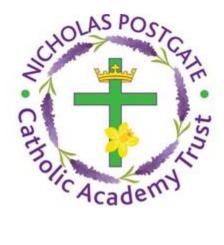# St Edward's
Primary School a Catholic Voluntary Academy

Computing
Policy

Reviewed September 2021
Review Date September 2022

Our Mission Statement

...we should love people not only with
words and talk, but by our
actions and true caring.
1 John 3:18

Our Vision Statement

We are guided by our Mission Statement and
we aim to:

● develop and care for the **whole child** through our teaching and sharing of the Catholic faith.
● show our love of God in the way we care and value each other and ourselves.
● aspire and equip children with those skills necessary to become contributing members of society and responsible adults.
● recognise and encourage all pupils' individual gifts and talents.
● provide an excellent quality of education striving to achieve the very highest standards for all pupils and, at the same time, develop lively critical minds.
● develop each pupil's appreciation of education as a lifelong and enjoyable process.
● work in partnership with the Parish and families, local schools and community groups recognising that only by working together can the school make its contribution towards the development of committed Christians and active members of the Church.

St. Edward's R.C. Primary School

Computing Policy 2021

"A high-quality computing education equips pupils to use computational thinking and creativity to understand and change the world." Ofsted (2013)

Intent
At St Edward's RC Primary School we believe that an engaging and motivating Computing curriculum will enable our learners to:

- Use computational thinking and creativity to understand and change the world.
- Make deep links with mathematics, science and design and technology (STEM)
- Build knowledge of principles of information and computation, how digital systems work, and how to put this knowledge to use through programming.
- Become digitally literate – able to use, express themselves and develop ideas through information and communication technology.

This policy sets out our aims, principles and strategies for the delivery of Computing. It is a working document as consideration needs to be given to the available funding and also to the continual developments being made in this area. Computing and ICT is given high priority in the successive school development plans.

In addition to being a core component of the primary curriculum, the ability to use ICT effectively and understand how computing effects our daily lives is a vital skill in modern society. Our children will grow and develop in a society in which ICT will become central to their lives. Of necessity, Computing will become an increasingly important factor in supporting teaching and learning across the curriculum.

Computing should provide a stimulating and enjoyable tool that enables good quality, cross-curricular teaching and learning to take place. It should support

children's progress and enable teachers to teach more efficiently and effectively. Other than for the teaching of specific skills, Computing should be embedded within each subject area and used as a tool for a cross curricular approach to learning. We are mindful of the rapid rate of progress in the area of technology and aim to keep abreast of advances in order to prepare our children for future learning and employment. Each child should be able to choose and access ICT tools and use them with confidence to meet curriculum needs. Staff should be able to use ICT efficiently to improve teaching and learning, reduce workload and gain access to data to support planning and assessment. The school ICT infrastructure should be robust and reliable, ensuring efficiency and appropriate access.

Aims

- The Computing Subject Leader and leadership team support staff to deliver a high quality computing education.
- Computational thinking – the ability to solve problems in a creative, logical and collaborative way – is developed through repeated programming opportunities and opportunities to build understanding and apply the concepts of computer science.
- Pupils become responsible, competent, confident and creative users of information and communication technology.
- Pupils have a growing awareness of how technology is used in the world around them and of the benefits that it provides. They are supported to evaluate and use information technology, including new or unfamiliar technologies.
- Opportunities for communication and collaboration develop understanding of the purposes for using technology and these are used to bring together home and school learning experiences.
- Technology is used imaginatively to engage all learners and widen their learning opportunities,
- Pupils have access to a variety of devices and resources and are encouraged to reflect on the choices they make to use them.

- We expect our pupils to:
  - Develop computing skills, knowledge and understanding

o   Develop an understanding of the wider applications of computer systems and communication technology in society

o   Develop independent and logical thinking through reasoning, decision making and problem solving

o   Develop imagination and creativity

o   Work independently and collaboratively

Through the Computing curriculum, we aim to help teachers and pupils become confident with the range of available technology and have the ability to exploit its potential. We also aim to use technology to broaden children's experience and inspire them to become independent learners. Computing has become part of the way we all work and entertain ourselves. Almost everything we do at school now involves the use of technology:

•   online lesson research, teaching plans and resource materials;

•   lesson delivery via either interactive whiteboard;

•   communication by e-mail/learning platforms;

•   document distribution and storage;

•   assessment information analysis;

•   production and editing of reports.

