



St. Nicholas C of E Primary School

Computing Policy

Our vision

We prepare every pupil for their best future by ensuring they reach their full potential and attain the knowledge, skills and understanding required for success as we believe that 'With God, all things are possible'. Matthew 19:26



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This policy reflects the Christian ethos and vision statement of our school. We believe that in an ever-changing world, one thing that we can be sure of is that our children will require advanced skills in Computing and we invest and teach to that end.

Preface

The growth of technology and especially the internet has led to great opportunity in developing teaching and learning. However, with this opportunity, also comes potential danger in the presence of online predators. This policy should be read in conjunction with the school's Acceptable Use Policy. This policy should be ready by and signed by children and parents. This policy will also need revisiting by all class teachers at least once a term.

1 Aims and objectives

1.1 At St. Nicholas we strive to deliver a high-quality computing curriculum which allows our pupils to recognise the significance of digital technology in their everyday lives. We explicitly teach pupils the skills and knowledge they need to become creative, digitally literate, computational thinkers. This policy sets out a framework within which teaching and non-teaching staff can work and gives guidance on planning, teaching and assessments.

The use of digital technology, especially computers and computer systems is an integral part of the National Curriculum and knowing how they work is a key life skill. In an increasingly digital world there now exists a wealth of software, tools and technologies that can be used to communicate, collaborate, express ideas and create digital content. We recognise that pupils are entitled to a broad and balanced computing education with a structured, progressive, cyclical approach to the learning of how computer systems work, programming, creative media and data and information. This provides our pupils with the skills necessary to become digitally literate use computational thinking and participate fully in the modern world. Where possible, we make explicit links with mathematics (data handling), science and Design Technology to enhance our computing curriculum further.

1.2

- The overall aim for computing is for pupils to become computer scientists and be digitally literate along with enriching learning for all pupils and to ensure that teachers develop confidence and competence to teach computing and plan cross curricular STEM activities to support the pupils.
- 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.

- Computing offers opportunities for pupils to:
- Develop their ability to apply their digital literacy capability to support their use of language and communication skills;
- Develop their digital literacy capability and understand the importance of information and how to select and prepare it;
- Develop their 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;
- Become responsible, competent, confident and creative users of information and communication technology;
- Explore their attitudes towards Computing, its value for themselves, others and society and their awareness of its advantages, risks and limitations;
- Develop skills involved in computer science, digital literacy and information technology;
- Grow an awareness of how technology is used in the world around them and of the benefits that it provides;
- Communicate and collaborate in order to develop understanding of the purposes for using technology and these are used to bring together home and school learning experiences;
- Engage all pupils imaginatively and widen their learning opportunities
- Develop an understanding of how to use technology safely and the risks associated.

KS1

Pupils will be taught to:

- Understand what algorithms are, and how they are implemented.
- Create and debug simple programs.
- Predict the behaviour of simple programs.
- Create, organise, store, manipulate and retrieve digital content.
- Recognise common uses of ICT beyond school.
- Use technology safely and respectfully, keeping personal information private, and to identify where to go for help and support when they have concerns online.

KS2

Pupils will be taught to:

- Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems, and solving problems.
- Use sequence, selection, and repetition in programs.
- Work with variables and various forms of input and output.
- Explain how some simple algorithms work, and how they can detect and correct errors.

- Understand computer networks, how they can provide multiple services, and the opportunities they offer for communication and collaboration.
- Use search technologies, understand how results are selected and ranked, and be able to critically evaluate digital content.
- Select, use and combine a variety of software on a range of devices to design and create programs, systems and content that accomplish specific goals.
- Use technology safely, respectfully and responsibly, recognise acceptable behaviour and identify a range of ways to report online concerns.

2 Teaching and learning style

2.1 As the aims of Computing are to equip children with the skills necessary to use Computing to become independent learners, 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 and other devices to help them in whatever they are trying to study. So, for example, children might research a history topic by using an app on the iPad, or they might investigate a particular issue on the Internet. Where possible, children are given the opportunity to select appropriate technology to meet a specific need or problem. 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.

2.2 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:

- setting common 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 by ability in the room and setting different tasks for each ability group;
- providing resources of different complexity that are matched to the ability of the child;
- using classroom assistants to support the work of individual children or groups of children.

3 Computing curriculum planning

3.1 The Scheme of Work is based on the Teach Computing Curriculum with plans adapted to suit the needs of St Nicholas pupils.

3.2 The long term plan includes key skills and vocabulary and all teachers have access to the relevant unit and resources as well as supplementary resources from linked websites referenced in the scheme of work.

