



Working together to inspire every pupil to:
Step in to their learning adventure.
Step up to achieve their potential.
Step out and let their creativity shine.
Step together in friendship and respect.
Step forward and follow their dreams.

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Computing and ICT Policy

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Policy review dates and changes

Review date	By whom	Summary of changes made	Approved by
June 2020	M. Draper		Name: S.Coleman

Computing Coordinator - Milly Draper

Introduction

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 Homefields 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.

The Computing and ICT policy should be read in collaboration with the school's assessment and E-safety policy.

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.
- To respond to new developments in technology.
- To equip pupils with the confidence and capability to use ICT and computing throughout their later life.
- To enhance learning in other areas of the curriculum using ICT and computing.
- To develop the understanding of how to use ICT and computing safely and responsibly.

The national curriculum for computing aims to ensure that all pupils:

- Can understand and apply the fundamental principles of computer science, including logic, algorithms, data representation, and communication
- 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.

Objectives

Early Years:

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, torches and remote control toys. Recording devices can support children to develop

Key Stage 1:

By the end of 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 a sequence of instructions
- Write and test simple programs
- Use logical reasoning to predict and computing 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.

Key Stage 2:

By the end of key stage 2, pupil should be taught to design and write 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; generate appropriate inputs and predicted outputs to test programs
- Use logical reasoning to explain how a simple algorithm works 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
- 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.

Curriculum Planning

At Homefields we have devised a curriculum to ensure our children are not only digitally literate but that they also have a deep understanding of a range of areas within computing. Throughout the year, each Year group will follow the same areas of learning, but working towards their appropriate Milestone:

- E-Safety
- To Communicate
- To Collect
- To Connect
- Coding

The topics studied in ICT are planned to build upon prior learning. While we offer opportunities for children of all abilities to develop their skills and knowledge in each unit, we also build planned progression into the scheme of work, so that the children are increasingly challenged as they move up through the school. Staff will follow the objective set out as in the Chris Quigley Milestones to ensure children a progressive curriculum

Staff are aware that many children in our catchment area have a high skill level and most have continuous access to a variety of ICT outside of school. Some children may have particular teaching and learning requirements, which go beyond the provision for that age range, and if not addressed could create barriers to learning. This could include Gifted and Talented children, those with Special Educational Needs or those with English as an Additional Language. Teachers must take account of these requirements and plan, where necessary, to support individuals or groups of pupils to enable them to participate effectively in the curriculum.

ICT across the Curriculum

ICT contributes to teaching and learning in all curriculum areas. For example, graphics links closely with art work, databases supports work in mathematics, while software and the internet prove very useful for research in humanities subjects. ICT enables children to present their information and conclusions in the most appropriate way.

Literacy:

ICT has become an increasingly important tool in the teaching of literacy. Staff use a variety of online resources and software to make teaching interactive and fun. The use of The Interactive Whiteboards also helps teachers to pinpoint misconceptions or celebrate writing or texts clearly with the whole class. Where ICT is used in conjunction with literacy teachers are planning lessons ensuring they have both a literacy and ICT skill objective where necessary. Children's ICT learning is challenged in this new capacity and they have the opportunity to consolidate and build on their previous learning more frequently. The children can capture their ideas and develop their speaking and listening using voice recording equipment. This allows young children and those unsure of writing, an avenue to developing their ideas. Through the development of keyboard skills and the use of computers children learn how to edit and revise text. They learn how to improve the presentation of their work by using desk-top publishing software. Teacher make good use of a variety of online systems, including The Literacy Shed to provide inspiring stimuli and Oxford Reading Owl to develop a love of reading.

Mathematics:

Many ICT activities build upon the mathematical skills of the children. Children use ICT in mathematics to collect data, make predictions, analyse results and present information graphically. They also acquire measuring techniques involving positive and negative numbers, and including decimal places. The children use mathematical ICT games and puzzles to consolidate and test learning and misconceptions in a fun and engaging way.

Research:

The internet is a fantastic tool for children to explore and discover new information for themselves. Children are given lots of opportunities to research different areas within their topics. They are taught that not all information may be accurate and how they can check for reliable information.

Special Educational Needs

At Homefields Primary School we teach ICT to all children, whatever their ability. ICT forms part of our school curriculum policy to provide a broad and balanced education for all children. We provide learning opportunities that are matched to the needs of the children with learning difficulties. In some instances the use of ICT has a considerable impact on the quality of work that children produce; it increases their confidence and motivation. When planning work in ICT, we take into account any SEND (Special Education Needs and Disabilities) targets that are relevant. We have a growing range of software that is specifically used to develop children's reading, speaking, mathematical and phonics work. The children have broad access to the equipment and software, with the support of adults.