Through teaching Computing, we facilitate children's participation in a world of rapidly-changing technology. We enable them to find, explore, analyse, exchange and present information. We also help them develop the necessary skills for using information in a discriminating and effective way. This is a major part of enabling children to be confident, creative and independent learners.

The objectives of the Computing curriculum are to enable children:

•   to apply their computing skills and knowledge to their learning in other areas;

- to develop capability in finding, selecting and using information;

- to use ICT for effective and appropriate communication;

- to monitor and control events, both real and imaginary;

- to explore their attitudes towards computing and technology and its value to them and society in general. For example, to learn about issues of security and personal safety, confidentiality and accuracy.

- to introduce the children to a wide range of ICT applications

- to equip pupils with the knowledge of the uses, effects and limitations of computing, enabling them to evaluate the benefits (or otherwise) and its impact on society

- to provide children with the skills and strategies to help them become safe and selective users of on-line resources

- to help children to become independent and discriminating users of technology

- to use technology and communication tools to develop partnerships beyond the school and in the wider world through the use of the Internet and e-mail

- to exploit developments in technology.

Implementation
Curriculum Coverage and Progression

- Planning for Computing is implemented using two core documents: the National Curriculum Programme of Study for Computing and the Statutory Framework for Early Years Foundation Stage
- Long term planning has been developed using the Somerset eLIM Computing Progressions and demonstrates coverage and progression of the attainment expectations at the end of Key Stage 1 and Key Stage as identified in the Computing POS.

- Medium term planning takes account of differentiation and progression in Programming, e-Safety, Multimedia, Handling Data and Technology in our Lives.
- Exemplification planning has been developed to support short term planning.
- The computer science aspects of Computing are taught discretely through the Programming and Technology in our Lives threads.
- Key skills in information technology are developed through Multimedia and Handling Data threads and are integrated into learning in other curriculum areas.
- E-Safety is developed through PSHE and, together with the threads of Technology in our Lives and Multimedia, builds the skills and understanding of Digital Literacy.
- Opportunities for technology as a tool to support learning and teaching in all areas are identified in curriculum planning.

Curriculum Organisation

Discrete computing lessons with the class teacher are timetabled to take place weekly with use of the computer suite and ipads. Skills development is linked to work across the curriculum. Class teachers are required to develop skills further by applying them to other areas of learning across the curriculum, for example, using the internet as a research tool for a history or science topic, a presentation application or package to present information through different media or use of apps on the ipads to develop maths or English skills. The Computing subject leader will provide additional guidance for colleagues on the development of basic skills and their application.

Roles and Responsibilities

The school community works together to ensure the implementation of the Computing policy.

- The Head teacher is responsible for ensuring staff access to ICT, arranging in-service support, meeting statutory requirements and health and safety policy and practice
- The subject leader is responsible for monitoring curriculum coverage and the impact of learning and teaching; assisting colleagues in its implementation; developing teacher's and children's use of our learning platform; overseeing the development and evolution of the school website, organising ICT resources; ensuring the consistent implementation of the Computing policy; ensuring continuity and progression in Computing teaching; reviewing the Computing policy; maintaining a portfolio of children's work using ICT. The Computing subject leader provides termly reports to governors on the impact of the Computing curriculum and how resources are being effectively deployed. Governors may include Computing in their learning walks around the school.
- Subject leaders in other curriculum areas are responsible for recognising the links between Computing and English, Mathematics, Science and foundation subjects; and planning to use these to support learning across the school.
- The class teacher is responsible for delivering an effective Computing curriculum and integrating this into their planning for other subject areas where this is appropriate; record keeping and assessment of pupils' achievement; ensuring children's entitlement is met and equal access for all pupils, delivering all aspects of the Computing curriculum; using technology as a resource to support teaching across the curriculum; identifying (with the subject leader) opportunities to integrate Computing in the wider curriculum in order for children to develop and apply their learning
- The school receives technical support from NPCAT and the technician is responsible for the maintenance of computers, printers, the school network and keeping software up to date. The subject leader liaises with the technician to ensure that the systems are running efficiently.

