeks) 2 Simple Music toolkit <u>DATA HANDLING – PICTOGRAMS</u> (3 weeks) Topic link: Maths – Collecting data 2Count	<u>CODING - INTRO TO COMPUTER PROGRAMMING</u> (5 weeks) Discovery Coding E-SAFETY – Hector's World (1 week)	<u>CODING – CREATING COMPUTER GAMES</u> (4 weeks) 2DIY E-SAFETY – Hector's World Cont. (1 week)	<u>2D ANIMATION</u> (3 weeks) Topic Link: Geography - Seaside 2Animate <u>MODELS AND SIMULATIONS</u> (3 weeks) Spex+

<p>Year 2</p>	<p><u>MODELS AND SIMULATIONS</u> (3 weeks)</p> <p>Topic Link: DT – Can you build the queen a castle?</p> <p>Spex+</p> <p>E- SAFETY and DB Learning Platform (4 weeks)</p>	<p><u>DIGITAL MEDIA – SOUND/MUSIC</u> (1 week)</p> <p>2 Simple Linked to fireworks</p> <p><u>CODING – CREATING COMPUTER GAMES</u> (2 weeks) - 2DIY</p> <p><u>TEXT AND GRAPHICS AND KEYBOARD SKILLS</u> (2 weeks)</p> <p>Topic Link: Geography – Arctic and Antarctic animals</p> <p>Publisher</p> <p><u>DIGITAL ART</u> (2 weeks)</p> <p>Topic link: RE – Christmas pictures</p> <p>Colour Magic</p>	<p><u>TEXT AND GRAPHICS</u> (2 weeks)</p> <p>Topic Links: Paddington Bear and Chinese New Year</p> <p>2Create a Story</p> <p><u>2D ANIMATION</u> (3 weeks)</p> <p>Topic Link: DT – Vehicles</p> <p>2Animate</p>	<p><u>CODING - INTRO TO COMPUTER PROGRAMMING</u> (6 weeks)</p> <p>Discovery Coding</p>	<p><u>CODING – CONTROL</u> (2 weeks)</p> <p>Floor roamer Roamer world</p> <p><u>DATA HANDLING - INTRODUCTION TO DATABASES</u> (3 weeks)</p> <p>Topic Link: Science – Living things and habitats</p> <p>2Investigate</p>	<p>E-SAFETY – Childnet – Smart Crew resource (1 week)</p> <p><u>RECOGNISE COMMON USES OF IT BEYOND SCHOOL</u> (Health care) (British Values)</p> <p><u>DIGITAL RESEARCH AND PRESENTING INFO</u> (3 weeks)</p> <p>Topic link: Science – Keeping healthy</p> <p>Internet PowerPoint</p> <p>E-SAFETY – Jessie and Friends resource (1 week)</p>
<p>Year 3</p>	<p><u>DIGITAL RESEARCH AND PRESENTING INFO</u> (4 weeks)</p> <p>Topic Link: Science Animals including humans</p> <p>Internet Publisher</p> <p><u>TEXT AND GRAPHICS</u> (3 weeks)</p> <p>Topic Link: History – The Stone Age</p> <p>Word</p>	<p><u>CODING - COMPUTER PROGRAMMING</u> (5 weeks)</p> <p>Discovery Coding</p> <p>E- SAFETY – Childnet – Smart Crew resources (1 week)</p> <p><u>DIGITAL ART</u> (1 weeks)</p> <p>Topic link: RE – Christmas pictures</p> <p>2Create a picture</p>	<p><u>2D ANIMATION</u> (3 weeks)</p> <p>Topic links: – DT – Making a monster move</p> <p>2Animate</p> <p>E- SAFETY Espresso resources (1 week) (linked to Safer Internet Day)</p> <p><u>ART TOPIC</u> (1 week) Linked to Lowry</p>	<p><u>CODING – CREATING COMPUTER GAMES</u> (3 weeks)</p> <p>2DIY</p> <p><u>MULTIMEDIA PRESENTATION</u> (3 weeks)</p> <p>Topic Link: History – The Romans</p> <p>Powerpoint Internet</p>	<p><u>DATABASES</u> (3 weeks)</p> <p>Topic Link: General Geography – Country/Climate/Flag</p> <p>2Investigate Database</p> <p><u>DIGITAL ART</u> (1 week)</p> <p>Topic link: Art – Antony Gornley</p> <p>2Paint</p> <p>E- SAFETY – Animal Magic resource (1 week)</p>	<p><u>UNDERSTANDING COMPUTERS AND USING THE INTERNET</u> (3 weeks) (British Values)</p> <p>DB Primary – Search Engines</p> <p>Topic Link: Geography – Europe and Capital Cities</p> <p>Photostory</p> <p>E-SAFETY and Communicating Online DB Primary (3 weeks)</p>
