

Hoylandswaine Primary School



Computing Policy February 2018

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Computing Policy

Rationale

The value of computing goes beyond the National Curriculum and offers advantages in developing children's social and personal development. Competence in computing encourages self-confidence and opportunities for collaborative work. It enhances many social skills involving co-operation and sensitivity to others and provides a focal point to encourage home/school links. Computing promotes and enhances teaching and learning throughout all curriculum areas within the school, improving access to the curriculum. Computing provides essential means for some children, especially those with special educational needs, including sensory, physical or learning difficulties, to express their ideas and build on a positive self-image.

Computing is a compulsory part of the national curriculum for schools in England at all key stages. The curriculum will ensure primary school children have practical experience of designing and writing computer programs, and that they can understand the fundamental principles of computer science.

Aims and Purpose of our Curriculum

At Hoylandswaine we aim to provide a computing curriculum that supports the overall aims of the school and develops knowledge, skills and understanding that will enable children to respond to the demands of a rapidly changing society.

Children from the age of five will be taught what algorithms are and how they are used in digital devices - they will also learn how to write and test simple programs and to organise, manipulate and store digital content. In Key Stage 2, pupils will be taught to understand computer networks including the internet, and how they can provide a range of services, such as the worldwide web.

As a school, we recognise that future jobs will require excellent digital skills, so improving digital literacy (by which we mean those capabilities essential for living, learning and working in a digital society) is a key component for developing effective and employable learners. Elements of digital literacy feature in the new computing curriculum and we will ensure our offer is a balance of computing and digital literacy.

Curriculum

We use the Chris Quigley Essentials Curriculum to inform our teaching of computing; this can be seen in Appendix 1.

Early Years:

The Foundation Stage has a curriculum based on exploration and play based experiences, through both indoor and outdoor provision. Foundation Stage should include learning environments that give access to a range of ICT scenarios they would encounter in real life. Children in Foundation Stage have access to a range of hardware including an interactive whiteboard (IWB), iPads and cameras. There is appropriate software installed on all hardware to give opportunity for development across a variety of subjects.

Key Stage 1:

Pupils in Key Stage 1 should understand what algorithms are, how they are implemented on programmes, and that programs execute by following instructions. They should be able to write and test simple programs, using logical reasoning to predict the behaviour of simple programs. Pupils should organise, store and manipulate data in a range of digital formats. They should be taught how to use ICT safely both in and out of school.

Key Stage 2:

Pupils in Key Stage 2 should design programmes that achieve a set goal. They should work with variables to change input and outputs in order to solve problems, using logical reasoning to write and explain simple algorithms, correcting any errors that they might find. Pupils should have an understanding of networks, looking particularly at the internet and how it provides opportunities for communication and collaboration. Explore how internet search engines find and store data, use search engines effectively by discerning and evaluating digital content and respecting individuals' intellectual property. They should also use a variety of software to collect, analyse, evaluate and present data and information.

Computing is used across the curriculum as well as being taught as a specific skill. iPads are available in every classroom and laptops are timetabled throughout the school. PC's are available in classrooms on a need to use basis.

Teachers are expected to employ a range of strategies and to use their professional judgement to decide which are appropriate administration techniques for each child. They are also expected to intervene as appropriate to reinforce an idea, teach a new point, challenge and extend children's knowledge and understanding of their activity.

Management and Organisation

As the Computing Leader, Mr Bond is responsible for planning, implementing and assessing computing throughout key stages 1 and 2. Class 1 teaching staff are responsible for these areas throughout the early years. The computing curriculum is carefully developed, monitored and evaluated by the Computing Leader.

Classroom management ensures that there are opportunities for all children to develop their computing and digital literacy capability on the classroom PCs as well as during lessons that take place using the iPads and laptops.

Staff at all levels receive appropriate training to extend their confidence in the use of a wide range of applications of computing and digital literacy and in new and exciting equipment.

The Senior Leadership Team is responsible for:

- Determining the way in which computing should support, enrich and expand the curriculum
- The allocation of provision and resources in conjunction with the Computing Leader
- Ensuring that computing technologies are used to meet the schools wider aims.

