Hollinhey Primary School

ICT and Computing Policy

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Hollinhey ICT & Computing Curriculum Policy

The use of information and communication technology is an integral part of the national curriculum and is a key skill for everyday life. Computers, tablets, programmable robots, digital and video cameras are a few of the tools that can be used to acquire, organise, store, manipulate, interpret, communicate and present information. At Hollinhey Primary School, we recognise that pupils are entitled to quality hardware and software and a structured and progressive approach to the learning of the skills needed to enable them to use it effectively. The purpose of this policy is to state how the school intends to make this provision and provide an overview to the Computing Curriculum 2014 and a programme of study across the Key Stages.

Aims

The school's aims are to:

- Provide a relevant, challenging and enjoyable curriculum for ICT and computing for all pupils.
- Meet the requirements of the national curriculum programmes of study for ICT and computing.
- Use ICT and computing as a tool to enhance learning throughout the curriculum.
- Respond to new developments in technology.
- Equip pupils with the confidence and capability to use ICT and computing throughout their later life.
- Enhance learning in other areas of the curriculum using ICT and computing.
- Develop the understanding of how to use ICT and computing safely and responsibly.

The National Curriculum for computing has four main 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.

Intent

The school believes that ICT and computing:

- Gives pupils immediate access to a rich source of materials.
- Can present information in new ways which help pupils understand access and use it more readily.
- Can motivate and enthuse pupils.
- Can help pupils focus and concentrate.
- Offers potential for effective group working.
- Has the flexibility to meet the individual needs and abilities of each pupil.

Further to this, in line with our values at Hollinhey, our computing curriculum allows children to express their creativity and individuality. It is also designed to enhance other areas of the curriculum; allow children to respond to new developments in technology; use technology safely and equip pupils with the confidence and capability to use ICT and computing throughout their later life.

Honesty – Evaluating our own computing skills in order to progress.

Effort – Ensuring all children try their best in the key skills of computing.

Achievement – Gaining a sense of success and achievement by learning and developing new computing skills.

Respect – Being respectful to the equipment and to others when they are online.

Tolerance – Accepting that technology is ever changing and adapting.

Implementation

We provide enriching opportunities throughout the school embedded across the curriculum to develop their skills and knowledge across the three areas (information technology, digital literacy and computer science) of the computing curriculum. At Hollinhey, we currently follow the **Purple Mash** curriculum which provides our teachers with step-by-step plans to deliver engaging computing lessons from ages 5-11. This scheme provides clear assessment and progression steps for staff to provide fun and exciting computing lessons

Early Years (see also Early Year's policy)

It is important in the foundation stage to give children a broad, play-based experience of ICT in a range of contexts, including outdoor play. ICT is not just about computers. Early years

learning environments should feature ICT scenarios based on experience in the real world, such as in role play. Children gain confidence, control and language skills through opportunities to 'paint' on the whiteboard or drive a remote-controlled toy. Outdoor exploration is an important aspect, supported by ICT toys such as metal detectors, controllable traffic lights and walkie-talkie sets. Recording devices can support children to develop their communication skills.

Impact

The integral nature of computing enables children at Hollinhey to gain new levels of achievement, self-confidence and self-reflection. Computing at Hollinhey also enables our pupils to prepare themselves for the outside world and allows them to see that technology is forever changing and advancing. It teaches them new skills that can be used in other subjects across the curriculum. It also teaches children how they should behave online and processes they should follow if anything unwanted happens. They have an understanding of how to further develop skills should they ever develop an interest and other stages in their lives. By the end of each Key Stage, pupils are expected to know, apply and understand the matters, skills and processes outlined in the relevant programme of study. This is assessed continually and tracked using an online tracking system.

The subject leader is responsible for monitoring the standard of the children's work and the quality of teaching in line with the school's monitoring cycle. This may be through lesson observations, book trawl or looking at other data for the subject. The subject leader is also responsible for supporting colleagues in the teaching of computing, for being informed about current developments in the subject, and for providing a strategic lead and direction for the subject in the school.