4 Computing in EYFS at St. Nicholas

4.1 Despite computing not being explicitly mentioned within the Early Years Foundation Stage (EYFS) statutory framework, there are many opportunities for children in Reception to use technology to solve problems and produce creative outcomes and computational skills which are a pre-requisite for the KS1 curriculum are implicitly embedded within our EYFS planning.

4.2 The sections of the framework below are linked to computational thinking and skills.

- Personal, Social and Emotional Development
- Show resilience and perseverance in the face of a challenge.
- Know and talk about the different factors that support their overall health and wellbeing: -sensible amounts of 'screen time'.
- Physical Development
- Develop their small motor skills so that they can use a range of tools competently, safely and confidently.
- Expressive Arts and Design
- Explore, use and refine a variety of artistic effects to express their ideas and feelings.
- ELG
- Personal, Social and Emotional Development/ Managing Self
- Be confident to try new activities and show independence, resilience and perseverance in the face of challenge.
- Explain the reasons for rules, know right from wrong and try to behave accordingly.
- Expressive Arts and Design /Creating with Materials
- Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.

4.3 Examples of activities in Reception explicitly linked to Computing

Reception have an interactive whiteboard which they themselves can access to e.g. Add a dojo point, choose a game, play phonics games, practice letter formation and so on.

Children also have access to desktop computers which they can use to play simple games, draw pictures and type sentences.

Reception can also access iPads to use simple apps, record their play and take photographs e.g. of things they have created during continuous provision.

The children also use a variety of electronic toys in continuous provision, e.g. calculators, old mobile phones, CD players and mini microphones are provided for children to use in themed areas of the classroom.

5 The contribution of Computing to teaching in other curriculum areas

5.1 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 proves very useful for research in humanities subjects. Computing enables children to present their information and conclusions in the most appropriate way.

5.2 English

Computing is a major contributor to the teaching of English. Through the development of keyboard skills and the use of computers and other devices, children learn how to edit and revise text. They have the opportunity 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. They learn how to improve the presentation of their work by using desk-top publishing software.

5.3 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. The school uses RMEasimaths, TTRockstars and LBQ as diagnostic and teaching tools in addition to a range of other resources.

5.4 Personal, social and health education (PSHE)

Computing makes a contribution to the teaching of PSHE as children learn to work together in a collaborative manner. They develop a sense of global citizenship by using the Internet. Through the discussion of moral issues related to electronic communication, children develop a view about the use and misuse of Computing, and they also gain a knowledge and understanding of the interdependence of people around the world. Online safety and cyber bullying is taught on an ongoing basis within the Computing scheme of work and specifically on Safer Internet Day and links with the Jigsaw theme of Individual Differences in PSHE.

5.5 Humanities

Research and study is enhanced through the use of Computing. Websites are used for problem solving and information gathering and the internet provides access to current information on topics such as the weather. The children use a range of technologies such as Podcasting and animation to convey meaning and messages. Children use apps such as Google Earth to find out more about the world around us.

5.6 Art and Design Technology

We are working to combine some of the physical computing units and objectives with those in our DT curriculum. For example building fairground rides using the crumble control kits.

6 Inclusion, Equal Opportunities and SEN

6.1 At St. Nicholas C of E Primary School we teach Computing to all children, whatever their gender, race, social circumstance or ability. Computing is an essential part of our broad and balanced curriculum. 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 take into account the targets in the children's Education Health Care Plans (EHCPs). Computing is used to support pupils who require it to access the curriculum. iPads

have been made available for those children who can benefit from having access to their own device throughout the day and a number of children on the SEND register have been given their own personal laptop for use within school.

7 Assessment and recording

7.1 Teachers assess children's work in Computing by making informal judgements as they observe them during lessons. At the end of a unit s/he makes a summary judgement about the work of each pupil using short term assessment sheets based on unit objectives with an overall assessment sheet based on year group objectives available for use at the end of the school year. This informs future planning. Class record sheets and notes are kept by the class teacher and shared with the Computing Co-ordinator. A comment regarding achievement and ability is made on the end of year report.

7.2 The safety rules (SMART Rules) and vocabulary should be displayed in each classroom as well as examples of computing work displayed in classrooms and around the school. There are also photographs and uploads of examples of work held for each year group in an online curriculum scrapbook.

8 Resources

8.1 Classes have access to 3 class sets of iPads with individual logins for each child so they can save their work. There are also 2 class sets of laptops with logins and passwords for each class and all pupils have individual logins to access the Just2Easy website and computing resources including blogging, data handling, paint program etc. iPads and laptops are equipped with a range of apps relating to curriculum units from our scheme of work, e.g, scratch junior coding app, audacity for audio recording, etc.