Teaching and Learning Styles

An objective of the Computing curriculum is to equip children with the technological skills to become independent learners and that 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 is for individuals or groups of children to use computers to help them progress in whatever they are

studying. So, for example, children might research a topic by using software that engages them in a highly visual way, or they might place themselves in a setting by manipulating a digital photograph, or they might investigate a particular issue on the Internet.

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. We achieve this in a variety of ways:

• setting 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 in the room (e.g. ability, friendship), which may include the setting of different tasks for each group;

• 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.

The Computing Subject Leader (together with class teachers) is responsible for developing children's ICT experiences and their progress. A range of teaching and learning strategies will be employed to achieve these responsibilities.

These will include:
• Using the computer or an interactive whiteboard to demonstrate to a group of pupils or to the whole class
• Using an interactive whiteboard as a tool to benefit learning across the curriculum. (For example with Smart Notebook, Education City, Purple Mash, the Internet and internet applications such as Videoscribe, Presi, etc, or other specific software

- Leading a group or class discussion about the benefits and limitations of ICT or responsible use of the internet and email
- Individual or paired work
- Collaborative creative work
- When the children are working in groups, the teacher will endeavour to select mixed ability groupings to ensure that all children are equally involved in the task, with equal access to the computer/ipad.
- Activities should be planned in order to allow different levels of achievement and incorporate possibilities for extension work.

Access to ICT

All classrooms have interactive whiteboards and teacher's laptops. Classrooms have access to a networked printer.

Class sets of ipad minis are available for use. These are timetabled for use once per week per year group. An ICT suite, containing 32 desktop computers and 2 laptops, is available for whole class teaching. Access to the suite is timetabled by the Computing subject leader. All classes have access to the suite once per week. In the PPA room, for teacher's use, are four desktop computers, a networked printer and a scanner. The school hall is equipped with a projector, a desktop computer, electrically operated screen and sound system. The cooking classroom, library area, computer suite and group room also have the use of a desktop PC and projector. The school has three Roamers and a selection of other floor robots for use by all classes as well as a selection of headphones, microphones, etc for use in lessons. To adapt to online teaching during COVID-19, school also purchased visualisers for each year group. These are now utilised as part of classroom teaching. There are 7 chrome books available for use within the classroom and to access virtual teaching/courses for staff and pupils too.

Equal Opportunities

- The school maintains its policy of equal opportunities as appropriate for Computing.
- Computers and related technology are made available to all pupils regardless of gender, race or abilities.

- The class teacher differentiates work by task, resource or support, to ensure the individual needs of more able and SEN pupils are met.
- St Edward's is aware that not all pupils have the same access to computers at home and this is considered by staff in the planning and delivery of the curriculum. At St. Edward's we recognise the benefit of home/school links and endeavour to ensure that computer work completed at home can be transferred to a school computer with appropriate safeguards, ideally using the Learning Platform (Google Classroom).
- We also offer homework clubs through our extended schools curriculum for children to access homework needed to be completed on the computer at various times throughout the week (e.g. My Maths)

Managing resources

- The school has a range of resources to support the delivery of the Computing curriculum, the Early Years Framework and learning across all areas of the National Curriculum. We maintain a list of resources used in each phase.
- Online tools are part of the experience of pupils.
- The Computing subject leader keeps up to date with new technologies and reviews the school's provision, as well as maintaining the existing resources in partnership with the school's technology support provider.
- Hardware and software faults are logged by the class teacher in a file saved on the school network.
- The Computing Action Plan expresses the school's priorities for future expenditure and is reviewed by the Computing subject leader, governors and senior management who consider its impact on all learning.
- Governors and senior management ensure that they achieve value for money by implementing the principles of best value in evaluating, planning, procuring and using technology.

Spending is determined in line with the School Improvement Plan as agreed by staff and school governors. Deployment of hardware is determined by the same process. Spending on, and distribution of, software is determined through discussion with staff and with reference to the S.I.P.

Staff training needs are also identified by reference to the S.I.P. and developments which follow from it. Staff training needs may be met in-house or from CPD programmes.