Pupils with Special Educational Needs and Disabilities (see also SEN policy)

We believe that all children have the right to access ICT and computing. In order to ensure that children with special educational needs achieve to the best of their ability, it may be necessary to adapt the delivery of the ICT Hollinhey Primary School Computing and ICT Policy and Computing curriculum for some pupils.

We teach ICT and computing to all children, whatever their ability. ICT and computing forms part of the national curriculum to provide a broad and balanced education for all children. Through the teaching of ICT and computing we provide learning opportunities that enable all pupils to make progress. We do this by setting suitable learning challenges and responding to each child's different needs. Where appropriate ICT and computing can be used to support SEN children on a one to one basis where children receive additional support. Additionally, as part of our dyslexia friendly approach to teaching and learning we will use adapted resources

wherever possible such as visual timetables, different coloured backgrounds and screen printouts.

Extra Opportunities

All children have access to Purple Mash at home and are encouraged to access it. They are able to independently develop their computing skills through the use of this. Teachers can set *To Do's* for children to complete at home and this can form part of their homework. They can also work as a cross curricular alternative.

Resources and Access

The school acknowledges the need to continually maintain, update and develop its resources and to make progress towards a consistent, compatible pc system by investing in resources that will effectively deliver the strands of the national curriculum and support the use of ICT and computing across the school. Teachers are required to inform the ICT and Computing Subject Leader of any faults as soon as they are noticed. There is also a Technical Issues Book in the ICT Suite to record issues that need the help of the Redtop ICT Technician. Resources if not classroom based are located in the ICT Suite.

ICT and computing network infrastructure and equipment has been sited so that:

- There is an ICT and computing suite of 32 computers.

- In school we have one I-Pad trolley containing 32 iPads and one laptop trolley with internet access available to use in classrooms. Also 6 additional iPads to be used by teaching assistants.

- Each class has an allocated slot for teaching of specific ICT and computing skills

- The ICT and computing suite and laptops/ iPads are available for use throughout the school day as part of ICT and computing lessons and for cross curricular use. (a timetable is available to book out sessions on a weekly basis)

- Pupils may use ICT and computing independently, but must be supervised by a TA or teacher

- The school has an ICT and computing technician (Red Top) who is in school one day every two weeks.

- A governor has been appointed to take a particular interest in the curriculum in school.

Equal Opportunities (see also Equal Opportunities Policy)

Hollinhey Primary School will ensure that all children are provided with the same learning opportunities regardless of social class, gender, culture, race, disability or learning difficulties. As a result we hope to enable all children to develop positive attitudes towards others. All pupils have equal access to ICT and computing and all staff members follow the equal opportunities policy. Resources for SEN children and More Able will be made available to support and challenge appropriately.

The Role of the ICT & Computing Subject Leader

The ICT and Computing Subject Leader, who is currently Miss Emily Holland, is

- responsible for producing an ICT and Computing Action plan and for the implementation and review of this ICT and Computing policy across the school.
- to offer help and support to all members of staff (including teaching assistants) in their teaching, planning and assessment of ICT and Computing
- to maintain resources and advise staff on the use of materials, equipment and books.
- to monitor classroom teaching or planning following the school's rolling programme of monitoring.
- to monitor the children's computing work, looking at samples of different abilities.
- to manage the ICT & Computing budget.
- to lead staff training on new initiatives.
- to attend appropriate in-service training and keep staff up to date with relevant information and developments.
- to have enthusiasm for ICT and Computing and encourage staff to share this enthusiasm.
- to keep parents and governors informed on the implementation of ICT & Computing in the school.
- to liaise with all members of staff on how to reach and improve on agreed targets
- to help staff to use assessment to inform future planning
- to liaise with the ICT Technician (Red Top)
- to produce and review the E-Safety Policy and Acceptable Use of the Internet Codes
- To monitor and track assessments and progress on Classroom Monitor for individuals, groups and classes

The Role of the Class Teacher

Individual teachers will be responsible for ensuring that pupils in their classes have opportunities for learning ICT and computing skills and using ICT and computing across the curriculum and assessments are regularly made and inputted in Classroom Monitor. (see ICT & Computing Learning Outcomes). Teachers should also use ICT and Computing to produce plans, reports, communications and teaching resources across the curriculum.

