



Whole-School Policy on Computing

SCHOOL:Pinfold Primary School Scarisbrick.

1. Introduction

Computing is changing the lives of everyone. Through teaching Computing we equip children to participate in a rapidly changing world where work and leisure activities are increasingly transformed by technology. We enable them to find out, explore, analyse, exchange and present information. We also focus on developing the skills necessary for children to be able to use information in a discriminating and effective way. As Computing underpins today's modern lifestyle it is essential that all pupils gain the confidence and ability, that they need in this subject, to prepare them for the challenge of a rapidly developing and changing technological world. The use of Computing will also enhance and extend children's learning across the whole curriculum whilst developing motivation and social skills. 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 Pinfold 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.

- 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 enhance learning in other areas of the curriculum using Computing.
- To develop the understanding of how to use Computing safely and responsibly.

1.1 The aims of the Computing curriculum are to enable children

- To understand and apply the fundamental principles of computer science, including logic, algorithms, data representation, and communication.
- To analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems
- To evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems.
- To be responsible, competent, confident and creative users of information and communication technology.
- To apply hardware and software to creative and appropriate uses of information;
- To apply their Computing skills and knowledge to their learning in other areas;
- To use their Computing skills to develop their language and communication skills;
- To explore their attitudes towards Computing and its value to them and society in general. For example, to learn about issues of security, confidentiality and accuracy.
- To present Computing as a creative and fascinating process in which children are encouraged to use their own initiative, imagination, reasoning and investigative skills.

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.

2. Computing Curriculum Objectives

2.1 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 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 programme 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.

2.2 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 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.

2.3 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 predict 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.

3. Planning the Computing curriculum

3.1 The school uses the National Curriculum Computing Programmes of study as the basis for its curriculum planning.

3.2 We carry out the curriculum planning in Computing in three phases (long-term, medium-term and short-term). The long-term plan maps the Computing areas that the children study in each term during each key stage. The Computing co-ordinator works this out in conjunction with teaching colleagues in each year group, and the children often study Computing as part of their work in other subject areas. Our long-term Computing plans show how teaching units are distributed across the key stages, and how these fit together to ensure progression within the curriculum plan.

3.3 Our medium-term plans, which we have adopted from the Computing curriculum, identify the key learning objectives for each unit of work.

The co-ordinator is responsible for reviewing these plans. As we have mixed- age classes, we do our medium planning on a two-year rotation cycle, covering all Computing applications each year but alternating the themes within them. In this way we ensure that we cover the Computing Curriculum without repeating topics.

- 3.4 The class teacher is responsible for compiling medium-term plans that are in such detail that they also act as short-term plans. The Computing component of each unit/lesson is given and learning objectives are specified. The class teacher will use her/his professional judgement to decide when/if s/he needs to write and keep their own daily plans or notes to aid teaching, and support the work of classroom assistants. The class teacher keeps copies of her/his short/medium plans and s/he and the Computing co-ordinator often discuss them on an informal basis.
- 3.5 The topics studies in Computing 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 schemes of work, so that the children are increasingly challenged as they move up through the school.
- 3.6 In teaching time all children, regardless of ability or needs are included. We ensure that all activities whether they are in school-time or out of hours, are differentiated so that they are accessible to all. Extra adult help is allocated whenever necessary to ensure full participation.

4. The contribution of COMPUTING to teaching in other curriculum areas.

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

4.2 English

Computing is a major contributor to the teaching of English. Through the development of keyboard skills and the use of computers, children learn how to edit and revise text. They have the opportunity to develop their writing skills by communicating with people over the Internet. They learn how to improve the presentation of their work by using desktop publishing software.

4.3 Mathematics

Many Computing activities build upon the mathematics skills of the children, including problem solving. Children use Computing in mathematics to collect data, make predictions, analyse results, and present information graphically. They learn about linear measure, space, shape and position when using Roamer or other Computing tools. Key Stage 2 children use computerised spreadsheets.

4.4 Personal, Social and Health education (PSHE) and citizenship

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

5. Equal Opportunities, including children with special educational needs

5.1 At our school we teach Computing to all children, whatever her/his intellectual and physical ability, race and gender. Class management will take account of such issues, and Computing materials free from bias will be positively sought. Computing forms part of the school curriculum policy to provide broad and balanced education to all children. Through

our Computing teaching 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 differing needs. Assessment against the National Curriculum allows us to consider each child's attainment and progress against expected levels.

- 5.2 When progress falls significantly outside the expected range, the child may have special educational needs. Our assessment process looks at a range of factors- classroom organisation, teaching materials, teaching style, differentiation- so that we can take some additional or different action to enable the child to learn more effectively. This ensures that our teaching is matched to the child's needs. For example: particular applications of Computing are used for pupils with difficulties in learning, who need to be motivated to practise basic skills regularly and intensively, and thus benefit from programs in which skills practice is set in the context of a motivating game. Certain pupils with communication difficulties will require use of the computers or laptops during some lesson times. This may include use of the laptops across other areas of the curriculum. Pupils of high ability may be extended through the use of programs which offer challenge and opportunities for investigation. Staff will ensure that computers/laptops are available when needed.
- 5.3 Intervention through School Action and School Action Plus will lead to the creation of a Learning Plan for children with special educational needs. The Learning Plan may include, as appropriate, specific targets relating to Computing. In some instances the use of Computing has a considerable impact on the quality of work that children produce; it increases their confidence and motivation.
- 5.4 We enable pupils to have access to the full range of activities involved in learning Computing. Where children are to participate in activities outside the classroom, for example, a visit to an Computing exhibition,

we carry out a risk assessment prior to the activity, to ensure that the activity is safe and appropriate for all pupils.