The Computing Leader is responsible for:

- Writing and updating the school's computing policy
- Ensuring consistent implementation of the policy
- Ensuring that, where appropriate, class teachers undertake assessment and recording of each pupil's progress
- Organising resources to support computing and digital literacy
- Ensuring all staff have access to ICT facilities
- Identifying what computing and digital literacy support is needed by individual staff
- Assisting staff to incorporate computing and digital literacy into their planning and lessons, in a cross curricular way
- Arranging in-service training and support
- Monitoring and reviewing computing and digital literacy practise and provision
- Involving staff in the review and development of computing and digital literacy
- Keeping up to date with the relevant use of computing and digital literacy in schools
- Liaising with advisory staff and other agencies
- Liaising with Code Green technicians to keep maintenance running smoothly and efficiently
- Liaising with other schools.

The Class Teacher is responsible for:

- Developing the children's computing and digital literacy capabilities in accordance with the school's policy, ensuring that each child has equal access to computing and digital literacy resources
- Monitoring and evaluating each child's computing and digital literacy experiences
- Determining the next stage in each child's use of computing and digital literacy, ensuring continuity and rigour
- Where appropriate, keeping records of children's computing and digital literacy achievements and assessing each child's attainment
- Developing their own capabilities to support teaching and learning.

Before every lesson the teacher will remind children about how to use the internet safely and refer to the Acceptable Use Policy agreement. They will monitor and report e-safety incidents in line with the AUP (Acceptable Use Policy).

Teaching assistants and other adults, other than teachers, are responsible for working closely with the class teacher to ensure children develop their computing and digital literacy capabilities while developing their own skills in teaching and learning.

Equal Opportunities

We operate within a whole school equal opportunities policy. All children, regardless of race, gender, background or ability are entitled to equal access to develop their computing and digital literacy capability.

Hoylandswaine Primary School is committed to valuing diversity and to equality of opportunity. We aim to create and promote an environment in which children, parents and staff are treated fairly and with respect, and feel able to contribute to the best of their abilities.

The governing body recognises that it is unlawful to take into account and discriminate against anyone's gender, marital status, colour, race, nationality, ethnic or national origin, disability, religious beliefs, age or sexual orientation. Full consideration has been given to this during the formulation of this policy as it is the governors' aim that no-one at Hoylandswaine Primary School should suffer discrimination, either directly or indirectly, or harassment on any of these grounds.

The medium term planning should consist of a range of outcomes that accommodate the least and most able. Priority is given for extra use to those who do not have access to a computer at home.

The Special Educational Needs Code of Practice recognises the importance of computing and digital literacy in supporting learners with SEND. Therefore, there are specific computing and digital literacy opportunities to support children with SEND.

Health and Safety

We follow the local authority advice on health and safety.

Class teachers are responsible for checking that there are no obvious breaches in health and safety. We ensure that all monitors are appropriately placed, that chairs are of an appropriate height and that work surfaces are sufficiently large with no trailing leads or wires.

We make sure that children only spend between 45 minutes and an hour at the screen, without getting up or having a short break. Children are encouraged to sit upright with hands on the keyboard and discouraged from sitting too close to the monitor.

All our equipment is given an annual check by the electrical testing officer to ensure its safety.

Resources and Software

Some classrooms are equipped with networked PCs. They are running on Windows 7 with the latest Office software. Each classroom has access to 6 iPads and we have a portable suite of 12 laptops that are available for every classroom. These are all connected through a wireless network that links to our whole school network. The school has both colour and mono printers/photocopiers.

Each classroom is also equipped with an interactive whiteboard/screen and all our ICT equipment runs on our own network and therefore can be shared throughout the school.

Staff have received training by the Computing Leader and other agencies where required on the new hardware and software that is available to them. Staff training will be a continuous programme for relevant issues.

All ICT equipment is security tagged by our support provider Code Green.

The Computing Leader regularly reviews new software as appropriate. Our aim when buying new software is to:

- Cover the breadth of the curriculum fully
- Ensure all schemes of work are fully resourced with software suitable for the skills of the children
- Ensure each age group has a wide selection of cross-curricular programmes which support the National Curriculum
- Ensure all software is used progressively through the school.

