SAINT AUGUSTINE OF CANTERBURY CATHOLIC PRIMARY SCHOOL

Computing Policy

Mission Statement

"I called you by your name, you are mine." Isaiah 43
The mission of our school is to support and further the teachings of Christ and His Church.
We welcome and embrace individuals of all abilities and cultural backgrounds.
We aim to enhance and celebrate their moral, physical, social and emotional development, so that they may reach their full potential in an atmosphere of stability, care and respect.
We believe that education is for all and in partnership with parents, carers, children and the wider Catholic community: we will strive and succeed in a wholly inclusive setting.

Equality Statement

This policy has been equality impact assessed and we believe that it is in line with the Equality Act 2010 as it is fair, it does not prioritise or disadvantage any pupil and it helps to promote equality at St Augustine of Canterbury Catholic Primary School.

We have carefully considered and analysed the impact of this policy on equality and the possible implications for children with protected characteristics, as part of our commitment to meet the Public Sector Equality Duty (PSED) requirement to have due regard to the need to eliminate discrimination, advance equality of opportunity and foster good relations.

Date: June 2020
Date to be reviewed: June 2021
Policy written by: Miss L Richardson and Miss L Wood

Computing Vision

At St Augustine of Canterbury, we value the contribution that Computing can make for the benefit of all pupils, staff, parents and governors. We strive to provide safe Computing opportunities in all subjects to motivate and inspire pupils and raise standards across the curriculum. Our aim is for everyone in our school community to become lifelong learners equipped to meet developing technology with confidence, enthusiasm and the skills that will prepare them for a future in an ever-changing world.

Computing changes the lives of everyone. Through our teaching, we equip children to participate in a rapidly changing world where work and leisure activities are increasingly transformed by technology. We enable them to find, explore, analyse, exchange and present information. We also focus on developing the skills necessary for children to be able to use information in a discriminating and effective way. Computing skills are a major factor in enabling children to be confident, creative and independent learners.

A computing education allows our children 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, children are equipped to use information technology to create programs, systems and a range of content. Computing also ensures that children 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. Through our teaching, we offer chances for pupils to observe how their learning is used by members of the community within their careers.

Our Aims

At St Augustine of Canterbury, the Computing curriculum will offer opportunities for our children to:

- Develop their understanding of the fundamental principles and concepts of computer science.
- Develop their skills in using hardware and software to manipulate information in their process of problem solving, recording and expressive work.
- Acquire a high quality computing education which equips them to understand and change the world through logical thinking and creativity.
- Develop their understanding of how digital systems work and to become digitally literate individuals.
- Explore their attitudes towards ICT, its value for themselves, others and society, and their awareness of its advantages and limitations

Computer science

Our children will acquire and develop the skills associated with computer science in order to:

- Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts.
- Use sequence, selection and repetition in programs; work with variables and various forms of input and output.
- Use logical reasoning to explain how some algorithms work and detect and correct errors in algorithms and programs.
- Understand computer networks including the internet and how these can provide multiple services such as the World Wide Web.

I.T.

Our children will acquire and develop skills associated with Information Technology in order to:

- Use search technologies effectively.
- Select, use and combine a variety of software on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information.
- Acquire and refine the techniques *e.g. saving, copying, and checking the accuracy of input and output* needed to use ICT.
- Practise mathematical skills *e.g. ordering numbers including negative numbers, measuring and calculating to an appropriate number of decimal places, drawing and interpreting graphs and bar charts* in real contexts.
- Learn why numerical and mathematical skills are useful and helpful in understanding.
- Develop the skills of collecting first hand data, analysing and evaluating it, making inferences or predictions and testing them, drawing and presenting conclusions, and use all these in their work with ICT.

Digital literacy

Our children will acquire and develop their skills in digital literacy in order to:

- Understand the opportunities networks offer for communication and collaboration.
- Be discerning in evaluating and presenting data and information.
- Be able to use technology safely, respectfully and responsibly.
- Recognise acceptable/unacceptable behaviour.
- Identify a range of ways to report concerns about content and contact.

Language and Communication

Our children will:

- Develop language skills *e.g. in systematic writing and in presenting their own ideas.*
- Use the appropriate technical vocabulary.
- Read non-fiction and extract information from sources such as on-line reference books or CD-ROMs.

