Part of the

Computing Policy

Date policy updated:	September 2022
Date of next review:	September 2023

Contents

Rationale

This policy sets out St John's CE Academy's aims and strategies for the successful delivery of Computing. This policy should be read in conjunction with other relevant school policies such as the Safeguarding, SEND and PSHE policies.

The policy has been developed by the Computing Lead in consultation with the SLT, teaching and support staff. It is based on the government statutory programmes of study as set out in the National Curriculum. Due to the fast pace of technology innovation and constantly emerging trends, it is recommended that this policy is reviewed at the start of every academic cycle.

Aims

At St John's, we believe that every child should have the right to a curriculum that champions excellence; supporting pupils in achieving to the very best of their abilities. We understand the immense value technology plays not only in supporting the Computing and whole school curriculum but overall in the day-to-day life of our school.

We believe that technology can provide enhanced collaborative learning opportunities; better engagement of pupils; easier access to rich content; support conceptual understanding of new concepts and can support the needs of all our pupils.

Using the Programmes of Study from the National Curriculum, it is our aim to:

- Provide an exciting, rich, relevant and challenging Computing curriculum for all pupils. Enthuse and
- Equip children with the capability to use technology throughout their lives.
- Give children access to a variety of high-quality hardware, software and unplugged resources.
- Instil critical thinking, reflective learning and a 'can do' attitude for all our pupils, particularly when engaging with technology and its associated resources.
- Teach pupils to become responsible, respectful and competent users of data, information and communication technology.
- Teach pupils to understand the importance of governance and legislation regarding how information is used, stored, created, retrieved, shared and manipulated.
- Equip pupils with skills, strategies and knowledge that will enable them to reap the benefits of the online world, whilst being able to minimise risk to themselves or others.
- Use technology imaginatively and creatively to inspire and engage all pupils, as well as using it to be more efficient in the tasks associated with running an effective school.
- Provide technology solutions for forging better home and school links.
- Utilise computational thinking beyond the Computing curriculum.
- Exceed the minimum government recommended/statutory guidance for programmes of study for Computing and other related legislative guidance (online safety).

Safeguarding and Online Safety

- Online safety has a high profile at St. John's for all stakeholders. We ensure this profile is maintained and that pupil needs are met by the following:

- A relevant up-to-date online safety curriculum (Education for a Connected World Framework) which is progressive from Early Years to the end of Year 6.
- Maintain an active membership to the Darlington Internet Safety Partnership.
- Use of Project Evolve resources to support the delivery of the Education for a Connected World framework during our Online Safety Computing lesson starters.
- Training for staff and governors which is relevant to their needs and ultimately positively impacts on the pupils.
- Scheduled pupil voice sessions and learning walks steer changes and inform training needs.
- Through our home/school links and communication channels, parents are kept up to date with relevant online safety matters, policies and agreements. They know who to contact at school if they have concerns.
- Our online safety policy (part of our safeguarding policy) clearly states how monitoring of online safety is undertaken and any incidents/infringements to it are dealt with.
- Filtering and monitoring systems for all our online access.
- Data policies which stipulate how we keep confidential information secure.

Curriculum

As a school, we have chosen the Teach Computing Scheme of Work from Reception to Year 6.

The scheme of work supports our teachers in delivering fun and engaging lessons, which help to raise standards and allow all pupils to achieve to their full potential. We are confident that the scheme of work more than adequately meets the national vision for Computing. It provides immense flexibility, strong cross-curricular links and allows for in-depth assessment of learning.

Our curriculum enables pupils to use their skills learnt in Computing to further enhance their experiences in other subjects (creating presentations, videos and presenting data effectively) Furthermore, it gives excellent supporting material for less confident teachers.

EYFS
- We aim to provide our pupils with a broad, play-based experience of Computing in a range of contexts. We believe the following:
- Early Years learning environments should feature ICT scenarios based on experience in the real world, such as in roleplay.
- Pupils gain confidence, control and language skills through opportunities to 'paint' on the interactive board/devices or control remotely operated toys.
- Outdoor exploration is an important aspect, supported by ICT toys such as robots, controllable traffic lights and walkie-talkie sets.
- Communication devices such as walkie-talkies can support children to develop their communication skills. This is especially useful for children who have English as an additional language.
- By the end of Reception, children will start to use a keyboard and mouse and log on to the school system.

