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Computing Policy
2026– 2027

Introduction

Our shared vision at St Joseph's Roman Catholic Primary School is one where 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. Buildings 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

Rationale

Our computing framework enables us to provide an exciting and rigorous curriculum that addresses the challenges and opportunities offered by the technologically rich world in which we live.

Computing is concerned with how computers and computer systems work, and how they are designed and programmed. Pupils studying computing will gain an understanding of computational systems of all kinds, whether or not they include computers. Computational thinking provides insights into many areas of the curriculum, and influences work at the cutting edge of a wide range of disciplines.

Computational thinking allows us to solve problems, design systems, and understand the power and limits of human and machine intelligence. It is a skill that empowers, and one that all pupils should be aware of and develop competence in. Pupils who can think computationally are better able to conceptualise, understand and use computer-based technology, and so are better prepared for today's world and the future.

Computing is a practical subject, in which invention and resourcefulness are encouraged. The ideas of computing are applied to understanding real-world systems and creating purposeful products. This combination of principles, practice and invention makes computing an extraordinarily useful and intensely creative subject, suffused with excitement, both visceral ('it works!') and intellectual ('that is so beautiful').

The focus of our programme of study undeniably moves towards programming and other aspects of computer science. Programming is part of the primary national curriculum right, as '**control**' or 'sequencing instructions', which incorporate techniques and methods for solving problems and advancing knowledge, and includes a distinct way of thinking and working that sets it apart from other disciplines. Every core principle can be taught or illustrated without relying on the use of a specific technology.

The role of programming in computer science is similar to that of practical work in the other sciences – it provides motivation, and a context within which ideas are brought to life.

Information technology deals with applying computer systems to solve real-world problems, such as finding things out, exchanging and sharing information, and reviewing, modifying and evaluating work, which creates a broad and balanced technological education, where the new programme of study provides ample scope for pupils to develop understanding, knowledge and skills in these areas.

At St Joseph's we equip pupils with high-level skills in using computing, which will prepare them to apply these across the curriculum in secondary education.

The aims of computing in the curriculum.

Our computing aims to ensure that all pupils:

- can understand and apply the fundamental principles and concepts of computing, 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.
- can develop and build metacognitive knowledge and skills.

At each key stage, pupils are entitled to the opportunity to develop computing capability through activities that arise in all curriculum areas, undertaken individually or in groups, as well as being appropriate to both boys and girls.

Key Personnel

The Role of Senior Leadership

The overall responsibility for the use of computing rests with the senior leadership of a school. The Headmistress, in consultation with staff:

- determines the ways computing should support, enrich and extend the curriculum;
- decides the provision and allocation of resources;
- decides ways in which developments can be assessed, and records maintained;
- ensures that computing is used in a way to achieve the aims and objectives of the school;
- ensures that there is a Computing policy, and identifies a Subject Leader;

The Role of the Computing Subject Leader

The computing subject leader:

- Ensures the development of a scheme of work for the computing curriculum.

This will develop the pre-requisites for the use of computing across the curriculum:

- promote the integration of computing within appropriate teaching and learning activities, develop and monitor the contributions of subjects to its cross-curricular use;
- manage the provision and deployment of resources;
- encourage colleagues;
- organise technical support and technicians or network managers where appropriate;
- coordinate the evaluation and review of the school's computing policy;
- online safety;
- remote learning

The Role of the Teacher

- Even though whole school co-ordination and support is essential to the development of computing capability, it remains the responsibility of each teacher to plan appropriate computing activities and assist the subject leader in the monitoring and recording of pupil progress in computing.
- Upload half term plans to the network system.
- Provide home learning assignments using Google Classroom
- Online Safety.

The Organisation of Computing

Although there are times when skills have to be taught as pre-cursor to cross-curricular use it is not intended that computing will be delivered in isolation.

Each classroom has access to an interactive whiteboard and at least one computer with a range of wireless peripherals.

Access to Apple iPads.

Years 1 to 6 have access to Chrome books stored in lap caddies.

Foundation stage has access to iPads stored in a lap safe and a variety of remote control peripherals.

Progression within Computing

Attainment targets

By the end of each key stage, pupils are expected to know, apply and understand the matters, skills and processes specified in the relevant programme of study.

Foundation stage

Pupils will:

- know how to operate simple equipment;
- show an interest in technological toys with knobs or pulleys, or real objects;
- show skill in making toys work by pressing parts or lifting flaps to achieve effects such as sound, movements or new images;
- know that information can be retrieved from computers;
- complete a simple program on a computer;
- interact with age-appropriate computer software.

Key stage 1

Pupils should 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

Pupils should 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 Google Chrome Drive; 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.

