



FERNDALE PRIMARY  
SCHOOL

# Computing and ICT Policy

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# Ferndale Primary School



## Computing & ICT Policy

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 an technology, and provides insights into both natural and artificial systems. The core of computing is computer science, in which pupils are 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 National Curriculum in England 2013

### Aims and objectives

#### **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.

### Teaching and learning style

As the aims of Computing and ICT 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 ICT 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 Computing and ICT abilities. This is especially true when some children have access to ICT 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.

## **Planning**

As the school develops its resources and expertise to deliver the ICT and computing curriculum, modules will be planned in line with the national curriculum and will allow for clear progression. Modules will be designed to enable pupils to achieve stated objectives.

We carry out the curriculum planning in Computing and ICT in three phases (long-term, medium-term and short-term). The long-term plan maps the Computing and ICT topics that the children study in each term during each key stage. The Computing subject leader works this out in conjunction with teaching colleagues in each year group, and the children often study Computing and ICT as part of their work in other subject areas. Our long-term Computing and ICT plan shows how teaching units are distributed across the year groups, and how these fit together to ensure progression within the curriculum plan. This can be viewed on our website <http://ferndaleprimary.co.uk/docs/curr/compcur.pdf>

The class teacher is responsible for writing the short-term plans with the Computing and ICT component of each lesson. These daily plans list the specific learning objectives of each lesson. The class teacher keeps these individual plans and s/he and the ICT subject leader often discuss them on an informal basis.

The topics studied in Computing and 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.

## **Foundation Stage**

We teach Computing and ICT in reception classes 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 ICT aspects of the children's work to the objectives set out in the Early Learning Goals (ELGs) which underpin the curriculum planning for children aged three to five. The children have the opportunity to use the computers and a digital camera. 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.

### **The contribution of ICT to teaching in other curriculum areas**

Computing and ICT 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 and ICT enables children to present their information and conclusions in the most appropriate way.

#### **English**

ICT 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, and they are able to join in discussions with other children throughout the world through the medium of video conferencing. They learn how to improve the presentation of their work by using desk-top publishing software.

#### **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.

#### **Personal, social and health education (PSHE) and citizenship**

ICT 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 ICT, and they also gain a knowledge and understanding of the interdependence of people around the world.

### **Teaching ICT to children with special educational needs**

At our school we teach ICT to all children, whatever their ability. ICT forms part of the school curriculum policy to provide a broad and balanced education to all children. Through our ICT 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 against the National Curriculum 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, 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 ICT 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 ICT. Where children are to participate in activities outside the classroom, for example, a visit to an ICT exhibition, we carry out a risk assessment prior to the activity, to ensure that the activity is safe and appropriate for all pupils.

### **Assessment and recording**

Teachers assess children's work in Computing and ICT 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 s/he makes a summary judgement about the work of each pupil in relation to the new 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 year.

The Computing and ICT subject leader keeps samples of the children's work in a portfolio. This demonstrates the expected level of achievement in Computing and ICT for each age group in the school.

### **Resources**

Our school is working towards a position where there will be a computer available in every classroom in addition to a computer room with a network of computers for groups of children. The school has Internet access for computers but, as yet, not for every computer. We keep resources for Computing and ICT, including software, in a central store where there is a box of equipment for each unit of work.

Along with the computers, the school has the following:

#### **Hardware**

- colour printer;
- scanner;
- digital camera;
- video recorder;
- electronic keyboard;
- listening centre;
- calculator;
- robot;
- control interface with buzzers etc.
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#### **Software**

- a word processing package;
- painting/drawing software;
- clip art;
- a music composition package;
- a multimedia programme;
- spreadsheets/database programmes;
- control programme;
- simulations;
- CD-ROMs.

### **Monitoring and review**

The monitoring of the standards of the children's work and of the quality of teaching in Computing and ICT is the responsibility of the Computing subject leader. The Computing subject leader is also responsible for

supporting colleagues in the teaching of Computing and ICT, 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 gives the headteacher an annual summary report in which s/he evaluates the strengths and weaknesses in the subject and indicates areas for further improvement. The Computing subject leader has specially-allocated time for carrying out the vital task of reviewing samples of the children's work and for visiting classes to observe the teaching of Computing and ICT.

### **Staff training**

The ICT and computing coordinator will assess and address staff training needs as part of the annual development 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 coordinator. Teachers will be encouraged to use ICT and computing to produce plans, reports, communications and teaching resources.

### **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.

**Signed: Mr Ray**

**Date: Jun 15**