Key Stage 1 Outcomes
- Understand what algorithms are, how they are implemented as programs on digital devices, and that programs execute by following a sequence of instructions.
- Write and test simple programs.
- Organise, store, manipulate and retrieve data in a range of digital formats.

- Communicate safely and respectfully online, keeping personal information private, and recognise common uses of information technology beyond school.

Key Stage 2 Outcomes

- Design and write 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; generate appropriate inputs and predicted outputs to test programs.
- Use logical reasoning to explain how a simple algorithm works 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.
- Describe how Internet search engines find and store data; use search engines effectively; be discerning in evaluating digital content; respect individuals and intellectual property; use technology responsibly, securely and safely.
- Select, use and combine a variety of software (including internet services) on a range of digital devices to accomplish given goals, including collecting, analysing, evaluating and presenting data and information.

Curriculum Implementation

At St. John's CE Academy, our curriculum is carefully mapped out into a curriculum overview. This enables links between subjects to be identified and carefully planned for to support pupils' retention of knowledge, acquisition of skills and the development of the confidence to engage with technology. The academic year is broken down into six units as seen below.

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Autumn 1	**Computing Systems and Networks** Technology Around Us	**Computing Systems and Networks** IT Around Us	**Computing Systems and Networks** Connecting Computers	**Computing Systems and Networks** The Internet	**Computing Systems and Networks** Sharing Information	**Computing Systems and Networks** Communication
Autumn 2	**Programming A** Moving a Robot	**Creating Media** Making Music	**Programming A** Sequence in Music	**Programming A** Repetition in Shapes	**Creating Media** Vector Drawing	**Programming A** Variables in Games
Spring 1	**Creating Media** Digital Painting	**Programming A** Robot Algorithms	**Creating Media** Desktop Publishing	**Creating Media** Photo Editing	**Programming A** Selection in Physical Computing	**Creating Media** Web Page Creation
Spring 2	**Data & Information** Grouping Data	**Data & Information** Pictograms	**Data & Information** Branching Databases	**Data & Information** Data Logging	**Data & Information** Flat-File Databases	**Data & Information** Spreadsheets
Summer 1	**Programming B** Introduction to Animation	**Programming B** Introduction to Quizzes	**Programming B** Events & Actions	**Programming B** Repetition in Games	**Programming B** Selection in Quizzes	**Programming B** Sensing with Micro:Bit
Summer 2	**Creating Media** Digital Writing	**Creating Media** Digital Photography	**Creating Media** Animation	**Creating Media** Audio Editing	**Creating Media** Video Editing	**Creating Media** 3D Modelling

Assessment

Pupil attainment is assessed through formative and summative assessments.

In Key Stage 1 there are many opportunities for formative assessments and each lesson builds up to the final lesson where children will be expected to use their skills and knowledge learnt in the unit.

Key Stage 2 focuses more on a summative assessment approach and uses quizzes and other means including rubrics to assess pupils' knowledge and understanding.

Children are encouraged to self, peer and group assess work in a positive way, at the end of every lesson pupils will self-assess their learning by using a thumbs up/side thumb/ thumbs down to give to inform the teacher for future planning.

Resources

All resources are procured with the underlining considerations of value: The extent at which the resource impacts on learning and the material cost of this. Protocol details for procurement can be found in the school finance policy. A range of resources is available, which successfully supports delivering the Computing curriculum and enables all learners to reach their full potential.

Resources are suitably maintained and replenished when needed, which is overseen by the Computing Lead. An itemised list of all resources is shared with staff and kept up to date by the Computing Lead. Audits of school resources are conducted regularly by the Computing Lead, which informs bidding for budgets allocations.

The Computing Lead keeps up to date with the latest technology resources and will make informed decisions about possible procurement of them through their own research. Suggestions for getting the very best out of the resources are made available to teaching and support staff by the Computing Lead.