<p>Year 4</p>	<p><u>DIGITAL RESEARCH AND PRESENTING INFO</u> (4 weeks)</p> <p>Topic Link: Science- Living things and habitats</p> <p>Internet Publisher</p> <p><u>CODING – CREATING COMPUTER GAMES</u> (3 weeks)</p> <p>2DIY</p>	<p><u>TEXT AND GRAPHICS</u> (4 weeks)</p> <p>Topic Link: Geography – Italy - Volcanoes</p> <p>Word</p> <p>E-SAFETY – DB Primary e-safety resources (1 week)</p> <p><u>DIGITAL ART</u> (2 weeks)</p> <p>Topic link: RE – Christmas pictures</p> <p>2 Paint a picture</p>	<p><u>DIGITAL MEDIA - 2D ANIMATION</u> (3 weeks)</p> <p>Topic links: – Geography - Africa</p> <p>2Animate</p> <p><u>DIGITAL MEDIA – PHOTO EDITING PROJECT</u> (2 weeks)</p> <p>Topic links: – Geography - Africa</p> <p>Photo Simple Publisher Internet</p>	<p><u>USING THE INTERNET AND MULTIMEDIA PRESENTATION</u> (4 weeks) (British Values)</p> <p>Topic Link: History – Normans</p> <p>Internet Powerpoint</p> <p>E-SAFETY – Know your friends resource And Design poster - Publisher (2 weeks)</p>	<p><u>CODING – COMPUTER PROGRAMMING</u> (5 weeks)</p> <p>Discovery Coding</p>	<p><u>DIGITAL MEDIA – COMPUTER ANIMATION</u> (3 weeks)</p> <p>Styckz software</p> <p>E-SAFETY – Thinkuknow Play, like,share and Band runner (1 week)</p> <p><u>CODING – CONTROL</u> (2 weeks)</p> <p>LOGO</p>
<p>Year 5</p>	<p><u>DIGITAL MEDIA ART/MUSIC PROJECT</u> (2 weeks)</p> <p>Topic Link: Geog – Caribbean</p> <p>Drawing packages</p> <p>Music software</p> <p>Powerpoint</p> <p><u>CODING - CREATING COMPUTER GAMES</u> (4 weeks)</p> <p>2DIY</p> <p>E-SAFETY – Espresso KS2 Digital Literacy resources (1 week)</p>	<p><u>USING THE INTERNET AND MULTIMEDIA PRESENTATION</u> (3 weeks) (British Values)</p> <p>Topic Link: History – WW1</p> <p>Internet Powerpoint</p> <p><u>TEXT AND GRAPHICS</u> And (3 weeks)</p> <p>Topic Link: Science – Earth and Space Word, Internet</p> <p><u>DIGITAL ART</u> (1 week)</p> <p>Topic link: RE – Christmas pictures</p> <p>2Paint</p>	<p><u>DATA HANDLING – INTRO TO SPREADSHEETS</u> (4 weeks)</p> <p>Excel</p> <p>E-SAFETY – Linked to Internet Safety Day – quiz and resources (1 week)</p>	<p><u>CODING – COMPUTER PROGRAMMING</u> (4 weeks)</p> <p>Scratch</p> <p><u>DIGITAL ART PROJECT</u> (1 week)</p> <p>Topic link: Art – David Hockney</p> <p>2 Paint</p> <p><u>UNDERSTANDING COMPUTERS</u> (1 week)</p> <p>DB Primary – computer hardware</p>	<p><u>CODING – COMPUTER PROGRAMMING</u> (5 weeks)</p> <p>Discovery Coding</p>	<p><u>GRAPHICAL MODELLING</u> (2 weeks)</p> <p>Spex</p> <p>E-SAFETY – Jigsaw video (1 week)</p> <p><u>DIGITAL ART AND PRESENTING TEXT AND GRAPHICS</u> (3 weeks)</p> <p>2Paint a picture Publisher</p> <p>History – Great Fire of London</p>

