Blessed Robert Widmerpool Catholic Voluntary Academy

Computing Policy

"I am the Alpha and the Omega," says the Lord God, "who is and who was and who is to come, the Almighty."

Revelation 1:8

Computing skills are a major factor in enabling children to be confident, creative and independent learners.

Children must be equipped to participate in a rapidly-changing world where work and leisure activities are increasingly transformed by technology. Technologies have a significant impact on children's education. Computers and computing equipment provide children with appropriate learning experiences and allow adults to enhance their own professional development.

INTENT

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 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 school's Computing curriculum aims to instil a sense of enjoyment around using technology and to develop pupil's appreciation of its capabilities and the opportunities technology offers to, create, manage, organise, and collaborate.

Exploring software and programs forms a part of the ethos of the scheme as we want to develop pupils' confidence when encountering new technology, which is a vital skill in the ever evolving and changing landscape of technology. Through our curriculum, we intend for pupils not only to be digitally competent and have a range of transferable skills at a suitable level for the future workplace, but also to be responsible online citizens.

The curriculum enables pupils to meet the end of Key Stage Attainment targets outlined in the National curriculum and the aims align with those in the National curriculum. Computing is taught alongside RSHE, which satisfies all the objectives of the DfE's Education for a Connected World Framework. This guidance was created to help equip children for life in the digital world, including developing their understanding of appropriate online behaviour, copyright issues, being discerning consumers of online information and healthy use of technology

IMPLEMENTATION

The Computing curriculum is designed with three strands which run throughout:

- Computer science
- Information technology
- Digital literacy

The Progression of skills document shows the knowledge and skills that are taught within each year group and how these skills develop year on year to ensure attainment targets are securely met by the end of each key stage.

The implementation of the Computing curriculum ensures a broad and balanced coverage of the National curriculum requirements, with the opportunity to learn and apply transferable skills. Where meaningful, units have been created to link to other subjects such as science, art, and music to enable the development of further transferable skills and genuine cross-curricular learning.

Lessons incorporate a range of teaching strategies from independent tasks, paired and group work as well as unplugged and digital activities. This variety means that lessons are engaging and appeal to those with a variety of learning styles.

Differentiated guidance is available for every lesson to ensure that lessons can be accessed by all pupils and opportunities to stretch pupils' learning are available when required. Knowledge organisers for each unit support pupils in building a foundation of factual knowledge by encouraging recall of key facts and vocabulary.

Strong subject knowledge is vital for staff to be able to deliver a highly effective and robust computing curriculum.

IMPACT

The impact of the computing curriculum can be constantly monitored through both formative and summative assessment opportunities. Lessons features 'quick quizzes and knowledge catchers which can be used at the start and/ or end of the unit.

The Computing curriculum allows children to leave school equipped with a range of skills to enable them to succeed in their secondary education and be active participants in the ever-increasing digital world.

The impact of the computing Curriculum is that children will:

- Be critical thinkers and able to understand how to make informed and appropriate digital choices in the future.

- Understand the importance that computing will have going forward in both their educational and working life and in their social and personal futures.

- Understand how to balance time spent on technology and time spent away from it in a healthy and appropriate manner.

- Understand that technology helps to showcase their ideas and creativity. They will know that different types of software and hardware can help them achieve a broad variety of artistic and practical aims.

- Show a clear progression of technical skills across all areas of the National curriculum - computer science, information technology and digital literacy.

- Be able to use technology both individually and as part of a collaborative team.

- Be aware of online safety issues and protocols and be able to deal with any problems in a responsible and appropriate manner.

- Have an awareness of developments in technology and have an idea of how current technologies work and relate to one another.

- Meet the end of key stage expectations outlined in the National curriculum for Computing.

Learning and Teaching

A combination of direct teaching of skills and practical activities enable children to develop as independent learners. Children are encouraged to explore ways in which the use of computing can improve their work.

Children have widely differing experiences and abilities. This is especially true when some children have access to computing equipment at home, while others do not. Suitable learning opportunities are provided for all children by matching the challenge of the task to the ability and experience of the child.