Inclusion

At St. John's, we aim to enable all children to achieve to their full potential. This includes children of all abilities, social and cultural backgrounds, those with disabilities, EAL speakers and SEND statements.

We place particular emphasis on the flexibility technology brings to allowing pupils to access learning opportunities, particularly pupils with SEND. With this in mind, we will ensure additional access to technology is provided throughout the school day and in some cases beyond the school day.

Monitoring, Evaluation and Feedback

Monitoring standards of teaching and learning within Computing is the primary responsibility of the Computing Lead. All teachers are expected to track children's work using our Computing End Point Assessment form. Pupils' work is evidenced in their computing folder (physical) and in their desktop work area (digital).

Monitoring will be achieved through:

- Discussions with pupils.
- Work scrutiny.
- Learning walks.
- Observations.
- Teacher voice.
- Reflective teacher feedback.

- Learning environment monitoring.
- Dedicated Computing Leader and Assessment Leader time.

Evaluation and Feedback will be achieved through:

- Dedicated Computing Leader and Assessment Leader time.
- Using recognised standards documentation for end-of-year expectations.
- Using recognised national standards for benchmarking Computing provision in primary schools.
- Written feedback on evaluation of monitoring activities to be provided by the Computing Lead in a timely manner.
- Feedback on whole school areas of development in regard to Computing to be fed back through PD sessions/AOB/staff meetings.

Roles and Responsibilities

Due to technology extending beyond the National Curriculum for Computing, there are key roles and responsibilities specific members of staff have.

Headteacher and Business Manager

- Monitoring the implementation of the Computing Policy and its associated policies such as the Safeguarding and SEND Policies.
- Ratifying (in conjunction with the Local Academy Council) the Computing, Safeguarding and Online Safety Policies.
- Securing technical support service contracts and infrastructure maintenance contracts. Approving CPD and training which is in line with the whole school's strategic plan. Approving budget bids and setting them.
- Creating in conjunction with the Computing Lead, a long-term vision for Computing which includes forecasted expenditure and resources.
- Monitoring the performance of the Computing Lead in respect to their specific job role description for Computing.
- Ensuring any government legislation is being met.

Computing Lead

- Raising the profile of Computing for all stakeholders.
- Monitoring the standards of Computing and feeding back to staff in a timely fashion so they can act on areas for development.
- Ensuring assessment systems are in place for Computing.
- Maintaining overall consistency in standards of Computing across the school.
- Reporting on Computing at specific times of the year to the Governing Body/Head/Staff.
- Auditing the needs of the staff in terms of training/CPD.
- Actively supporting staff with their day-to-day practice.
- Seeking out opportunities to inspire staff in developing their practice through modelling and sharing new ideas, approaches and initiatives.
- Attending training and keeping abreast with the latest educational technology initiatives. Using nationally recognised standards to benchmark Computing.
- Creating Action Plans for Computing and supporting a long-term vision which feeds into the whole school development plan.

- Creating bids for the annual budgets and monitoring budget spend. Keeping an up-to-date log of all resources available to staff. Procuring physical and online resources that demonstrate best value.
- Reviewing the Computing curriculum and developing it as needed. Overseeing the effectiveness of the technician.
- Working as needed with the SENCO/Headteacher to ensure online safety provision is above adequate and all legislation is in place.
- Maintain the school website content.
- Posts approved requests to the school's social media accounts.
- Supports procurement of resources and technical services. Supports the technician with some data management.

Technician (OneIT)
- Conducts routine scheduled maintenance/updates on systems.
- Supports the administration and set-up of online services including the school website. Fixes errors/issues with hardware and software set-up, prioritising as needed.
- Routinely checks school filtering, monitoring and virus protection.
- Sets up new hardware and installations.
- Maintains network connectivity and stability.
- Supports the Computing Leader and Head Teacher with future infrastructure needs and associated projected costs.

Health and Safety

Both staff and pupils are trained to handle electrical equipment correctly including how to power off and on. Pupils are reminded about the dangers of electricity and the danger signs to look out for. Staff will demonstrate safe use of equipment before pupils use them and establish safe use rules for equipment with the pupils. Adequate displays and warning signs are strategically placed around the school to reinforce health and safety.