Year 6	<u>TEXT AND GRAPHICS/DIGITAL MEDIA</u> <u>SUSTAINED INDIVIDUAL PROJECT (Introduction) (2 weeks)</u> <u>Powerpoint</u> <u>CODING - CREATING COMPUTER GAMES (1) (5 weeks)</u> <u>Introduction to Kodu Games Lab</u>	<u>CODING – COMPUTER PROGRAMMING (4 weeks)</u> <u>Discovery Coding</u> <u>TEXT AND GRAPHICS/DIGITAL MEDIA (1 week)</u> <u>SUSTAINED INDIVIDUAL PROJECT</u> <u>Powerpoint</u> <u>E-SAFETY – Game on resource (1 week)</u>	<u>DATA HANDLING - SPREADSHEETS (3 weeks)</u> <u>Excel</u> <u>TEXT AND GRAPHICS/DIGITAL MEDIA</u> <u>SUSTAINED INDIVIDUAL PROJECT (2 weeks)</u> <u>Powerpoint</u> <u>E-SAFETY – Linked to Internet Safety Day – quiz and resources (1 week)</u>	<u>SATS PRACTICE</u> <u>TEXT AND GRAPHICS/DIGITAL MEDIA</u> <u>SUSTAINED INDIVIDUAL PROJECT (1 week)</u> <u>Powerpoint</u>	<u>CODING - CREATING COMPUTER GAMES (2) (5 weeks)</u> <u>Kodu Games Lab</u>	<u>SUSTAINED INDIVIDUAL PROJECT (1 week)</u> <u>E-SAFETY – Espresso resources (1 week)</u> <u>CROSS CURRICULAR TOPICS Independent Projects (3 weeks)</u> <u>History - The Mayans</u> <u>SUSTAINED INDIVIDUAL PROJECT (1 week)</u>
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COMPUTING CURRICULUM STRANDS:

COMPUTER SCIENCE – THIS IS THE SCIENTIFIC AND PRACTICAL STUDY OF COMPUTATION; WHAT CAN BE COMPUTED, HOW TO COMPUTE IT AND HOW COMPUTATION MAY BE APPLIED TO THE SOLUTION OF PROBLEMS.

INFORMATION TECHNOLOGY – THIS IS CONCERNED WITH HOW COMPUTERS AND TELECOMMUNICATIONS EQUIPMENT WORK AND HOW THEY MAY BE APPLIED TO THE STORAGE, RETRIEVAL, TRANSMISSION AND MANIPULATION OF DATA. (INCLUDING FROM ABOVE E-SAFETY AND USES OF IT BEYOND SCHOOL)

DIGITAL LITERACY – THIS IS THE ABILITY TO EFFECTIVELY, RESPONSIBLY, SAFELY AND CRITICALLY NAVIGATE, EVALUATE AND CREATE DIGITAL ARTEFACTS USING A RANGE OF DIGITAL TECHNOLOGIES.

Planning

The Units of Work take the form of Medium Term Planning and are reviewed and, if necessary, revised to address the particular needs of the children within that group. Lesson plans are produced in the half term prior to being delivered.

The ICT Manager draws up the Computing Scheme of Work and lesson plans for Foundation, KS1 and KS2.

Pupil Grouping

Computing is taught to a mixed ability class. Children work individually in the Computer Suite and in pairs or individually (where appropriate) in classrooms. Sometimes it is appropriate to pair children of similar experience and other times to pair an inexperienced child with an experienced one.

Teaching & Learning Styles

The ICT Manager plans a diverse range of activities through which to teach computer skills and knowledge. These activities should reflect the different learning styles of children and encourage enthusiasm and interest in the world around them.

Cross-Curricular Links

Teachers try whenever possible to link concepts from within different subjects to give them meaning in a wider context. The computing scheme of work has been linked, when appropriate, to the foundation subject topic weeks. Classroom based computers, laptops and ipads are used to support links with all other subjects. Cross-curricular links are identified in the points to note section of the units of work.

Computing

Class teachers and the Computing team explore the opportunities offered by ICT to enhance teaching and learning. The Internet is used as a tool for learning across the curriculum.

Children in upper KS2 are responsible for creating and developing content for ‘Harewood Scene’, this gives current school information and news.

Community Cohesion

Community links are established via Harewood Scene on the screen in the entrance hall. This allows visitors to school to have the opportunity to access regularly updated community news and activities. In addition to this the school website and learning platforms provide a link between school and the wider community.

Specialist Teaching

The role of the Computing teacher should be to plan and deliver lessons that teach computing skills which can be further developed when used across the curriculum. These lessons should lead to an understanding of the appropriate use of ICT. The ICT Manager is supported by class teaching assistants in the delivery of the Computing curriculum.

Role of the Teacher

Teachers should be aware of the strengths and weaknesses of all children in their groups through liaison with the Computing teacher. These need to be met by effective planning, organisation and teaching when incorporating computing across the curriculum.