Subject leaders have the responsibility for advising where a particular program is appropriate within their subject area and the SENDCo seeks advice on specific programmes that would be beneficial to support special educational needs.

Assessment

At Hoylandswaine we aim to give every child the opportunity to experience success in learning and to achieve as high a standard as possible.

Computing and digital literacy assessment is part of the school's non-core assessment and is the responsibility of the Computing Leader and class teachers where appropriate. The Computing Leader/class teachers use the main objectives indicated in the Chris Quigley Essentials Curriculum. They will keep records electronically. Pupils know whether they have achieved the objectives through success criteria. A formal written comment is made by the Computing Leader/class teacher on each pupil in their annual report, focusing on specific computing and digital literacy skills. Each pupil collects a range of example pieces in an electronic folder.

Professional Development

Computing and Digital Literacy is a basic core skill for teachers so that they can develop children's capabilities. Ongoing and informal training is given by the Computing Leader and other expert staff from outside agencies. Staff are encouraged to discuss any curriculum difficulties with the Computing Leader.

Technical Support

If teachers find a basic fault with their computers or any ICT equipment, they first undertake basic checks themselves, if possible, before referring the problem to the Computing Leader who in turn refers it to the Code Green helpdesk if it cannot be solved.

Code Green is contracted for maintenance support and technical advice. When a problem occurs, the leader contacts Code Green via their help line, who respond to the complaint within a published time limit, dependent on the nature of the problem itself.

We also have a technician who visits half a day per fortnight to develop ICT provision throughout Hoylandswaine in line with the vision and action plan.

Access to the Internet

More information about internet access can be found in our separate Acceptable Use Policy.

Visions for Future Developments

At the moment at Hoylandswaine we are exploring:

- Continual training on the new curriculum and computing initiatives
- Purchase of new software/apps to accompany growing developments and schemes of work
- Purchase of hardware to enhance our provision in order to deliver the curriculum to an acceptable level.

Monitoring and Review

This policy is monitored by the Headteacher, who reports to governors about the effectiveness of the policy on request. It will be reviewed appropriate to new legislation or to the needs of the school.

This policy will be reviewed in February 2021

Signed _____ Headteacher

Date _____

Signed _____ Chair of Governors

Date _____

Appendix 1

Chris Quigley Essentials Computing Curriculum

Key Stage 1	Key Stage 2
<ul style="list-style-type: none"> • Understand what algorithms are, how they are implemented as programs on digital devices, and that programs execute by following a sequence of instructions. • Write and test simple programs. • Use logical reasoning to predict the behaviour of simple programs. • Organise, store, manipulate and retrieve data in a range of digital formats. • Communicate safely and respectfully online, keeping personal information private and recognise common uses of information technology beyond school. 	<ul style="list-style-type: none"> • Design and write programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts. • Use sequence, selections and repetition in programs; work with variables and various forms of input and output; generate appropriate inputs and predicted outputs to test programs. • Use logical reasoning to explain how a simple algorithm works, 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. • Describe how internet search engines find and store data; use search engines effectively; be discerning in evaluating digital content; respect individuals and intellectual property; use technology responsibly, securely and safely. • Select, use and combine a variety of software (including internet services) on a range of digital devices to accomplish given goals, including collecting, analysing, evaluating and presenting data and information.

		Milestone 1 Years 1 and 2	Milestone 2 Years 3 and 4	Milestone 3 Years 5 and 6
To code (using Scratch)	Motion	<ul style="list-style-type: none"> • Control motion by specifying the number of steps to travel, direction and turn. 	<ul style="list-style-type: none"> • Use specified screen coordinates to control movement. 	<ul style="list-style-type: none"> • Set IF conditions for movements. Specify types of rotation giving the number of degrees.
	Looks	<ul style="list-style-type: none"> • Add text strings, show and hide objects and change the features of an object. 	<ul style="list-style-type: none"> • Set the appearance of objects and create sequences of changes. 	<ul style="list-style-type: none"> • Change the position of objects between screen layers (send to back, bring to front).