Health and Safety (see also Health and Safety policy)

The school is aware of the health and safety issues involved in children's use of ICT and computing. All fixed electrical appliances in school are tested by a contractor every five years and all portable electrical equipment in school is tested by an external contractor every twelve months. It is advised that staff should not bring their own electrical equipment in to school but if this is necessary, then the equipment must be PAT tested before being used in school. This also applies to any equipment brought in to school by, for example, people running workshops, activities, etc. and it is the responsibility of the member of staff organising the workshop, etc. to advise those people. All staff should visually check electrical equipment

before they use it and take any damaged equipment out of use. Damaged equipment should then be reported to the ICT & Computing Subject Leader who will arrange for the Site Maintenance Officer to investigate repair or dispose.

- Children should not put plugs into sockets, remove plugs or cables or switch the sockets on.
- Trailing leads should be made safe behind the equipment
- Liquids must not be taken near the computers
- Magnets must be kept away from all equipment
- Children should not move the I-pad trolley or re-attach leads into the i-pads
- E-Safety guidelines are set out in the E-Safety policy & Acceptable Use Codes

Security

- The ICT and computing technician /Subject Leader will be responsible for regularly updating anti-virus software.
- Use of ICT and computing will be in line with the school's 'Acceptable Use Codes'. All staff, volunteers and children must sign a copy of the school's Codes.
- Parents will be made aware of the 'Acceptable Use Code' at school entry and KS2.
- All pupils and parents will be aware of the school rules for responsible use of ICT and computing and the internet and will understand the consequence of any misuse.
- The agreed rules for safe and responsible use of ICT and computing and the internet will be displayed in all ICT and computing areas.
- The I-pad trolley must be returned to the ICT Suite every evening and locked.
- Only the ICT Technician and Subject Leader should access the Server and the Router Switches unless specific agreement has been given.
- Teacher's I-pads and laptops should be sited away from public view and the teacher is to remain vigilant about their safety & security. They are the property of the school, not the individual.

Additional Policies & Documents relating to this Policy:

- Acceptable Use of the Internet Codes (Staff, Pupils & Visitors)
- E- Safety Policy
- Hollinhey ICT Scheme of Work
- Hollinhey Progression in E-Safety EYFS- Y6

Appendix – progression document

EYFS and National Curriculum Key Stage Aims

EYFS			
ELG	**Personal, Social and Emotional Development**	Managing Self	• Be confident to try new activities and show independence, resilience and perseverance in the face of challenge. • Explain the reasons for rules, know right from wrong and try to behave accordingly.
	Expressive Arts and Design	Creating with materials	• Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.

	Computer Science	**Information Technology**	**Digital Literacy**
KS1	• 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
KS2	• 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 program	• 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.

