



Our Lady of Hartley Catholic Primary School Computing Policy

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Our Lady of Hartley Computing Policy

(with reference to Computing Programme of Study 2014, DfE)

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1.0 Introduction

This policy expresses the school's purpose for the teaching and learning of Computing. It sets out the aims; planning of the curriculum and assessment and monitoring. It was developed in May 2024 by the Computing subject leader through discussion with teachers and the leadership team and based on Computing programmes of study (POS): key stages 1 and 2 (*DfE September 2014*).

2.0 Curriculum Intent

At Our Lady of Hartley, we understand that a high-quality computing education is essential for pupils to understand modern information and communication technologies. We prepare our pupils for the 21st century to be safe, responsible, competent, confident and creative participants in an increasingly digital world, not just as accomplished consumers of technology, but also as skilled, enthusiastic and imaginative creators of technology.

We teach a curriculum that enables children to become skilled users of technology who can:

- Keep safe when using technology.
- Understand and apply the essential principles and concepts of Computer Science, including logic, algorithms and data representations.
- Analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems.
- Build knowledge of principles of information and computation, how digital systems work, and how to put this knowledge to use through programming.
- Become digitally literate - able to use, express themselves and develop ideas through information and communication technology.
- Evaluate and apply information technology analytically to solve problems.
- Communicate ideas well by utilising software tools throughout all areas of the curriculum.

Our Computing teaching provides a wealth of learning opportunities and transferrable skills explicitly within the Computing lesson and across other curriculum subjects.

3.0 Implementation

3.1 Schemes of work



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- At Our Lady of Hartley, computing is taught using a blocked curriculum approach, following the NCCE Teach Computing curriculum scheme. This ensures children are able to develop breadth and depth in their knowledge, through key concepts and skills development. The Teach Computing units of work; a scheme written by The National Centre for Computing Education in association with STEM.
- Teaching of computing is delivered through a series of discrete Computing lessons, with additional planned opportunities to practise and embed skills learned, through cross-curricular subject links.

3.2. Online Safety

As outlined in the School's Online Safety Policy, online safety learning is delivered through discrete computing lessons, when appropriate opportunities arrive (such as at the start of each computing topic), during assemblies, during PHSE lessons and when taking part in the Safer Internet Day campaign promoted by the UK Safer Internet Centre. Online safety awareness and knowledge is extended to parents via the school website where there are links to suggested websites for further information.

Discreet lessons follow project evolve scheme of work. However, the lessons are adapted annually in line with technological advances and emerging issues.

3.3 Computing in Early Years

The Statutory Framework for the Early Years Foundation Stage (September 2021) separates learning and development into seven areas (three prime areas and four specific areas). The most relevant statements for computing are taken from Personal, Social and Emotional Development (prime area of learning), Physical Development (prime area of learning) and Expressive Arts and Design (specific area of learning). The targets that relate to the computing curriculum are as follows:

Personal, Social and Emotional Development

- Show resilience and perseverance in the face of a challenge.
- Know and talk about the different factors that support their overall health and well-being: sensible amounts of 'screen time'.
- Be confident to try new activities and show independence, resilience and perseverance in the face of challenge (managing self ELG).
- Explain the reasons for rules, know right from wrong and try to behave accordingly (managing self ELG).

Physical Development

- Develop their small motor skills so that they can use a range of tools competently, safely and confidently.

Expressive Art and Design

- Explore, use and refine a variety of artistic effects to express their ideas and feelings.
- Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function (Creating with materials ELG).



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Computing in the Early Years at Our Lady of Hartley

At Our Lady of Hartley, we are big advocates of encouraging and developing ICT skills from an early age. Children have access to a range of technology in the early years classroom including (but not limited to) role play toys (hoovers, microwaves, tills, old mobile phones, washing machines etc), technology that is used throughout the school (such as photocopies, tablets, computers, interactive whiteboards) and resources that encourage children to develop programming skills (such as Beebots and remote control vehicles).

Although we do allow children to access technology as part of child initiated learning, we also plan for such learning opportunities. In our experience, we have found that the best practise is: Co-operative activity shared with another child or an adult; Involves doing things together and giving opportunities to take turns; Provides opportunity for talking and listening together; Feeds the imagination; Encourages further investigation and exploration; Challenges and encourages solving problems.

Children are taught how to use a variety of ICT equipment throughout the year and this knowledge is built upon in Year 1.