Classroom Assistants

Classroom Assistants are used primarily to support children with Special Educational Needs to enable them to have equal access to the learning objectives of the lesson. They may work alongside the children to provide additional explanations or they may adapt activities to meet the particular special needs of an individual child. They work under the guidance of the class teacher and ICT Manager and are part of the planning for the lessons. Classroom assistants develop knowledge and understanding of how the SEN children in their group learn and this experience is valued greatly.

Presentation and Recording of Work

In computing children's work can take various forms. It can be an example of computing programming, a computer game design, a piece of word processing, a drawing, a poster, a graph, a spreadsheet, a database, a computer simulation, a presentation, an animation or a piece of music. Children's work is saved in their own work area on the network.

School Website

The school website is developed by the ICT Manager and upper KS2 children as an extension to their work on Harewood Scene; the content is reviewed and updated regularly to include relevant and interesting information.

Resources

Resource	Total
Interactive whiteboards	26
Projectors	8
Stand alone PCs	6
Networked laptops (incl. Computing suite and admin)	97
Printers/scanners/copiers	3
Ipads and mini ipads	140
Hudls	18
Ladybug Visualiser	9
Kindles	10
Kindle Fire HD	30

We have a wide selection of ICT resources.

The school's Computer suite contains 31 networked laptops, which can also connect wirelessly to the network, a colour laser printer/scanner/copier and CTouch screen. We

have a bank of 66 wireless networked laptops and 6 stand-alone computers which are used in classrooms and around school.

We also have a collection of ipads and mini ipads which are used in our Support Base, Foundation stage, Key stage 1 and Key stage 2 classes. Kindle reading systems are used in Key stage 2 to offer the children a different reading experience. Kindle Fire HD devices are used in year 6 to support the teaching of reading using Reading Plus online resource.

Each classroom has a networked laptop, interactive whiteboard and projector or Touchscreen board.

ICT Manager

The ICT Manager produces the Foundation, KS1 and 2 medium term planning. She produces weekly KS1 and 2 lesson plans that are implemented with the support of the teaching assistant. She ensures progression and continuity across both key stages. She is responsible for the management of the network, management of the One IT technician, ordering of resources and development of internal staff training.

Assessment and Record Keeping

‘By the end of each key stage, pupils are expected to know, apply and understand the matters, skills and processes specified in the relevant programme of study.’

At the end of each topic the children’s computing work is judged against National Age Related Expectations. Consideration is given as to whether the child has met these, is working towards them or is working at greater depth. The children have the opportunity to express their views at the end of each unit of work.

SEN

All children take part in mainstream lessons for computing; the children from the Support Base are fully included. They are given access to the learning outcomes by additional support from the classroom assistants, planned differentiated activities and specific resources where appropriate. The SENCO is available to support staff with advice concerning any aspect of special needs.

Gifted and Talented

Teachers plan carefully to meet the learning needs of all the children in our school. Differentiation is used where necessary or desirable. G&T pupils will be catered for in a variety of ways including:

- open ended activities which the children can respond to at their own level
- enrichment and extension activities that broaden a child’s knowledge or a particular skill
- an individual task within a common activity that reflects a greater depth of understanding and a higher level of outcome.
- being part of a group of Year 5 pupils, identified as G&T, who are responsible for producing Harewood Scene, contributing to the school website and the termly school newsletter.

Equal Opportunities

The computing curriculum is accessible to all children irrespective of age, ability, gender and cultural background. Children are encouraged to respect and value the diversity of other cultures and lifestyles.

British Values

British Values are not taught as a discreet subject. Opportunities have been identified in the computing curriculum to promote and develop an understanding of British Values.

These lessons are identified on the Computing Long Term Plan with **BV**.

Health & Safety

The ICT Manager monitors all hardware and ensures the equipment is well maintained. Children are closely supervised and rules concerning standards of behaviour are in place.

Internet Policy

Guidelines to ensure that the Internet is not accessed inappropriately have been given to children, parents and staff. All users have signed to declare that they will use the Internet appropriately. The policy is displayed on the wall of the computer suite and in the staff room.

Role of the Subject Leader

Please refer to the policy on the role of the Curriculum Leader.

Parental Involvement

As co-educators of children parents have an important role to play. They should be kept informed about the areas of study within computing so that they can make the most of any opportunities to apply the concepts learnt at school within the local environment.

Role of the Governing Body

The Curriculum Working Party has the role of approving all curriculum policies.

Policy reviewed: September 2019

Next review date: September 2020