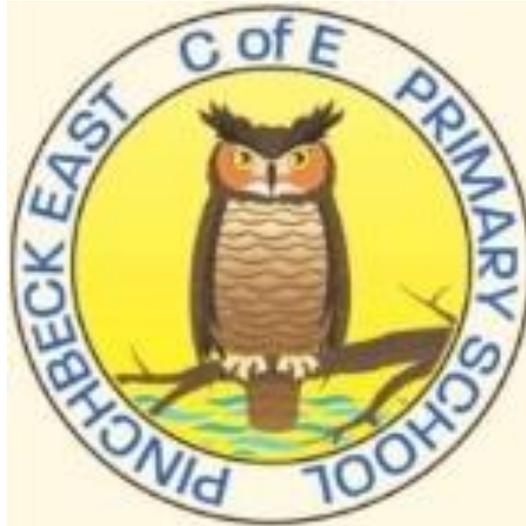**Pinchbeck East C of E Primary School**

Computing Policy

February 2018

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 Pinchbeck East Primary CofE 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.

Aims

The school's aims are to:

- Provide a relevant, challenging and enjoyable curriculum for Computing for all pupils.
- Meet the requirements of the national curriculum programmes of study for computing.
- Use 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 computing throughout their later life.
- To develop the understanding of how to use computing safely and responsibly.

The new 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 term, and have repeated practical experience of writing computer programmes in order to solve such problems.
- Can evaluate and apply information technology, including new or unfamiliar technologies and analytically solve problems.
- Are responsible, competent, confident and creative users of information and communication technology.

Rationale

The school believes that 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.

Objectives

Early Years

It is important in the Foundation Stage to give children a broad, play-based experience of computing in a range of contexts, including outdoor play. Computing is not just about computers. Early Years learning environments should feature computing based 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 program a toy. Recording devices can support children to develop their communication skills. This is particularly useful with children who have English as an additional language.

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, pupils 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.

<u>Planning</u>

Planning needs to incorporate assessment so that there are clear intentions for the teachers and the children. This will assist in monitoring and assessing children's progress as the teacher will be able to compare intentions with achievements attained. Planning in Computing is a process in which all teachers are consulted. Topics are carefully balanced to ensure full coverage of the National Curriculum. The scheme of work for Computing will be developed by the coordinator in collaboration with the whole staff. The school is currently using Knowsley scheme of work, which enables a broad coverage of all areas of the National Curriculum from Year 1 to Year 6, ensuring that progression is maintained and built on throughout each child's education at school. It is the Computing Leads role to monitor and evaluate the learning done.

We recognise that all classes have children with widely differing computing abilities. This is especially true when some children have access to equipment at home, while others do not. We provide suitable learning opportunities for all children by matching the challenge of the task to the ability and experience of the child. We achieve this in a variety of ways by:

- Setting common tasks which are open-ended and can have a variety of responses.
- Setting tasks of increasing difficulty (not all children complete all tasks)
- Grouping children by ability in the room or grouping by mixed ability to support peer learning.
- Using classroom assistants to support the work of individual children or groups of children.

Assessment

Teachers regularly assess capability through observations and looking at completed work. Key objectives to be assessed are marked on Pupil Asset to show whether the child is working at an emerging, expected or exceeding level.

Teaching and Learning Style

As the aims of computing are to equip children with the skills necessary to use technology to become independent learners, the teaching style that we adopt is as active and practical as possible. While at times we do give children direct instruction on how to use hardware or software, the main emphasis of our teaching in computing is for individuals or groups of children to use computers to help them in whatever they are trying to study.

Inclusion

At Pinchbeck East CofE Primary School, we plan to provide for all pupils to achieve, including boys and girls, higher achieving pupils, gifted and talented pupils, those with SEN, pupils with disabilities, pupils from all social and cultural backgrounds, children who are in care and those subject to safeguarding, pupils from different ethnic groups and those from diverse linguistic backgrounds.

Resources and access

The school acknowledges the need to continually maintain, update and develop its resources and 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 computing across the school. Teachers are required to information the Computing lead of any faults as soon as they are noticed. Resources if not classroom based are located in the Server room. A service level agreement with Ark is currently in place to help support the lead to fulfil this role both in hardware and audio-visual. Computing network infrastructure and equipment has been sited so that:

- Every classroom from Reception to Year 6 has a laptop connected to the school network and an interactive whiteboard or panel with audio and DVD facilities.
- There are two laptop trolleys containing 32 laptops: 16 for KS1 and 16 for KS2.
- There are two iPad trolleys containing 30 iPad mini's for KS1 and 30 iPad's for KS1.
- Each teacher has been allocated an iPad Air.
- Each class from Year 1 to Year 6 has an allocated slot across the week for teaching of specific computing skills.

School employs a qualified technician. He is responsible for installation of new software, maintenance of hardware and offers support to staff where difficulties arise. The technician is in school every Tuesday.

Cross Curricular Links

Computing contributes to teaching and learning in all curriculum areas. There is now opportunity for staff to book out the iPads for use across the curriculum in both the morning and afternoons. Our online portfolio 'Seesaw' is now in place in all classrooms for children to save their learning on. Computing enables children to present their information and conclusions in the most appropriate way.

SMSC

Computing makes a contribution to the teaching of SMSC as children learn to work together in a collaborate manner. They develop a sense of global citizenship by using the Internet in a collaborative manner. They develop a sense of global citizenship by using the Internet and email. Through the discussion of moral issues related to electronic communication, children develop a view about the use and misuse, and they also gain a knowledge and understanding of the interdependence of people around the world.

Health and Safety and Safeguarding

The school is aware of the health and safety issues involved in children's use of computing. All electrical appliances in school are tested accordingly. 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 technician, bursar or head teacher who will arrange for repair or disposal.

(See E-safety and Anti-Bullying Policies)

Monitoring and Reviewing

The monitoring of the standards of the children's work and of the quality of teaching in computing is the responsibility of the subject leader. The subject leader is also responsible for supporting colleagues in the teaching of computing, for keeping informed about current developments in the subject and for providing a strategic lead and direction for the subject in the school. The subject leader gives the head teacher an annual summary report in which s/he evaluates the strengths and weaknesses in the subject and indicates areas for further improvement. The subject leader has specially-allocated time for carrying out the vital task of reviewing samples of the children's work on our online portfolio 'Seesaw' and for visiting classes to observe the teaching.

Staff Training

- The Computing lead will assess and address staff training needs as part of the annual action plan process or in response to individual needs and requests throughout the year.
- Individual teachers should attempt to continually develop their own skills and knowledge, identify their own needs and notify the lead.
- Teachers are encouraged to use computing to produce plans, reports, communications and teaching resources.

Security

- The Computing technician will be responsible for regularly updating anti-virus software.
- Use of 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'.
- All pupils and parents will be aware of the school rules for responsible use of computing and the Internet and will understand the consequence of any misuse.
- The agreed rules for safe and responsible use of computing and the Internet will be displayed in all computing areas.

Dissemination

All staff and governors will receive a copy of the policy. The policy and schemes will be available on request to parents. Ofsted and others working for the school, through the Head teacher.

Policy Date: February 2018

Review date: February 2019