

Lewknor Church of England School

Computing Policy

Introduction

Computing (principally but not exclusively computers) is used in many ways for the presentation, analysis and storage of information, but also to model, measure and control external events, to solve problems and to support learning in a variety of contexts, not least through the use of the internet, across the whole curriculum. The term computing is understood to incorporate ICT.

The use of computing is an integral part of the school life and is a key skill for everyday life. Computers, programmable robots, digital and video cameras and tape recorders can be used to acquire, organise, store, manipulate, interpret, communicate and present information. As such, Lewknor C of E School recognises that its 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 computing policy is to state how the school intends to make this provision.

Aims

Our aims in using computing technologies are that all pupils will enjoy using computing facilities, choose and use appropriate applications with confidence and a sense of achievement, develop practical skills in the use of computing, be able to apply these skills to the solving of relevant and worthwhile problems, understand the capabilities and limitations of computing and the implications and consequences of its use.

Principles for the use of computing

Computing is important because its use is widespread in the modern technological world and is likely to continue to grow. Computing skills are recognised as cross-curricular within the national curriculum and their use is called for or assumed in all subjects except PE to support and enrich pupils' learning. It is also a knowledge and skill area in its own right. As in other areas of the curriculum we incorporate the requirements and recommendations of the national curriculum into our planning and assessment at class, year and school level.

Strategies for the use of information and communication technology

In order to ensure that valuable areas of experience are covered, computer use is integrated into the curricula followed throughout the school, including early years. Pupils will have experiences of a variety of software that allows teachers to provide for progression of skills, concepts and applications.

Rationale

The school believes that computing:

- Gives students immediate access to a rich source of materials.
- Can present information in new ways which help pupils understand, assimilate and use it more readily.
- Can motivate and enthuse pupils.
- Can help children focus and concentrate.
- Offers potential for collaborative working.
- Has the flexibility to meet the needs and abilities of each student.

The aims of Computing at Lewknor C of E School are to enable children:

- To develop computing capability in finding, selecting and using information.
- To use computing for effective and appropriate communication
- To monitor and control events both real and imaginary.

- 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 respond to new developments in technology.
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Teaching and learning

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. As computing is widespread in the modern technological world and is likely to continue to grow, we aim to prepare children with the skills they need across a wide range of technologies.

The computing curriculum will be delivered through direct instruction on how to use hardware or software in 'skills' lessons. The main area of direct teaching will be focusing on programming skills. The children will learn what algorithms are; how they are implemented as programs on digital devices. They will design, write and debug simple programs that accomplish simple goals, including controlling or simulating physical systems.

The computing curriculum will also be delivered within a range of topics across the curriculum. So, for example, children might research a history topic using the internet and present it as a PowerPoint or video presentation to the class. 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 computing 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 abilities. This is especially true when some children have access to computing 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:

- Introducing children to a wide range of computing equipment beginning in the Early Years class, including computers, laptops, remote controlled toys, video cameras, cameras, microphones and media equipment.
- Setting tasks of increasing difficulties and with differentiated expected outcomes. The mixed classes within Lewknor School allow for a wide range of abilities to be accommodated within each class group.
- Grouping children by ability and setting different tasks for each ability group. Or grouping children in mixed groups to allow them to share their own experiences with each other.
- Providing resources of different complexity that are matched to the ability of the child.
- Using Teaching Assistants to support the work of individual children or groups of children.

Computing curriculum planning

The school uses their own computing scheme of work based on the 2014 National Curriculum. Our scheme of work identifies the key learning objectives for each unit of work and stipulates the curriculum time that we devote to it. As we have mixed-age classes, we do our medium-term planning on a two-year rotation cycle. In this way we ensure that we cover the National Curriculum without repeating topics.

The class teacher is responsible for detailed lesson planning and keeping and assessing against these objectives. The class teacher has control if the objectives are to be taught in direct lessons or alongside another curriculum subject or topic. These plans list the specific learning objectives of each lesson. The class teacher keeps these individual plans and s/he and the computing subject leader often 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.

