



Ianford Mere Primary School

Computing Policy

Members of staff responsible:

Mrs L Davis (Computing Co-ordinator)

Consultation Process:

Full consultation with governors, teaching and non-teaching staff.

Review Date:

January 2016

Rights to Respecting School

Article 17 – Every child has the right to reliable information from the media. This should be information that children can understand. Governments must help protect children from materials that could harm them.

POLICY STATEMENT FOR COMPUTING

What is computing?

Computing is the study and use of systems that handle information electronically. Computers are the most obvious of these but also include telephones, programmable robots, tape recorders, calculators, video cameras and mobile devices.

Aims

A high-quality computing education equips pupils to use computational thinking and creativity to understand and change the world. Computing has deep links with mathematics, science, and design and technology, and provides insights into both natural and artificial systems.

ICT is changing the lives of everyone. Through teaching ICT we equip children to participate in a rapidly changing world where work and leisure activities are increasingly transformed by technology. They will be taught the principles of information and computation, how digital systems work, and how to put this knowledge to use through programming. Building on this knowledge and understanding, pupils are equipped to use information technology to create programs, systems and a range of content. Computing also ensures that pupils become digitally literate – able to use, and express themselves and develop their ideas through, information and communication technology – at a level suitable for the future workplace and as active participants in a digital world.

The aims of computing are to enable children:

- To understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation
- 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.

Teaching and Learning of Computing

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. So, for example, children might research a history topic by using a CD-ROM, or they might investigate a particular issue on the Internet. Children who are learning science might use the computer to model a problem or to analyse data. We encourage the children to explore ways in which the use of ICT can improve their results, for example, how a piece of writing can be edited or how the presentation of a piece of work can be improved by moving text about etc.

We recognise that all classes have children with widely differing abilities in information technology. This is especially true when some children have access to IT 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 and setting different tasks for each ability group;
- Providing resources of different complexity that are matched to the ability of the child;
- Using classroom assistants to support the work of individual children or groups of children.

Computing in the Foundation Stage

We teach Computing in reception class as an integral part of the topic work covered during the year. As the reception class is part of the Foundation Stage of the National Curriculum, we relate the Computing aspects of the children's work to the objectives set out in the Foundation Stage Framework, which underpins the curriculum planning for children aged three to five.

The children have the opportunity to use the computers and any other hardware deemed appropriate. Then during the year they gain confidence and start using the computer to find information and use it to communicate in a variety of ways.

Strategies for the Teaching of Computing

Approximately 39 hours per year are spent on Computing in Key Stage 1 and 2

When teaching Computing we use a variety of strategies including co-operative group work, individual work and class teaching which are used where appropriate. Within this structure:

- Every classroom has a computer connected to the school network and an interactive whiteboard with sound, DVD and video facilities.
- There is an ICT and computing suite with facilities for one class to use at a time.
- There are 2 laptop trolleys in school containing netbooks with internet access available to use in classrooms.
- Each class has an allocated slot across the week for teaching of specific ICT and computing skills
- The netbooks are available for use throughout the school day as part of ICT and computing lessons and for cross curricular use.
- Pupils may use ICT and computing independently, in pairs, alongside a TA or in a group with a teacher.
- The school has an ICT and computing technician who is in school one afternoon every other week.
- Groups are usually of mixed ability
- Groups are encouraged to work co-operatively
- Relevant discussion is encouraged using the enquiry approach focused on the asking and answering of questions
- Groups are encouraged to communicate their findings in a variety of ways
- A computing consultant is available to help and give advice to teachers on the new curriculum where necessary.
- Opportunities for differentiation are indicated in weekly planning.
- Homework is not set on a regular basis although children are sometimes asked to support Computing through tasks such as presentations and research for topic based lessons.
- Where possible in our teaching of Computing we integrate learning, linking the subject with many other areas of the curriculum appropriate, notably science, history, mathematics and geography. We aim to develop a range of study skills allowing children increasingly to take control of their own learning.
- Pupils are encouraged to communicate their findings in ways appropriate to the task and audience.
- Excellence in Computing is celebrated in display and presentations, including displays in the classroom and around school.
- Information technology 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 of moral issues related to electronic communication, children develop a view about the use and misuse of technology, and they also gain a knowledge and understanding of the interdependence of people around the world.

Equal Opportunities and Inclusion

At our school we teach Computing to all children, whatever their ability. Computing forms part of the school curriculum policy to provide a 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 different needs. Assessment allows us to consider each child's attainment and progress against expected levels.

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 and 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.

Intervention through School Action and School Action Plus will lead to the creation of an Individual Education Plan (IEP) for children with special educational needs. The IEP may include, as appropriate, specific targets relating to ICT. In some instances the use of information technology has a considerable impact on the quality of work that children produce; it increases their confidence and motivation.

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

Strategies for Ensuring Progress and Continuity

Planning in Computing is a process in which all teachers are involved wherein:

- Curricular planning is developed through a process of collaboration between staff, and approved by governors
- The year groups are responsible for writing the lessons plans with the Computing component of each lesson. These plans list the specific learning objectives of each lesson. The class teacher keeps these individual plans and the ICT subject leader may discuss them on an informal basis.
- The topics studied 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 scheme of work, so that the children are increasingly challenged as they move up through the school.
- Staff meetings are used as appropriate to discuss the Computing curriculum and ensure consistency of approach and of standards

The Role of the Computing Co-ordinator

The role of the Computing Co-ordinator is to:

- Take the lead in policy development to ensure progression and continuity in Computing throughout the school
- Support colleagues in their development of detailed work plans and implementation of the new curriculum and in assessment and record keeping activities
- Monitor progress in Computing and advise the Headteacher on action needed
- Take responsibility for the purchase and organisation of central resources for Computing
- Keep up-to-date with developments in Computing education and disseminate information to colleagues as appropriate.

Assessment and recording

Teachers 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 is expected to assess it and provide comments / feedback as necessary. At the end of a unit of work the teacher will make a summary judgement about the work of each pupil in relation to the National Curriculum expected outcomes and passes this information on to the next teacher at the end of the year.

The Computing subject leader keep samples of the children's work in a portfolio. This will demonstrate the expected level of achievement in Computing for each age group in the school.

Monitoring and review

The monitoring of the standards of the children's work and of the quality of teaching in Computing is the responsibility of the Computing subject leader. The Computing 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 Computing subject leader has specially-allocated time for carrying out the task of reviewing samples of the children's work and pupil voice.

Health and Safety

The school is aware of the health and safety issues involved in children's use of ICT and 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 away. Damaged equipment should then be reported to the ICT technician, Computing coordinator or head teacher who will arrange for repair or disposal.

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'.
- 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.