Values and Attitudes

Our children will:

- Work with others, listening to their ideas and expertise and treating these with respect *e.g. cooperating and collaborating when using a computer as part of a group to ensure that all contribute.*
- Acknowledge the ownership of ideas and recognise the value of information held on IT systems *e.g. recognising how much work has gone into producing a computer file, and how easily careless access can destroy it.*
- Be aware of the security of their own and other people's information in electronic form *e.g. recognise that they should ask before reading or copying from other's work.*

- Recognise the importance of printed output *e.g. keeping examples of work safe so that source files may be easily identified when work is developed at a later date.*
- Be creative and persistent *e.g. when assembling a computer file from a large amount of source material.*
- Consider the origin and quality of information and its fitness for purpose.
- Evaluate critically their own and others' use of ICT.
- Recognise the strengths and limitations of ICT and its users *e.g. recognising that a word processor is an effective and efficient tool to help writing, but, on occasion, handwritten text is more appropriate.*

Teaching and Learning Style

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 as practical as possible. We teach a balanced curriculum involving 'skills' lessons, based on the 'Switched on Computing' units by Rising Stars alongside other computing resources which support the National Curriculum.

Teachers plan units of work set out within the 'Switched on Computing' scheme. The teachers submit termly unit plans, modified to fit in with other areas of the curriculum, such as History, Science and Geography.

We recognise that all classes have children with widely different abilities. This is especially true when some children have access to computers 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.

Early Years Foundation Stage

It is important in the Early Years Foundation Stage to give children a broad, play-based experience of ICT in a range of contexts, including outdoor play. Our EYFS learning environment features ICT scenarios based on experience in the real world, such as in role play. Our children gain confidence, control and language skills through opportunities to 'paint' on the interactive whiteboard or programme a toy. Recording devices can help children develop their communication skills. This is particularly useful with children who have English as a second language.

Classrooms

There are Interactive Whiteboards (IWBs) in every class and Visualizers in every year group (Years R-6), these are used throughout the day for whole class teaching. Whiteboards are also used in group activities by teachers or TAs or for collaborative activities by pupils.

The IWB is connected to a main classroom computer, which is on the school network with access to our shared work areas and activities on the wider Internet. Visualizers are used for a range of purposes including assessment for learning.

Ipads

There are a set of 15 class Ipads for use by teachers and children within lessons. These have access to the internet and an app store. The app store content is controlled by Bctec and lead in school by Miss L Wood (Computing Lead). Apps can be downloaded upon request by the teachers. Teacher's use these tablets to support the development of Computer Science, digital Literacy and other areas of the curriculum.

Objectives from National Curriculum

Key Stage 1

By the end of key stage 1 children will be taught to:

- Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions
- Create and debug simple programs
- Use logical reasoning to predict the behaviour of simple programs
- Use technology purposefully to create, organise, store, manipulate and retrieve digital content
- Recognise common uses of information technology beyond school
- Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.

Key stage 2

Children will be taught to:

- Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts
- Use sequence, selection, and repetition in programs; work with variables and various forms of input and output
- Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs
- Understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration
- Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content
- Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information
- Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.

Assessment and record keeping

Key objectives are taken from the national curriculum to assess key computing skills. Assessing ICT and computing work is an integral part of teaching and learning, and is central to good practice. As assessment is part of the learning process it is essential that children are closely involved.

Formative assessments are carried out during and following short focused tasks and activities set out by our Rising Stars Scheme of work. These provide children and teaching staff the opportunity to reflect on their learning in the context of the agreed success criteria. This feeds into planning for the next lesson or activity. Teachers use assessment tasks to plan future work, to provide the basis for assessing the progress of the child and to pass information on to the next teacher at the end of the year. Computing work is saved on the school network.

Coverage

Each teacher is aware of the importance of teaching specific skills in Computing. To ensure there is sufficient coverage across all year groups, each teacher has a progression sheet. This enables them to track which objectives have been taught and how often; allowing for gaps in learning to be closed. It also allows teachers to see where children are expected to be at the end of the year. The progression sheet stays within the Assessment Folder and given to the next teacher at the end of the year.

Inclusion

Children with special educational needs are encouraged to use the technology available in school to support their independence and develop their interests and abilities. All children have access to the use of Computing regardless of gender, race, cultural background or any physical or sensory disability. Children with learning difficulties can be given greater access to the whole curriculum through the use of computer technology.

Monitoring and review

Monitoring the standards of the children's work, and of the quality of teaching in Computing, is the responsibility of the Computing subject leader (Miss L Wood) who reports to the Leadership Team. This is achieved through: work sampling, monitoring of planning and lessons, pupil conferencing and looking at Computing displays.

The Computing subject leader is also responsible for supporting colleagues in the teaching of Computing, for keeping them informed about current developments in the subject and providing a strategic lead and direction for the subject in the school.

Security

- Our computing technicians (BCTEC) 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' at school entry.
- All children will be aware of the school rules for responsible use on login to the network and will understand the consequence of any misuse.