

Computing Policy 2014



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. 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 program, 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.

National Curriculum 2014

Policy Reviewed by Staff: September 2014

Consultation with Parents via the school Website: October 2014

Date for Presentation to Curriculum Committee: November 2014

Approved:

Aims

The National Curriculum for computing aims to ensure that all pupils:

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

(National Curriculum 2014)

Teaching and learning styles

In order to equip children with the technological skills to become independent learners, the teaching style that we adopt is as active and practical as possible. We use direct instruction on how to use hardware or software to ensure acquisition of skills. We combine this with cross-curricular opportunities to allow individuals or groups of children to use ICT to help them progress in whatever they are studying. We recognise that all classes have children with a wide range of 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.

ICT Curriculum

The school has purchased the ICT scheme of work 'Switched on Computing' (<http://www.risingstars-uk.com/series/switched-on-computing/?offset=all>) which will be phased in from the autumn term of 2014 and taught within our Cornerstones creative curriculum. The scheme uses a wide range of software and web based resources as well as hardware we have in school already. The scheme of work is very much skills based and progresses ICT skills, including programming, from year 1 to 6. We feel using this scheme of work will enable the children to build up the key skills they will need in future life.

We will also continue to use ICT in school for research purposes (linked to other subjects like science, history and geography) and for producing art projects. The school has a wide range of hardware including apple based technologies and Microsoft products.

The Foundation Stage

Children in Reception are taught to look at a range of technology in the home and school environments and learn to use and select technology for particular purposes.

The contribution of ICT to teaching in other curriculum areas

The teaching of ICT contributes to teaching and learning in all curriculum areas. In literacy children's reading development is supported through the Accelerated Reader program, talking stories and access to a variety of texts available from the Internet. As the children develop mouse, keyboard skills and 'touch technology', they learn how to edit and revise text on a computer. They have the opportunity to develop their writing skills by communicating with people in a variety of forms. They also learn how to improve the presentation of their work by using desktop publishing software. In numeracy ICT is used to collect data, make predictions, analyse results, and present information graphically. Screen robots allow pupils to give exact instructions for a particular route, or to use their knowledge of angles to draw a range of polygons. A variety of programs are used to

support mathematics teaching whilst MyMaths is used to set homework from Year 2 upwards. ICT also supports research throughout the creative curriculum.

Ensuring Equality

At Shottery St Andrew's Primary School we are committed to ensuring equality of education and opportunity for all children, please see our Equality Policy for further details. We follow the necessary regulations to ensure that we take the experiences and needs of all children into account aiming to develop a culture of inclusion and diversity in which all pupils are able to participate fully in school life and achieve their learning potential. We will make reasonable adjustments to ensure that barriers to learning are removed and the school environment and the Computing curriculum are as accessible as possible.

Special Educational Needs

We recognise that there are pupils of widely different abilities in all classes and as such use a variety of methods to ensure suitable learning opportunities for all pupils, matching the challenge of the task to the ability of the pupil, where necessary additional teacher input will be given when needed.

Monitoring and Assessment

ICT provision is monitored by the ICT coordinator who will ensure all members of staff have appropriate training to enable them to deliver the curriculum to the expected standard. Teachers assess pupils continuously on an informal basis. These assessments inform the teacher of the pupil's current achievements and guide the teacher in planning the pupil's future learning.

Resources

Current hardware provision for pupils includes 20 iPads, 9 MacBooks, 13 Windows based laptops and 10 PCs. In addition classrooms are equipped with smartboards. The school buys into the ICTDS support service for both the curriculum and admin networks. Members of staff report faults in "Charlie's Book" which is located in the staffroom. There are a number of laptop computers and iPads available for staff to use as needed, a register of which equipment is on loan is held in the staffroom. In order to keep our school computers virus free, no software from home will be installed on school computers.

Additional Equipment to support class teaching:

- Network shared resources, including printers and a scanner;
- Digital cameras and Flip;
- Digital microscope;
- Tape based listening centre and sound recorder;
- calculators;
- Floor robots including Beebots;
- Control interface with buzzers etc.;
- Headphones and microphones;
- Keyboard (musical)
- Two visualisers

Attainment Targets

By the end of each key stage, pupils are expected to know, apply and understand the matters, skills and processes specified in the relevant Programmes of Study. "National Curriculum 2014"