We have also purchased 2 crumble controller kits for physical computing and robotics units.

There is now a range of hardware available including an Interactive White Board in every class, a Visualiser in each class and Bee Bots.

8.2 All teachers have an iPad and a laptop which is used for teaching and learning.

9 Monitoring and review

9.1 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 Lucy Roffey.

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 subject leader evaluates the quality of teaching and learning in Computing by observations and work scrutinies plus evidence in children's work and regular learning conversation mornings/afternoons.

9.2 The criteria by which this policy will be evaluated include:

- Teaching and learning styles

- Achievements and progression
- Use of Computing across the curriculum to promote learning, flexibility and creativity
- Development of network, additional resources and initiatives, etc.

10 Acceptable Use

10.1 Information and Communications Technology (ICT) is seen in the 21st century as an essential resource to support learning and teaching, as well as playing an important role in the everyday lives of children, young people and adults. Consequently, schools need to build the use of these technologies into the curriculum in order to teach children and young people about using them safely and responsibly, as well as to arm them with the skills to access life-long learning and employment.

This section will be used to deal with incidents involving pupils, in conjunction with the school's behaviour and anti-bullying policies where appropriate. The school will, where known, inform parents / carers of incidents of inappropriate e-safety behaviour that take place out of school.

10.2 Guidelines for children

Internet and device access have been provided to equip children with the necessary resources to build on skills taught in school and at home. The use of these exciting and innovative tools in school and at home has been shown to raise educational standards and promote student achievement.

Children must only use computers, devices and the internet when supervised by an adult in school.

Children must use school devices in a responsible way to make sure that there is no risk to the safety of themselves or others. Children must follow and agree to the following guidelines:

- Children will be aware that school can monitor their use of ICT systems, email and other device use.
- Children will not share their logins or passwords for devices.
- Children will be aware of the need to create avatars and nicknames when online so as not to disclose or share their personal photograph and/or name.
- Children will be aware that they should not speak to anyone online that they do not know as this can be dangerous.
- Children will immediately report any unpleasant or inappropriate material or messages that make them feel uncomfortable.
- Children will only use school ICT devices for educational use and not for personal or recreational use unless they have permission to do so.
- Children must seek permission before accepting downloads or uploads.
- Children must not use school ICT devices for online gambling, internet shopping, video broadcasting or file sharing unless they have the permission of an adult.
- Children will respect other pupils' work and will not access, copy, edit or remove any files that do not belong to them.

- Children will only use personal “bring your own” devices (phones, tablets, etc.) in school with the permission of their class teacher and Headteacher. If children are using their own devices, they are to follow all the rules set out in this policy. Children will not be able to access social media sites on their home devices in school.
- Children must report any damaged devices to their class teacher who will report and log the problem to the ICT technician or the subject leader for Computing.
- Children will not use programmes or software that will enable them to bypass the school’s filtering systems.
- Children will not open any attachments to emails, unless they know the sender.
- When using the internet for research, children must ensure that they recognise copyright protection.

10.3 Children must understand that ICT must be used appropriately out of school.

10.4 Children must be aware that school may take action against them and inform their parents / carers if they are involved in incidents of inappropriate behaviour when they are out of school. Examples of this would be cyber bullying, use of images or personal information, inappropriate comments about school or other pupils on social media sites.

10.5 Children not complying with these guidelines may risk losing the right to use ICT devices in school and staff will make parents/carers aware of the reasons for this.

10.6 E-safety in school

E-safety should be a constant focus in all areas of the curriculum and staff should reinforce e-safety messages at all times particularly when children are accessing devices. The school also takes part in Safer Internet Day on a yearly basis and each class has access to related resources.

In lessons where internet use is planned, staff should endeavour to check sites beforehand to determine their suitability for use. Staff should ensure that they are vigilant in monitoring content of the websites that children visit.

It is accepted that at times, especially in UKS2, children may need to research topics (e.g. racism, discrimination, drugs, alcohol, social media) that may result in sites being blocked. Staff can request that a site is temporarily accessed for the period of study time needed. Any request must be made with clear reasons for the need.

Pupils should be provided with constant reminders of being critically aware of materials/content that they access online.

Pupils should be encouraged to acknowledge sources of information used and to respect copyright when using material that has been accessed online.

Parents/carers should be provided with guidance via the school website highlighting good practice for encouraging ‘e-safe’ children.