Curriculum Map

Purple Mash Units of Work

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Yr 1	Online Safety Introduction to Purple Mash	Online Safety Data Explorers	Online Safety Creative and Following Instructions	Online Safety Animated Stories	Online Safety Coding	Online Safety Technology Around Us
	Online Safety Creative Computing					Online Safety Making Beats
Yr 2	Online Safety Making music	Online Safety Coding	Online Safety Spreadsheets	Online Safety Questioning	Online Safety Creating Pictures	Online Safety The internet
	Online Safety Route Explorers					Online Safety Presenting Ideas
Yr 3	Online Safety Route Planners	Online Safety Coding	Online Safety Presentations	Online Safety Email	Online Safety Branching Databases	Online Safety Spreadsheets
					Online Safety Touch Typing	Online Safety Spreadsheets
Yr 4	Online Safety Composing Beats	Online Safety Coding	Online Safety Micro:bits	Online Safety Artificial Intelligence	Online Safety Logos	Online Safety Animations
	Online Safety Sound Stories				Online Safety Effective Searching	Online Safety Unpacking Hardware and Software
Yr 5	Online Safety Quizzing	Online Safety Coding	Online Safety Spreadsheets	Online Safety Databases	Online Safety Word Processing	Online Safety Game Creator
						Online Safety Concept Maps
Yr 6	Online Safety Networks	Online Safety Coding	Online Safety Spreadsheets	Online Safety Blogging	Online Safety Graphing	Online Safety Intro to Python
	Online Safety Binary				Online Safety Data Detectives	Online Safety 3D Modelling

Computer Science | Information Technology | Digital Literacy

Assessment

The progress of classes and year groups in computing is evaluated by the

Head Teacher through:

- monitoring attainment by observation of teaching and learning in the classroom;
- monitoring progress against the computing action plan;
- monitoring coverage through completion of medium term planning using Purple Mash Scheme of Work.

Subject Leader through:

- scrutiny of pupil's work stored in folders in Google Chrome Classrooms;
- monitoring coverage through completion of medium term planning using Purple Mash Scheme of Work;
- monitoring of pupil's self-assessment sheets at the end of each unit of work;
- monitoring of pupil's progression statements at the end of each unit of work in relation to 'emerging', 'expected' and 'exceeding' which are then mapped to corresponding statements from the programme of study. So in a single unit this could allow pupils to demonstrate learning relating to several bullet points from the programme of study.

Teachers through:

- assessment of outcomes at the end of each Purple Mash unit of work; relating to 'emerging', 'expected' or 'exceeding' statements.;
- pupil self-assessment at the end of each Purple Mash unit of work.

Summative Assessment

- The progress of individual children's attainment is monitored by the class teacher through recording attainment against the key computing skills as defined by the National Curriculum Programme of Study.
- Analysis of Year group and whole school data using computerised system on Purple Mash
- Pupil's digital portfolio of work.

Resource Management

Software policy

Educating pupils in and through computing demands that one identifies the curriculum needs, selects appropriate software and then considers the hardware. In choosing the software tools, there has been a strong emphasis on content free and general software, which are appropriate within a cross-curricular context. Therefore, it is intended all children have access to the following software:

- a word processor
- a database
- a spreadsheet
- a drawing/art package
- control and monitoring software
- a presentation package
- online applications

Additionally, it is intended that there should be opportunities to:

- use various software packages specifically related to what they are being taught;
- use 2Simple programs such as 2DIY, 2Code, 2Calculate, 2Question and other programming packages;
- use Google Chrome Drive applications;
- relate packages specifically to the needs of an individual child or subject area, e.g. special input devices or analogue measuring tools for science or geography;
- Access to educational programs such as Purple Mash, My Maths and TimeTables Rockstars.

A Hardware Policy

Equipment which supports the use of mouse driven, graphic interfaces where windows, icons, menus and pointers is seen as a providing a supportive environment for pupil's work.

Such hardware allows the opportunity to narrow the gap between the software of the classroom and that of the world of work, whilst giving access to a much wider variety of professionally produced software titles, which will have the flexibility to allow differentiation of task, and progression within and between applications.

Opportunities to work with non-computer computing is essential. This includes knowledge of remote control TV'S, video and tape recorders, cameras, remote control toys, computer microphones, microscopes and the like.

Replacement / New equipment / Security/ Maintenance

The falling cost of new equipment and the rising cost of repairs mean that there will come a point where the equipment may have to be written off over a set period of time. New equipment will be purchased on a rolling programme.