6. Assessment, recording and reporting

- 6.1 Teachers and teaching assistants assess children's work in Computing by making informal judgements as they observe them during lessons. On completion of a piece of work, the teacher marks it and comments as necessary. At the end of a unit of work a summary judgement is made about the work of each pupil in relation to the national Curriculum. We use this as the basis for assessing the progress of the children and to pass information on to the next teacher at the end of the Key Stage.
- 6.2 Pupil progress in Computing is reported to parents orally at parents' evening and in the annual written report.
- 6.3 Children's work may be kept as a hard copy (where work is annotated) and/or saved on the hard-drive. Work saved on the computer is kept in the pupils individual folder (via year groups on the computer). For Reception, it may not always be practical to keep samples of work, but observations and discussions could be recorded.

7. Resources

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 Computing across the school. Teachers are required to inform the Computing Co ordinator of any faults as soon as they are noticed. Resources, if not classroom based, are

located in the Computing suite. 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 with sound and DVD facilities.
- There are 14 laptops in school all with internet access available to use in classrooms.

7.1 Along with the computers, the school has the following:

Hardware

- 13 laptops.
- Colour printer/photocopier/scanner
- Digital cameras
- Listening centres
- Calculators
- Floor robots
- Interactive whiteboards
- Cache box
- Control interface with buzzers.
- Visualiser.

Software

- Word processing software
- Painting/drawing software
- Clip art
- A music composition package
- Multimedia programmes
- Spreadsheets/database programmes
- Control programmes
- Simulations
- CD-ROMs.
- Broadband/wireless network.

8. Monitoring and review

8.1 The monitoring of the standards of the children's work and the quality of teaching in Computing is the responsibility of the Computing co-ordinator and Headteacher. The Computing subject leader gives the headteacher summary reports in which she evaluates the strengths and weaknesses in the subject areas for further improvement. The Computing co-ordinator will oversee the development and review of the school's Computing Policy and development plan in conjunction with the headteacher.

The present Computing co-ordinator is Caroline Whiteside.

9. Role of the Computing co-ordinator

The responsibilities include:

- Maintenance of Computing policy that reflects current technology and attitudes.
- Maintenance of a Scheme of Work that reflects current resources, National Curriculum, staff and child skills etc.
- Monitoring of implementation of the Scheme of Work throughout the school including issues such as equality of access, planning and assessment etc.
- Keeping informed about current developments in the subject and for providing a strategic lead and direction for the subject in the school.
- Organisation and distribution of hardware and software throughout the school (in conjunction with Computing technician-Mr.Wilson).
- Maintain central resources (audited annually) such as software masters, digital cameras, control and monitoring equipment in an organised and accessible manner (in conjunction with Computing technician-Mr.Wilson).

- Maintain the network software infrastructure including the addition and deletion of users, e-mail accounts, new software etc (with Computing technician – Mr.Wilson).
- Plan and implement INSET programmes according to staff needs, as agreed with the Headteacher.
- Support colleagues in the teaching of Computing.
- Ensure that Health and Safety guidelines in Computing are followed, including
 - Setting up and moving equipment;
 - Establishing appropriate working conditions;
- To liaise with other curriculum co-ordinators regarding the purchase of resources for their subject area,
- To provide support in the delivery of the school's Scheme of Work through monitoring, advice, provision of sample lessons and activities etc according to the needs of the individual member of staff. This will include reporting to the Headteacher when appropriate.
- To monitor new developments in Computing (through the attendance of appropriate INSET/Training) and integrate these into action plans, schemes of work and policies where appropriate.
 - Timetabling of equipment, purchase of core software for Computing;
 - Ensuring all staff have appropriate software/systems for their classrooms;
 - Liaison with SEN staff;
 - Help new/existing staff with training;
 - Point of contact for repair/collection of broken equipment (in conjunction with Computing technician-Mr.Wilson).
 - Keeping resource lists up to date and circulate (in conjunction with Computing technician).

11 **Security, health and safety**

11.1 All software is security marked with the school name and postcode. Both classrooms are alarmed when the school building is unoccupied. Master

discs are kept computing cupboard and software licences are kept in a file in the school's safe. Teachers are insured to take laptops home providing they are not left overnight in a car.

- 11.2 The school has an Online Safety Policy covering Computing acceptable use, Internet and email, which includes rules for responsible use of computers and the Internet and permission forms both for staff and pupil.
- 11.3 Children are taught about relevant health and safety issues: no child may plug in or unplug electrical equipment; children are not allowed to move the computer trolley; magnets should be kept away from computer equipment.
- 11.4 Laptops for children are stored in the locked laptop trolley in Ash classroom overnight. This classroom has additionally locks on both doors and is alarmed.

10. Care of Equipment

- The Computing technician maintains all Computing equipment in a clean and serviceable state.
- All equipment should be switched off at the end of the working day.
- Computers may be wiped clean with a soft damp cloth *when switched off*, and covered with fabric when not in use (if appropriate).
- Any technical fault should be reported immediately to the Computing co-ordinator and reported in Computing Technician's file in school office.
- The use of solvent cleaners and polishes is not allowed without express permission from the Computing co-ordinator.

Policy Date: Sept 17

Policy to be reviewed: Sept 18