3.4 Computing in Key Stage One

In Key Stage One children learn:

Year 1					
How tech can help us, parts of computer using keyboard & mouse, using tech responsibly	Create digital paintings based on artists' work	Programming floor robots	Grouping and sorting objects, labelling groups	Using a word processor	Programming Space race project
Year 2					
Information tech at school and beyond; how it improves our world and using responsibly	Capturing, editing and improving photos. Online safety - images may not be real	Algorithms, programs, debugging and design	Sorting and grouping data, pictograms, tally charts and block diagrams. When information shouldn't be shared	Listen to and create music, linking to patterns	Creating a simple quiz

3.5 Computing in Key Stage Two

In Key Stage Two children learn to:

Year 3					
What is digital device, compare digital and non-digital devices, intro to devices making up network infrastructure	Create stop frame animation, story-based animation, adding music and text to animation	Sequencing and simple programs, exploring motion, sound and event blocks	Investigating and creating branching database	Using text and images to communicate messages, how & why desktop publishing used in real world	Creating maze using pen blocks and movement
Year 4					



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Apply knowledge of networks to appreciate internet as network or networks. Explore WWW, who owns content and what they can create. Evaluate online content and understand consequences of false information	Recording and playing audio, plan and record a podcast	Programming to create shapes and patterns, using repetition and loops	Data collection and analysis using data loggers	How digital images can be changed and edited, resaved and reused. Impact that editing images can have	Exploring repetition in animation and games
Year 5					
Develop understanding of computer systems and how information is transferred between systems and devices. Take part in a collaborative online project	Planning, capturing, editing and manipulating video	Using Crumble to control simple model with input (selection) and output	Order and answer questions about data in flat-file database. Create graphs and charts	Use different drawing tools and create images in layers	Planning, creating and testing a quiz
Year 6					
Using WWW as communication tool. How search engines work, what influences searching; privacy & security	Design, create and evaluate own website, paying attention to copyright and fair use of media	Variables in scoreboard simulation, design and improve game using variables	Organising and formatting data in spreadsheets, formulae and graphs	Produce 3D models, examining the differences between working digitally and 2D and 3D graphics	Sequence, repetition, selection and variables using MicroBits

3.6 Helping every child to make progress

- Learning opportunities are provided for all children by matching the challenge of the task to their individual needs and abilities.
- Assigning classroom assistants to small groups of children and, where appropriate, one-to-one assistance enables all of our children to access the learning.
- More able students are provided opportunities to further extent their knowledge and skills through differentiated challenges.

3.7 Resources and access

The school acknowledges the need to continually maintain, update and develop its resources and to make progress towards consistent, compatible computer systems by investing in resources that will effectively deliver the objectives of the National Curriculum and support the use of IT, computer science and digital literacy across the school. Teachers are required to inform the computing subject leader of any faults as soon as they are noticed.

A service level agreement with EIS is currently in place to help support the subject leader to fulfil this role. Computing network infrastructure and equipment has been sited so that:



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- Every classroom from Reception to Y6 has a computer connected to the school network and an interactive whiteboard with sound, DVD and video facilities.
- Internet access is available in all classrooms.
- There is a computing suite of 32 computers (upgraded in 2019). Each class from Y1 – Y6 has an allocated slot one afternoon per week for teaching computing as a discrete subject.
- There is one-ipad charger and sync trolley containing a combined 32 ipads for use in classes throughout the school.
- There are 32 chrome books shared between year 5 and 6
- There are 6 chrome books in Year 1, 2, 3 and 4.
- Pupils may use IT and computing independently, in pairs, alongside a TA or in a group with a teacher.
- A governor will be invited to take a particular interest in computing in the school.

4.0 Impact

After the implementation of the comprehensive computing curriculum at Our Lady of Hartley, the children will be digitally literate and equipped to use technology creatively to understand and take an active role as participants of an increasingly digital world, but more importantly – safely.

We measure the impact of our curriculum through the following methods:

- The impact of the Computing curriculum is monitored regularly by the Computing subject leader through pupil discussion, samples of work and discussion with teachers and by monitoring children's electronic portfolios.
- The Computing leader conducts regular audits of the training needs of teachers and teaching assistants to improve their subject knowledge and confidence. Requests for training in Computing can be part of individual teacher's performance management plan.
- The impact of individual lessons are monitored by teachers in a variety of ways including:
 - An end of lesson reflection against the planned success criteria for the lesson.
 - On-going formative.
 - Reviews of children's progress and abilities are undertaken at the end of each unit and recorded on an assessment form. These are collated and given to the subsequent teacher to be used to inform planning.
 - Pupil discussion about their learning.
 - Samples of work will be kept for groups of children and stored digitally.

5.0 Policy Review

- This computing policy will be reviewed annually by the Computing subject leader and leadership team.