Progression of skills

Key skills	• To know how to switch a range of digital devices (computer/laptops) on and off • Load programs (office, apps) with support/open and close apps • Use a mouse pad to navigate an age-appropriate website/know how to navigate programmes • Use a mouse pad to select/drag/position an object or window to talk about what they are doing with Computers/Digital Media using appropriate vocabulary according to equipment available e.g screen/keyboard/laptop/computer/ mouse/headphones		
	Computer Science	**Information Technology**	**Digital Literacy**
Year One	• To explore a range of control toys and digital devices (BeeBots/microphones/laptops) • To follow instructions to move around to complete a simple task • To give a sequence of instructions to complete a simple task • To record instructions simply using pictures • To understand that instructions should be given clearly and in the correct order) • To talk about what will happen when instructions are given in a sequence.	• To use a digital device to take a picture or record their work • To select or record a sound to add to their work • To be familiar with a keyboard • To select images on a computer/laptop • To begin to type sentences (with support using capital letters, full stops and other punctuation • To use a paint package to a create a picture (paint) • To use pre-defined layouts or templates for presentation • To know other uses for ICT outside of school • To discuss examples of other ICT uses.	• To know that we can communicate online (email/text) • To contribute ideas to a class email or respond to a message • To create a story to combine words, pictures, sounds and animations (ppt) • Use simple writing tools to create their own content • Follow age-appropriate links provided by the teacher to research information • With support, use sound recording tools to convey a simple message • To sort objects into groups according to the criteria
Purple Mash unit	• Units: 1.2, 4, 5, 7 Additional: Beebots	• Units: 1.3, 6, 8 Additional: paint, Word, Microsoft teams	• Units: 1.1, 9 Additional: PowerPoint

Key Skills	• To develop awareness of keyboard layout and use of a mouse e.g. use the mouse or arrow keys to insert • words and sentences • To know backspace/undo/ • shift for capital letters/enter/upload • Changing font/ size/colour and style of text. • Typing skills (use two hands when typing) • Logging on/off digital devices use navigation skills to access appropriate parts of a website/ simple program/ app		
	Computer Science	**Information Technology**	**Digital Literacy**
Year Two	• Understand that programs use precise instructions to work • Create simple programs and find bugs in them. • Predict outcomes of their algorithms and programs • To know how to control a range of digital devices • To know that devices and actions on screen may be controlled by sequences of actions and instructions • To create a sequence of instructions to complete a simple task (move a BeeBots) • To control a floor robot using appropriate buttons (BeeBots) • To make predictions about what will happen when a command is entered • To discuss how to improve/change their sequence of commands. • To know the purpose of a range of digital devices: laptops/cameras/computers • To begin to answer 'What if' questions using a simulation	• To develop basic editing skills e.g. shift key for upper case, question marks, spaces after punctuation. • To know how to improve the presentation of a piece of work by changing the font size, colour and style • To use different layouts and templates for different purposes (e.g. story/newspaper /poster) • To understand that folders are used to organise files on a computer • To organise files and folders by creating, renaming, moving, copying and deleting • To combine graphics, text and sound to enhance their text • (PPT/Word) • To use a sound recording tool to record voice for a specific purpose (PPT) • To create a simple animation to illustrate a story or idea • To upload an image	• To compare the different ways that messages can be sent e.g email/text /telephone/letter and start to consider their advantages and disadvantages • To contribute and respond to an email (with support from teacher) • To look and talk about other people's contributions online • To know that stories can be shared in different ways • (photos/video/animation) • To create/use own their pictograms/graphs • To create QR codes • To access websites and documents using QR codes • To enter/save and retrieve pictures and text
Purple Mash units	• Unit 2.1 Additional: Beebots	• Units: 2.3, 4, 6, 7, 8 Additional: PowerPoint, Microsoft teams	• Units 2.2, 5 Additional: QR generator