Filtering and Monitoring

The school via Comptech will ensure that appropriate strong filtering systems are in place on all school devices and school networks to prevent children accessing inappropriate material. The school will, however, ensure that the use of filtering and monitoring systems does not cause 'over blocking' which may lead to unreasonable restrictions as to what pupils can be taught online.

The school will ensure that these systems meet the filtering and monitoring standards published by the DfE.

Staff will be made aware of the filtering and monitoring systems in place and will know how to escalate concerns where they are identified. Staff will be made aware of their responsibilities relating to filtering and monitoring systems during their induction. Any incidences of inappropriate content which has not been filtered must be reported to a member of the Senior Leadership Team.

10.7 ClassDojo

10.7.1 This online system was initially used as a behaviour management system but has now developed into a communication system between home, school and the children. Homework activities are now set on here which children and parents can see, access and comment on. Successful use of Dojo can:

- Safely give your pupils a wider audience for their learning.
- Encourage reluctant learners to participate and succeed
- Allow pupils to receive feedback safely from many different people
- Allow your pupils to peer assess each other's learning
- Encourage parental engagement

Don'ts:

- Never give away any personal information about your location or identity.
- Don't post pictures of yourself without specific permission from your teacher or parents.
- Never give out your log in details to anyone.
- Don't use text language in your posts

Do's:

- Post about whatever you like.
- If you receive a comment, it is polite to respond, say thank you and reply to a question if they have left one.
- Comment on other people's posts too. Blogging is about commenting and posting!
- If your post doesn't appear straight away, your teacher might be busy, do be patient.
- Try to post about things that your audience would like to read.
- If you see anything that shouldn't be on your screen, do tell your teacher or parents immediately.

- Do visit other class blogs regularly to read and comment. This helps people come back to your blog.
- Try to show off your best work/writing whilst blogging and use the tips people suggest to you to improve.
- Always tag your posts with your first name and include key words specific to your post.

10.8 Parent / carer acceptable use policy

Parents are to be made aware that children must be responsible when using the internet and other communications technologies at school and at home.

Parents / carers will be issued with a notice when their child starts at the school, which outlines the use of the internet and ICT devices in school.

Parents / carers to be aware that their child will have had to sign an Acceptable Use Agreement in school.

Parents / carers to understand that children will be receiving e-safety education in school appropriate to their child's age and that staff will be following government guidance on this.

Parents / carers will be aware that the school will take all necessary precautions to ensure that monitoring and filtering systems are in place.

Parents / carers to understand that, although staff will take all necessary precautions, school cannot ultimately be held responsible for the nature and content of materials that may be accessed on school devices.

Parents / carers to understand that their child's activity will be monitored and that staff will contact them should there be a deliberate breach of the Acceptable Use Policy.

Parents / carers must be encouraged to role model safe use of the internet and devices at home and will inform school if they have concerns over their child's internet usage.

Parents / carers taking photographs or videos at school events, e.g. concerts, sports days, etc. should not publish these on any social networking site if they contain images of any other children but their own.

Notice to Parents/Carers regarding Acceptable Use of ICT

At school, we provide children with access to the Internet using a range of devices, such as computers, iPads, iPods, etc. The use of these exciting and innovative tools in school and at home has been shown to raise educational standards and promote student achievement.

Parents / Carers should note that:

- Children must be responsible when using the internet and other communications technologies at school and at home.
- Children use devices and the internet in school.
- Children receive e-safety education in school appropriate to their age; staff follow government guidance on this.
- School will take all necessary precautions to ensure that monitoring and filtering systems are in place. However, school cannot be ultimately responsible for the nature and content of materials that may be accessed.
- Children's activity will be monitored and a member of staff will contact me should there be a deliberate breach of the school's Acceptable Use Policy.
- They should ensure that they role model safe use of the internet on devices at home and inform school if they have concerns over their child(ren)'s internet usage.
- Children sign an Acceptable Use Agreement in school.
- The legal minimum age for having a Facebook account is 13. This is similar to other social media accounts as children below this age are not always aware of the impact of their messages.
- Any photographs or videos that parents/carers take at school events, e.g. concerts, sports days, etc. should not be published on any social networking site if they contain images of any other children but their own.
- **Unless we are notified by parents/carers to the contrary, we will assume that they are happy with their child(ren)'s use of the internet and devices within school.**

Appendix Four – Pupil eSafety (SMART) Rules

Each class teacher will share these with their class at the beginning of each school year, making sure they understand and agree to them. These rules will then be displayed in the classrooms as a visual reminder.