Foundation Stage

We teach computing in the Foundations Stage/Year 1 class as an integral part of the topic work covered during the year. We relate the computing aspects of the children's work to the objectives set out in the Early Years Foundation Stage (EYFS) which underpin the curriculum planning for children from birth to five. The children have the opportunity to use the computers and other computing equipment such as computers, laptops, remote controlled toys, programmable rovers, video cameras, cameras, microphones and media equipment.

The class has both free choice of these resources and specifically planned lessons based on the schools scheme of work, beginning the progression of skills continued throughout the school.

The contribution of computing to teaching in other curriculum areas

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 the Internet is integral for research in humanities subjects. Computing enables children to present their information and conclusions in the most appropriate way, in line with the developments of technology in the wider world.

English

Computing is a major contributor to the teaching of English. Through the development of keyboard skills and the use of computers to word process and present their work. Children learn how to edit and revise text, 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 and skype. They learn how to improve the presentation of their work by using desk-top publishing software and Power Point presentations.

Mathematics

Many computing activities build upon the mathematical skills of the children. Children use computing 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. We use Abacus Active learning resources and applications to support both classroom teaching of mathematics and individual and homework based mathematics. Children have access to a range of mathematical applications, both on school based programs and via the internet.

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 of moral issues related to electronic communication, children develop a view about the use and misuse of computing via continuous and specific teaching about e-safety, and they also gain a knowledge and understanding of the interdependence of people around the world.

Teaching ICT to children with special needs

At our school, we teach computing to all children, whatever their ability. Computing forms part of our school curriculum policy to provide a broad and balanced education for all children. We provide learning opportunities that are matched to the needs of children with learning difficulties. 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. When planning work in computing, we can take into account the targets in the children's Individual Education Plans (IEPs). The use of computing can help children in achieving their targets and progressing in their learning. As many children are surrounded by technology in their lives the use of computing can prove a beneficial tool to support children's specific learning needs.

Assessment and recording

Teachers assess children's work in computing by making informal judgements as they observe them during lessons based on specific learning objectives and success criteria. Pupils' progress is closely monitored by the class teacher and future planning and progression will be based upon these observations. The computing subject leader keeps samples of the children's work in a computer folder. This demonstrates the 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 and the Head teacher. 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 regularly discusses the computing situation with the Head teacher and provides an annual summary report in which s/he evaluates the strengths and weaknesses in the subject and indicates areas for further improvement. During the year, 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.

Health and Safety

It is the responsibility of staff to ensure that no food or drink is consumed near ICT equipment. Staff should check that all ICT equipment is stored securely and that laptops are locked away at the end of each day. Any faults or problems with schools computers should be reported directly to the computing subject leader or the school Business Manager. These problems will then be reported to the schools ICT Maintenance company (TurnITon) via their portal.

Staff should ensure all children are sitting appropriately and that they are made aware of potential wrist/neck/back strain if they do not do so. The room should be well-lit and ventilated.

An adult should always supervise Internet access and make children aware of Internet safety rules and the website. Every lesson using the internet should include a recap of rules of e-safety and refer back to the children's own signed acceptance of these rules.

Laptops should be carried between the classrooms by an adult only, unless the children are in the Junior Class, when they will have been shown how to safely carry a laptop.

E – Safety

Please see the schools separate E-Safety policy (appendix 2)

Appendix 1:

Resources

At present the infant classroom contains at two desktop computers and the Upper Junior classroom has at least three desktop computers. The ICT room contains twenty laptops on a lap-cabby charging trolley. Teachers all have a school laptop which has been programmed with suitable software to support learning. Every computer in the school is linked to the internet. All classrooms, have an interactive Smart board. We keep resources for ICT, including software, in a central store in the ICT room. Every two weeks we have the support of TurnITon, a computer company contracted to service and repair our computers, to upgrade software and Virus protection and to teach whole class sessions on a rotation basis.

Along with the computers and hardware mentioned above, the school has the following:

- Black and white/colour photocopier
- Colour printers
- Scanner and fax machine
- A digital camera per class
- Integral and external webcams per class
- Roamers and BeeBots
- Electronic keyboards
- Calculators
- Microphone
- Two large speakers
- Projector
- Two CD/MP3 players
- Foundation Stage Resources – Video camera, microphone, remote controlled toys, walkie talkies, media player, voice recorders.