This is achieved in a variety of ways:

- Setting tasks which are open-ended and can have a variety of responses
- Providing resources of differing complexity that are matched to the ability of the child
- Using teaching assistants to support the work of individual children or groups of children

Curriculum Planning

The National Curriculum provides an overview of what children will be learning throughout the year. Class teachers provide curricular mind-maps termly, as a guide for long term planning in each year group. This planning is continually reviewed in order to provide a curriculum that is rich in creativity. A themed, experienced-based approach enables children to make connections and link ideas and areas of learning. A wide range of visits, visitors and partnerships enhances the broad and rich curriculum.

The school scheme of work for computing provides opportunities for children of all abilities to develop their skills and knowledge in each unit and planned progression ensures that the children are increasingly challenged as they move through the school.

Curriculum planning in Computing is carried out in three phases (long-term, medium-term and short-term). The long-term plan maps the Computing studied in each term during each key stage. Medium-term plans, give details of each unit of work for each term. Short term plans list the specific learning objectives of each lesson.

Foundation Stage

Technology is an integral part of a young child's environment and the world around them. In Foundation Stage opportunities are provided for children to explore, solve problems and express themselves using a wide range of computing resources, both indoors, outdoors and through role play.

Computing equipment added to role-play reflects the real world, builds on children's experiences and allows them opportunities to understand how, why, when and where different forms of technology are used in everyday life. This encourages children to engage positively in imaginative, active learning.

The Contribution of Computing to Learning and Teaching

Computing contributes to learning and teaching in all curriculum areas. The increased independence afforded by technology enriches learning. It supports pupils with English as an

additional language and those with special educational needs and disabilities to access learning.

Software applications incorporating colour, animations, sound and humour mean that every classroom can offer stimulating learning opportunities that captivate and motivate the learner.

Technology enables young people to communicate in a variety of ways. The written word can often be a major barrier to learning. Removing barriers that prevent children from accessing their learning is key. The ability to interact with the technology through touch, sight and movement, or use it to enlarge, project and translate information are all things which may be the key to unlocking the curriculum for many learners.

Technology enables everyone to have access to information at any time and from anywhere. This enables us to communicate quickly and easily and share sensitive information in a safe and secure way.

Creating environments that are conducive to learning for all is vital. Careful consideration of space, flexibility, adaptability, safety and sensory awareness can produce learning environments that inspire, include and empower all children.

Children work collaboratively to develop a sense of global citizenship by using the internet, gaining knowledge and understanding of the interdependence of people around the world.

Children discuss and debate a range of spiritual, moral, social and cultural issues related to electronic communication. In doing this, children develop a view about the use and misuse of computers.

Assessment and Recording

Teachers assess children's learning in computing by making informal judgements through observation and work scrutiny. At the end of each term the teacher makes a summary judgement about the work of each pupil in relation to the National Curriculum. This information is used as the basis for assessing the attainment and progress of the children.

Evidence of children's learning can be seen in displays around the school and also celebrated in Records of Achievement.

Monitoring and Review

The monitoring of the standards of children's work and of the quality of teaching is the responsibility of the SLT, supported by the Computing Coordinator. The role of the coordinator involves supporting colleagues, being informed about current developments in the subject, and providing a strategic lead and direction for the subject in the school. They inform the SLT of her evaluation of the strengths and weaknesses in the subject and indicates areas for further improvement.

The Computing Coordinator has specially-allocated, regular management time in order to review evidence of the children's learning, update development plans and work alongside teachers to support and evaluate teaching across the school.

Backup Procedures

Files are backed up on the server to ensure recovery from computer or network failures or disturbances. The Computing backup system is not designed or intended to be a means for members of the school community to have access to long-term storage of files. The server has two forms of backup. Backups of the Computing user file systems are carried out nightly.

Internet Access -Acceptable Use

All internet activity should be appropriately used by staff and for children's learning. Children must not be given unsupervised access to the internet. The teaching of internet safety is included in the school's Computing Programme of Study and the responsibility of all staff.

All children are made aware through class discussions of the important issues relating to acceptable use, especially the monitoring of internet use.

Online Safety is discussed regularly in class and also at House Meetings. Online safety is an integral part of the Computing Curriculum and RSHE policy. The E-Safety Policy is available on the school blog alongside other online safety resources available for parents.