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 coordinator of any faults as soon as they are noticed. Resources if not classroom based are located in the ICT and computing suite. A service level agreement with entrust is currently in place to help support the coordinator to fulfill this role both in hardware & audio visual. ICT and computing network infrastructure and equipment has been sited so that:

- Every classroom from Nursery to Year 6 has a laptop connected to the school network and an interactive whiteboard with sound, DVD and video facilities.
- Each teacher has access to a laptop and tablet.
- There is an ICT hub containing 8 desktop computers.
- There is a tablet trolley containing 15 Android Tablets.
- There is a laptop trolley containing 10 2-in-1 laptops.
- There is a research hub, situated near upper Key Stage 2, containing 4 notebooks.
- Pupils may use ICT and computing independently, in pairs, alongside a TA or in a group with a teacher.
- The school has access to technical support throughout the school day from Chellaston Academy technicians.
- A governor will be invited to take a particular interest in ICT and computing in the school.

Assessment and Recording

Teachers regularly assess capability through observations and looking at completed work. Key objectives to be assessed are taken from Chris Quigley Milestones to assess key ICT and computing skills each term. Assessing ICT and computing work is an integral part of teaching and learning and central to good practice. It should be process orientated - reviewing the way that techniques and skills are applied purposefully by pupils to demonstrate their understanding of the concepts of ICT and computing. As assessment is part of the learning process it is essential that pupils are closely involved. Assessment can be broken down into;

- Formative assessments are carried out during and following short focused tasks and activities. They provide pupils and teaching staff the opportunity to reflect on their learning in the context of the agreed success criteria. This feeds into planning for the next lesson or activity.
- Summative assessment should review pupils' capability and provide a best fit level. Use of independent open ended tasks, provide opportunities for pupils to demonstrate capability in relation to the term's work. There should be an opportunity for pupil review and identification of next steps. Summative assessment should be recorded for all pupils – showing whether the pupils have met, exceeded or not achieved the learning objectives.

During each area of computing and ICT that is taught, teachers will make informal assessments based on the key ideas and skills taught.

We use these assessments as a basis for tracking the children within each area, stating which level of the Milestone they are working at (Basic, Advancing or Deep). At the end of the year the ICT coordinator collects in the grids from each year group. This assessment information will then be passed on to the next teacher in preparation for the following academic year. Teachers will use this information to ensure teaching and learning provide support and extension where necessary.

The ICT coordinator will look at work completed by a child at each level and will discuss with staff members any concerns regarding the children's progress and computing in informal discussions. Through pupil discussions the ICT coordinator will monitor the children's knowledge and ability to talk about their ICT experiences within school. It also promotes an opportunity for children to give their suggestions on ways to improve ICT within our school. This information is collated and where appropriate new opportunities can be implemented.

Early Years

Technology in the early years comes under the area of understanding the world. Teachers will assess children within this area and progress will be clearly shown through tracking at four points of the year.

Health and safety

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 la 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 coordinator, bursar or head teacher who will arrange for repair or disposal.

- Children should not put plugs into sockets or switch the sockets on.
- Trailing leads should be made safe behind the equipment.
- Liquids must not be taken near the computers or any ICT equipment.
- Magnets must be kept away from all equipment.
- E-safety guidelines will be set out in the e-safety policy & AUP

Security

- The ICT and computing technician will be responsible for regularly updating anti-virus software.
- Use of ICT and computing will be in line with the school's 'acceptable use policy'. All staff, volunteers and children must sign a copy of the schools AUP.
- Parents will be made aware of the 'acceptable use policy' via the school website.
- 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.

Roles and Responsibilities

The ICT coordinator will be responsible for:

- Ensuring the consistent implementation of the Computing and ICT policy, the E-Safety Policy and reviewing the policy.
- Ensuring staff have good knowledge of computing and ICT and supporting their continuing professional development.
- Ensuring consistent implementation of the curriculum and continuity between year groups.
- Curriculum development.
- Ensuring and monitoring progression in computing and ICT
- Purchasing and organising ICT resources.
- Reviewing the assessment of ICT needs.
- Overseeing equipment maintenance.

The senior leadership team will be responsible for:

- health and safety policy and practise
- arranging in-service support

The staff will be responsible for:

- Creating schemes of work that develop the children's computing and ICT skills in alignment with the Chris Quigley Milestones.
- For assessing children's ICT during and after each area of learning.
- For implementing E-safety learning into their ICT and PHSE schemes of work.
- For developing differentiated learning and ensuring all the children in their class can access ICT.
- For ensuring they seek support and training with areas of the ICT curriculum they are unfamiliar with.

The ICT technicians will be responsible for:

- Assisting in the development, support, maintenance and security of all ICT systems within the school.
- Assisting in the installation, configuration and testing of hardware and software.
- Providing technical advice and assistance to support staff members where necessary

Parental involvement

Parents are encouraged to support the implementation of ICT and computing where possible by encouraging use of ICT and computing skills at home during home-learning tasks and through the school website. They will be made aware of e-safety and encouraged to promote this at home.