External services which support ICT include One IT School Support.

Along with desktop and laptop computers, the school has the following:

Hardware resources
- Ipads
- 32 networked PC's plus 2 networked laptops (in the computer suite)
- Teacher laptops (networked) in each classroom
- network, including switch cabinet
- 1 Curriculum server and 1 Admin server
- network shared resources, including printers;
- interactive whiteboard and screen projection equipment;
- access to 4 networked photocopiers with scanning and printing capabilities;
- 1 Netgear wireless switch
- digital cameras;
- digital microscope;
- data logger and sensors;
- calculators;
- floor turtles;
- headphones and microphones;
- overhead projector;

Software Resources
- word-processing and desktop-publishing programs;
- painting and drawing software;
- music composition package;
- multimedia presentation program;
- spreadsheet and database programs;
- control program and models;
- simulations;
- Virus protection.

Online subscriptions
- My Maths
- Purple Mash
- Word and Number Shark
- Education City

- Timestables Rockstars
- Spelling Shed

Online material

- School Website
- Google Classroom

Planning, Recording, Assessment and Reporting

- Progress is assessed on an on-going basis using the 'I can' statements for each thread of Computing. This ensures teachers are aware of individual pupil's progress in computer science, information technology and digital literacy.
- Formative assessment is used by the class teacher and teaching assistant during whole class or group teaching. Children's confidence and difficulties are observed and use to inform future planning.
- Each class teacher maintains a record, indicating pupils that are working beyond or below age-expected attainment. This is passed on to the next class teacher.
- Children are aware of the 'I can' statements and are encouraged to set success criteria for their work.
- Open questions are used to challenge children's thinking and learning.
- Children are encouraged to evaluate their own and others' work in a positive and supportive environment, including peer assessment.
- Teacher's judgments are supported through an electronic portfolio of evidence which provides examples of age-expected attainment.
- Information is shared with the school community through the school website, display, celebration events, newsletters, and end of year reports.
- In light of COVID-19 school closures, staff have also worked on a recovery assessment document to ensure that all objectives from the previous year will be covered and allow pupils to "catch up" on any missed work. This has been amended on the formative assessments for each year group and linked to current teaching objectives to allow for effective progress.

Early Years

- Pupils build confidence to use technology purposefully to support their learning for all Early Learning Goals as appropriate.
- Pupils in Foundation Stage class will have experiences using technology indoors, outdoors and through role play in both child-initiated and teacher-directed time.

Online-Safety

- A progressive online safety curriculum ensures that all pupils are able to develop skills to keep them safe online.
- Opportunities for learning about online safety are part of the PSHE and RSE curriculum and reinforced whenever technology is used.
- Clear rules for online safety are agreed by each class at the beginning of every year. Parents and pupils sign an annual acceptable user policy together.
- A digital citizen scheme is used to ensure progression and coverage; and provides positive rewards for responsible use of technology.
- The school supports the international Safer Internet Day each February and provides opportunities for pupils to consider cyberbullying as part of Anti-Bullying week in the Autumn term.
- Opportunities are taken whenever possible to reinforce messages of a healthy life style.
- The school has an online safety policy in place that details how the principles of online safety will be promoted and monitored. Further details can be found in the school's online safety policy.

Health and Safety

- Age-appropriate class and safety rules are displayed in the learning environment.
- Equipment is maintained to meet agreed safety standards.
- From Foundation Stage, pupils are taught to respect and care for technology equipment.
- Further guidance can be found in the school's health and safety policy.

Monitoring and Review

- The impact of the Computing curriculum is monitored regularly by the Computing subject leader through pupil discussion, samples of work and discussion with teachers, an electronic portfolio and the use of the NAACE Self Review Framework.
- Systematic monitoring of all threads of Computing informs the subject leader and school development plan.
- The Computing leader conducts regular audits of the training needs of teachers and teaching assistants to improve their subject knowledge and confidence. Requests for training in Computing can be part of individual teacher's performance management plan.

This policy will be reviewed annually by the Computing subject lead.

Date to be reviewed: September 2022

Associated documents

- Internet Policy and Letter
- Online Safety Policy
- Responsible User Agreement Policy
- Use of Photos and Videos Policy