Un-authorised program files are not permitted to be downloaded to the computer. This is to prevent corruption of data and avoid viruses. The school reserves the right to examine or delete any files that may be held on its computer systems or to monitor any internet sites visited. Access is limited to the use of authorised accounts and passwords. Pupils should not access other people's files unless permission has been given.

Users are responsible for all e-mail sent and for contacts made that may result in e-mail being received. The same professional levels of language should be applied as for letters and other media. Copyright of materials must be respected. All material saved on the school's network is the property of the school.

Internet Monitoring

Internet activity is monitored by Fortigate.

Pupils are expected to use the internet responsibly. Should any pupils encounter any offensive material accidentally, they are expected to report it immediately to a teacher, so that the Service Provider can block further access to the site.

The Computing Coordinator reports any misuse of the school's internet policy and/or use of obscene, racist or threatening language detected by the system to the Headteacher. All serious incidents are recorded in the school's Incident File in the Headteacher's office. Misuse of the E-Safety Policy and use of inappropriate language is dealt with according to the school's Behaviour Policy and the Academy Trust's disciplinary policy.

Security

The school Computing system's capacity and security are reviewed regularly by the Computing Coordinator and reported termly to SLT. Virus protection is installed on the network and regularly updated. The Computing Coordinator ensures that the updating takes place.

Use of Portable Equipment

Portable Computing equipment such as Ipads, laptops and digital cameras enhance the children's education. All teaching staff are provided with a laptop which is allocated to named individuals on long-term loan. Teachers retain the equipment for the duration of their appointment at the school. The laptop will then be reallocated.

Equipment such as laptop computers taken offsite for use by staff should be used as described within this, and the Safeguarding Policy. The school insurance policy provides cover for equipment taken offsite, provided it is looked after with due care. All electronic devices belonging to school should not be left on view on in staff cars. Any costs generated by the user at home, such as phone bills are the responsibility of the user.

Where a member of staff is likely to be away from school through illness, or maternity leave, portable equipment in their care should be returned to school, except in exceptional circumstances at the discretion of the head teacher.

Data should not be transferred from external computer systems, without discussion with the Computing Coordinator and Data Manager. Staff may install software on laptops to connect to the internet from home. The Computing Coordinator will advise where necessary. No other software, whether licensed or not, may be installed on laptops in the care of teachers as the school does not own or control the licences for such software. Replacements will be determined by budgetary allowances.

Using the Computing Equipment

There is a very slight risk of triggering epileptic seizures from excessive screen flicker – there is wide variation in the 'steadiness' of screen image from one monitor to another. If an individual child is at risk then consult with the relevant therapist or doctor when choosing a screen for them to use. Any concerns regarding children's safety when using IT equipment will be shared and consultations will take place between class teacher and SLT.

The Health and Safety Executive guidelines on holding a mouse are

- Position the mouse within easy reach so it can be used with the wrist straight
- Sit upright and close to the desk so you don't have to work with your mouse arm stretched
- Move the keyboard out of the way if it is not being used
- Support your forearm on the desk and don't grip the mouse too tightly
- Rest your fingers on the buttons and do not press them too hard

Resources

The Governing Body are committed to securing funding to maintain an effective infrastructure to ensure provision of a sustainable computing strategy across the whole school to engage children with ever-changing modern technology.

Computers, interactive whiteboards, projectors and a range of control technology are an integral part of classroom resources and are in addition to a computer lab with a network of computers for groups of children. All children in the school have access to the internet.

The school is well resourced with appropriate software in all classrooms. A wide range of resources are located on the server and in the Computing Lab.

The Computing Coordinator carries out regular reviews of resources and makes recommendations to the SLT so that priorities can be established.

Hardware

- Colour laser printers
- iPads
- Roamer, Bee-bots and robot
- IWBs in all classrooms and a projector in the Computing Lab
- Multi-media centre in the hall
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Software

- Word processing packages
- A range of iPad Apps
- Painting/drawing software
- Mind Mapping software
- Clip Art

- Photo editing software
- Music composition packages
- Multimedia programme
- Spreadsheets/database programmes
- Control programs, Scratch
- Activ-Inspire
- Internet subscription resources

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