Key skills	• To upload from digital devices and the Internet to a shared space (Class folders/Chn's Folder) • To know that they can access their work from any school computer by logging on to their Folder/Network Area. • Open/edit and save their work in their own space • To insert/cut/ copy/paste		• To use **'save as'** to create another version of their work • To develop further basic drafting skills: Insert words or sentences. • Change font, font size, colour. • To practice touch typing • Use ctrl+v and ctrl+c to copy and paste
	Computer Science	**Information Technology**	**Digital Literacy**
Year Three	• To develop an understanding of how technology works and how computers process instructions and commands. • To create/edit and refine more complex sequences of instructions for a variety of programmable devices e.g. using the repeat command • To use a computer to create basic applications, investigating how different variables can be changed and the effect this has • To understand that computer simulations can represent real life situations. • To use simulations to represent real life situations • To navigate a programming app • To control a character by dragging commands • To write a simple program/create a simple animation	• To download images and video • To select suitable sounds (including recording with a microphone) • To recognise and use key features of layout and design such as text boxes, columns, borders, WordArt • Explore and begin to use more advanced features in a paint package, eg colour picker, colour replacer • Save images and use them as part of other multimedia/ desktop publishing work • To use music software to select/record/organise and reorganise sounds • To locate, record, save and retrieve sounds • to add sounds from different sources. • Sequence still images and use simple editing techniques to create a presentation	• To reply to an email independently. • To organise and present information for a specific audience • To begin to experience forms of online discussion: such as blogs, wikis, quizzes, surveys and google hangouts • To know that ICT enables access to a wider range of information and tools to help find specific information quickly • Produce work using a computer, using more advanced features of programs and tools (font sizes) • To work collaboratively to create documents, including presentations • To understand the basic structure of a database • To add data to a pre-made database • To use the data in a pre-made database to generate graphs and charts • To use technology to create graphs and charts • To answer questions by searching and sorting the database
Purple Mash Units	• Unit 3.1	• Units: 3, 4, 6, 7, 8, 9 Additional: Paint, iPads, cameras, Word	• Units: 3.2, 5 Additional: Word, PowerPoint, Excel

Key Skills	• To use the online dictionary/thesaurus • To use ctrl+alt+prntscrn to take a picture of the whole screen and paste it into paint to adapt it. • Continue to practice touch typing • Use more than two fingers to type	• To develop further basic drafting and editing skills • Edit and top copy literacy work using Word/PPT/Publisher • Use spell checker • Use windows snipping tool to capture and annotate work • Delete, insert and replace text using a mouse or arrow keys

	Computer Science	Information Technology	Digital Literacy
Year Four	allows for situations to be modelled which it would be impractical to try out in real life life To understand that ICT allows for situations to be modelled which it would be impractical to try out in real life • To investigate the effects of changing variables in these simulations • To develop their understanding of how technology works and how computers process instructions and commands • To change algorithms/conditional statements and investigate the effect this has e.g use of 'if' and 'then'	• To evaluate a range of digital media (eg: digital images, digital video, video games, web pages and websites) To select and import images from digital cameras and graphics packages • Select and import sounds (eg own recording) and video/ visual effects. • Through peer assessment and self-evaluation, evaluate work both during and after completion, and make suitable improvements • To develop an increasing awareness of intended audience. • To import a photograph and explore the effects which can be created • To cut and reorganise digital video • To add text, sound effects and other graphic effects • To continue to use technology to create graphs and present data in different ways. • To design and create a basic database • To use a database to answer questions that have been constructed • To enter data into a spreadsheet • To change data and observe changes in results	• To use the online dictionary/thesaurus • To use ctrl+alt+prntscrn to take a picture of the whole screen and paste it into paint to adapt it. • Use windows snipping tool to capture and annotate work • Continue to practice touch typing and use more than two fingers to type. • To plan the structure and layout of document/presentation • To improve presentation of a document by laying it out effectively • To develop further basic drafting and editing skills • Edit and top copy literacy work using Word/PPT/Publisher • To open/read, and reply to email (independently) • To discuss advantages and disadvantages of these communication methods. (email ect) • To start to think about the different styles of language layout and format of online communications sent to different people (eg. when it is appropriate to use "text language"). To begin to experience forms of online discussion: such as blogs • To collaborate to create a document, giving thought to its audience and including links/images/embedded media (PPT) • To understand that ICT allows us to make improvements to our work quickly and efficiently.
Purple Mash Units	• Units: 4.1, 5, 8	• Units: 4.3, 6, 7, 9 Additional: iPads, microphones, excel	• Units 4.2, 4 Additional: PowerPoint, Word, Publisher