	Sound	<ul style="list-style-type: none"> • Select sounds and control when they are heard, their duration and volume. 	<ul style="list-style-type: none"> • Create and edit sounds. Control when they are heard, their volume, duration and rests. 	<ul style="list-style-type: none"> • Upload sounds from a file and edit them. Add effects such as fade in and out and control their implementation.
	Draw	<ul style="list-style-type: none"> • Control when drawings appear and set the pen colour, size and shape. 	<ul style="list-style-type: none"> • Control the shade of pens. 	<ul style="list-style-type: none"> • Combine the use of pens with movement to create interesting effects.
	Events	<ul style="list-style-type: none"> • Specify user inputs (such as clicks) to control events. 	<ul style="list-style-type: none"> • Specify conditions to trigger events. 	<ul style="list-style-type: none"> • Set events to control other events by 'broadcasting' information as a trigger.
	Control	<ul style="list-style-type: none"> • Specify the nature of events (such as a single event or a loop). 	<ul style="list-style-type: none"> • Use IF THEN conditions to control events or objects. 	<ul style="list-style-type: none"> • Use IF THEN ELSE conditions to control events or objects.
	Sensing	<ul style="list-style-type: none"> • Create conditions for actions by waiting for a user input (such as responses to questions like: What is your name?). 	<ul style="list-style-type: none"> • Create conditions for actions by sensing proximity or by waiting for a user input (such as proximity to a specified colour or a line or responses to questions). 	<ul style="list-style-type: none"> • Use a range of sensing tools (including proximity, user inputs, loudness and mouse position) to control events or actions.
	Variables and lists	<ul style="list-style-type: none"> • From Year 3 onwards. 	<ul style="list-style-type: none"> • Use variables to store a value. • Use the functions define, set, change, show and hide to control the variables. 	<ul style="list-style-type: none"> • Use lists to create a set of variables.
	Operators	<ul style="list-style-type: none"> • From Year 3 onwards. 	<ul style="list-style-type: none"> • Use the Reporter operators $() + ()$ $() - ()$ $() * ()$ $() / ()$ to perform calculations. 	<ul style="list-style-type: none"> • Use the Boolean operators $() < ()$ $() = ()$ $() > ()$ $() \text{and} ()$ $() \text{or} ()$ $\text{Not} ()$ to define conditions. • Use the Reporter operators $() + ()$ $() - ()$ $() * ()$ $() / ()$

				<p>to perform calculations. Pick Random () to () Join () () Letter () of () Length of () () Mod () This reports the remainder after a division calculation Round () () of ().</p>
To connect		<ul style="list-style-type: none"> • Participate in class social media accounts. • Understand online risks and the age rules for sites. 	<ul style="list-style-type: none"> • Contribute to blogs that are moderated by teachers. • Give examples of the risks posed by online communications. • Understand the term 'copyright'. • Understand that comments made online that are hurtful or offensive are the same as bullying. • Understand how online services work. 	<ul style="list-style-type: none"> • Collaborate with others online on sites approved and moderated by teachers. • Give examples of the risks of online communities and demonstrate knowledge of how to minimise risk and report problems. • Understand and demonstrate knowledge that it is illegal to download copyrighted material, including music or games, without express written permission, from the copyright holder. • Understand the effect of online comments and show responsibility and sensitivity when online. • Understand how simple networks are set up and used.

To communicate		<ul style="list-style-type: none"> • Use a range of applications and devices in order to communicate ideas, work and messages. 	<ul style="list-style-type: none"> • Use some of the advanced features of applications and devices in order to communicate ideas, work or messages professionally. 	<ul style="list-style-type: none"> • Choose the most suitable applications and devices for the purposes of communication. • Use many of the advanced features in order to create high quality, professional or efficient communications.
To collect		<ul style="list-style-type: none"> • Use simple databases to record information in areas across the curriculum. 	<ul style="list-style-type: none"> • Devise and construct databases using applications designed for this purpose in areas across the curriculum. 	<ul style="list-style-type: none"> • Select appropriate applications to devise, construct and manipulate data and present it in an effective and professional manner.