We have seven lap caddies containing at total of one-hundred and forty Chromebooks, and one teacher's station computer with interactive white board, and at least 1 standalone / networked laptop in every classroom. We also have Apple iPads with chargers. Hardware for administrative use will extend beyond the school office to include all teaching staff.

In addition to Chromebooks, computing systems are based in classrooms to allow instant use. Years N to 6 have a fixed data projector and interactive whiteboard. Security systems are fitted where appropriate. We also have Chromebooks for remote learning during periods of isolation or national lockdowns due to COVID.

Serial numbers have been recorded in the school inventory and equipment is security marked, including keyboards, printers, monitors, overheard projectors and data projectors as well as other peripherals.

Insurance cover is taken and the school complies with the regulations so that a claim could be made in the event of hardware being stolen.

Great importance is attached to the security of programs and data backups. Hardware can ultimately be replaced if stolen or vandalised however each school's data is unique to the individual school with this in mind we have back up procedures for data to Cloud. Procedures for making backups, virus protection and internet filtering systems are in place.

Maintenance contracts are in place for both hardware and software.

Internet and the National Grid for Learning (NGFL)

The World Wide Web, Broadband, National Grid for Learning and Google Chrome have a huge impact upon the teaching and use of Computing within schools. It facilitates the access of information via libraries and other establishments across the globe, with up to date data on line 24 hours a day.

It enables the transfer of data by electronic means, affording pupils the opportunity of sending and receiving e-mail as the norm.

The school subscribes to the LEA Managed Internet service. This ensures shielded access.

Pupils in Key Stages 1 & 2 are already using the Internet and Google Drive and are encouraged to visit sites of significant educational importance ensuring they follow the safety guidelines.

Staff are trained in the safe use of Internet and use these skills at home and school. Online safety plays an important role in the safe use of computers. An online safety policy is in place and shared with all parties.

All year groups are taught online safety at the start of a new academic year using Purple Mash online safety units of work where pupils communicate online safely and respectfully.

There is multi-user access (i.e. more than one pupil/adult being active on the Internet simultaneously)

The school has established its own web site. (www.stjospehsrc.co.uk), which will continue to be updated.

School documents, plans and resources are uploaded to the network system - to provide an alternative electronic filing and retrieval system and can be accessed through the shared areas. Teachers are encouraged to upload useful resources which can be used by other members of staff.

Staff Development

Teachers need to become familiar with the educational uses of computers as well as with the hardware / software which supports computing. These will constantly change as teaching and learning methodologies evolve and technical developments allow computing to be used in new curriculum applications. With this in mind each teacher has an allocated Chromebook which can be used both at school or home. One the greatest investments are in the training and familiarisation of teachers and adult support staff with the new technology.

As computing capability for all staff must be seen as a natural precursor to computer capability for all pupils, opportunities should be provided for staff to take advantage of Inset arrangements and access to computer resources for personal practice. All teaching staff will have access to training opportunities, through the CDS and in-house courses. Adult support staff has access to in-house courses and are encouraged to attend externally provided training.

Training courses are identified on the CDS website.

Access to the curriculum

The strength of computing is that it can provide equality of access to the curriculum for all children, which allows them to function at their optimum level, either as an aid to communication or a means of controlling their environment, as well as an integrated aid to learning. The provision of resources should also take into account the needs, abilities and interests of individual children, especially:

- younger pupils
- pupils who have a special skill or talent
- pupils who speak a language other than English
- pupils who experience difficulties with learning

- pupils from ethnic backgrounds
- pupils with physical and sensory difficulties
- offering equality of opportunity for both girls and boys

Equal Opportunities and the use of ICT

Computers are becoming an everyday fact of life in our schools. It is important, therefore, that all pupils, girls and boys, those with low attainments and those with high attainments, irrespective of ethnic and social background, feel comfortable with them.

Careful planning is necessary to ensure that all children have sufficient time to develop and implement their computer skills. To ensure each pupil is catered for, the following points should be taken into consideration

- Groups / pairs should be mixed sex and / or ability wherever possible. Careful monitoring of these groups is necessary to ensure that no one pupil dominates and that individual skill development is recorded.
- All teachers are role models for pupils. Teachers should be aware of their influence on pupils and develop their own confidence and competence in the use of the computer.

Welfare, Health and Safety Issues

The following issues have been considered and included in the school policy, as appropriate:

- Annual Electrical Safety Check;
- Maintenance of Hardware;
- Electrical Supply Systems to include cabling, Networks and Modifying equipment;
- The Data Protection Act to include registering the Governing Body and the Head Teacher and who may access the data, - any Parent & Person with Parental Responsibility or Child
- Internet and E-mail - shielded systems;
- Software copyright with regard to Networks, Single copies and Licences;
- Pupil Supervision.