Key Skills	• To be able to use an online dictionary/thesaurus to search out level specific grammar and vocabulary independently • To use a variety of techniques to save and annotate on screen projects (screenshots/snipping)	• To find, save, crop and edit images to suit needs of projects • Continue to practice touch typing and use several fingers when typing • Use spellchecker and grammar checker to ensure consistency throughout work	
	Computer Science	**Information Technology**	**Digital Literacy**
Year Five	• To begin to develop understanding of how technology works; how computers process instructions and commands, including the use of coding languages. • To experience a selection of coding environments. • To design their own game including, backgrounds, scoring and/or timers. • To use conditional statements to create unique algorithms • Begin to understand the history of Computer Science • Use variables to add variation to algorithms • To program start and ends to games involving wins, losses and draws • To create variable interaction in quizzes and games using a combination of selection, conditional statements and variables • To evaluate the effectiveness of their algorithms • To continually debug code to identify and correct errors, exceptions and exploits	• To use presentation software and skills to present work or information relating to their learning. • To evaluate a range of digital media • To select software to support structure and layout of document/presentation • To improve the presentation of a document by considering its target audience • To select and import graphics from iPads, graphics packages and online sources • To select and import sounds (eg own recording, free online sources) video/visual effects • Through self-evaluation, evaluate projects both during and after completion, and make suitable improvements • To develop projects with an awareness of intended audience • To capture video clips to communicate ideas and information to specific audiences • To edit, reorganise and enhance digital video for a specific purpose or audience • To use online communication methods to support topic work • To consider language, layout and format when communicating with different people online	• Use technology to present their work, showing an increasing degree of skill and using advanced software • To use different filming techniques and camera angles e.g. zoom, panning, wide shot etc. to create different mood/perspective • To plan a video or animation by drawing a storyboard (Storyboard It) • To use a range of sound effects, music and voice-overs to create mood/ atmosphere • To select and edit sounds, text, movie clips and other effects to suit purpose and audience • Begin to recognise that the internet may contain material that is irrelevant, bias and inappropriate. • Begin to understand how issues of copyright apply to their own work • Begin to understand the different type of copyright pertaining to digital medias
Purple Mash Units	• Units: 5.1, 5	• Units: 5.3, 4, 6, 7, 8 Additional: PowerPoint, iPads, microphones	• Unit 5.2

Key Skills	• To continue to build on year 5 key skills • To select suitable software to edit and redraft written work • Use a variety of keyboard shortcuts to improve efficiency on computing systems		
	Computer Science	**Information Technology**	**Digital Literacy**
Year Six	• To continue develop understanding of how technology works; how computers process instructions and commands, including the use of coding languages. • To experience a variety of coding environments (Scratch, Code.org) • To show an understanding of the history of computing and computer science. • To design their own game including sprites, backgrounds, scoring and/or timers. • To use conditional statements to create unique algorithms • Use variables to add variation to algorithms • To program start and ends to games involving wins, losses and draws • To create variable interaction in quizzes and games using a combination of selection, conditional • To evaluate the effectiveness of their algorithms • To continually debug code to identify and correct errors, exceptions and exploits statements and variables	• Through peer assessment and self-evaluation, evaluate projects both during and after completion, and make suitable improvements • To continue to produce and add to a portfolio of written and visual work and projects for sharing with other children inside and out of school • To engage in a range of online activities including; publishing and sharing work for evaluation and evaluating the work of others.	• Use technology to present their work, showing a degree of skill and using advanced software • To use a range of sources to check validity and recognise different viewpoints and the impact of incorrect data • Understand how issues of copyright apply to their own work • Understand the different type of copyright pertaining to digital medias • Recognise that the internet may contain material that is irrelevant, bias and inappropriate. • Save and use pictures, text and sound recognising copyright issues
Purple Mash Units	• Units: 6.1, 5, 6, 8	• Units: 6. 3, 4, 7, 9	• Unit 6.2 Additional: Kiddle