ST. BERNADETTE'S CATHOLIC PRIMARY SCHOOL

Learn to love, love to learn.

Computing Policy 2022-2023

Mission Statement

At St. Bernadette's Catholic Primary School you will find us caring, hard-working and co-operative. We follow the ways of Jesus using our talents and gifts to make our school special. We show respect to all and welcome you.

Approved by:	E. Finnegan	**Date:** July 2023
Last reviewed on:	July 2023	
Next review due by:	July 2024	

Introduction

This policy sets out our school's vision, aims, principles and strategies for the delivery of Computing and the use of technology to support the curriculum.

At St. Bernadette's Catholic Primary School, we understand that a high-quality computing education is essential for pupils to understand modern information and communication technologies, and for them to use these skills to become responsible, competent, confident, and creative participants of an increasingly digital world. We believe the use of computers and computer systems is an integral part of the National Curriculum. In today's digital age there is a wealth of software, tools and technologies that can be used to communicate, collaborate, express ideas, and create digital content. At St. Bernadette's Catholic Primary School, we recognise that pupils are entitled to a broad and balanced computing education with a structured, progressive, approach to the learning how computer systems work, the use of IT and the skills necessary to become digitally literate and participate fully in the modern world.

What is 'Computing'?

The National Curriculum Purpose of Study states that:

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. Building 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.

Whilst the Computing Curriculum has an increased focus on Computer Science including developing pupils' programming skills and their understanding of what happens 'behind the scenes', it is important that they also continue to develop their Digital Literacy and online safety capability and our school curriculum is designed to reflect this.

The School's Computing Curriculum

As a school, we embrace the national vision for Computing and appreciate that, to achieve this, pupils must have access to a curriculum which is 'balanced and broadly based'.

Our aim is to produce learners who are confident, discerning, and effective users of technology and who also have a good understanding of computers and how computer systems work, and how they are designed and programmed.

We strive to achieve this aim by:

- supporting all children in using technology with purpose and enjoyment
- meeting, and building on the minimum requirement set out in the National Curriculum as fully as possible and helping all children to achieve the highest possible standards of achievement
- helping all children to develop the underlying skills and capability which is essential to developing Computing capability (such as problem solving, perseverance, learning from mistakes) and apply them elsewhere
- helping all children to develop the necessary skills to exploit the potential of technology and to become autonomous and discerning users
- helping all children to evaluate the benefits and risks of technology, its impact on society and how to manage their use of it safely and respectfully.
- using technology to develop partnerships beyond the school
- celebrating success in the use of technology.

In St. Bernadette's Catholic Primary School, teachers are encouraged to progressively develop pupils' Computing skills and capability through discrete learning opportunities, and also to exploit this capability as a tool to support objectives in other curriculum areas meaningfully. These links include, but are not limited to, the use of a range digital devices in a wide range of contexts. Both plugged and unplugged learning opportunities are planned to support pupils' understanding of the underlying concepts in Computing. These opportunities may well be presented within other subject areas (e.g., sequencing instructions in English, isolating variables in Science or spreadsheets for Maths, such as budgeting and calculating averages). In this way Computing and the use of technology become integrated into the curriculum and are used as a truly beneficial tool for learning.

The curriculum is broken down into areas with progression across and between year groups. Using these materials, St Bernadette's Catholic Primary School has developed its own flexible scheme of work for Computing which is adapted regularly to allow pupils' capability to be used effectively in other curriculum areas. At Key Stages 1 and 2 the school's Computing curriculum is organised into the following aspects:

- Multimedia Text and Images
- Multimedia Sound and Motion
- Handling Data
- Technology in Our Lives
- Coding and Programming
- Online Safety

These themes are mapped in a long-term progression plan for the whole school, with elements taught in most terms.

In the EYFS, opportunities for the use of technology are an integral part of each area of learning and the school ensures that children have access to both continuous and enhanced provision.

In Key Stage 1, the focus is on developing the use of algorithms, word processing skills, programming and how technology can be used safely and purposefully. Using Logo and Bee-Bots, the students will learn to understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions. They will be taught to create and debug simple programs and use logical reasoning to predict the behaviour of simple program. They will be shown how to use a range of technology purposefully to create, organise, store, manipulate and retrieve digital content as well as understand common uses of information technology beyond school. They will be taught to 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.

In Key Stage 2, lessons still focus on algorithms, programming and coding in a much more complex way and for different purposes. Using Scratch and Kodu, students will design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts. They will use sequence, selection, and repetition in programs, use logical reasoning to explain how some simple algorithms work and correct errors in algorithms and programs. Students will also develop their knowledge of computer networks, internet services and the safe and purposeful use of the internet and technology. Students will select and use a range of programs when focusing on animations, formulas, radio stations and 3D modelling. Students will use technology safely, respectfully, and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.

Safeguarding Children: Online Safety

At St. Bernadette's Catholic Primary School, we believe that the use of technology in schools brings great benefits. To live, learn and work successfully in an increasingly complex and information-rich society, our children must be able to use technology effectively. The use of these exciting and innovative technology tools in school and at home has been shown to raise educational standards and promote pupil achievement. Yet at the same time we recognise that the use of these technologies can put young people at risk within and outside the school.

The school has developed a separate policy which details our approach to online safety and safeguarding children and staff when using technology both within and beyond the school. This includes reference to the online safety elements of the National Curriculum for Computing and the statutory Relationships and Health Education curriculum. It considers the government's 'Teaching online safety in schools' guidance and 'Education for a Connected World' from the UK Council for Internet Safety.

Teaching and Learning Approaches

When delivering the National Curriculum for Computing, teachers are expected to employ a range of strategies and to use their professional judgement to decide on the most appropriate teaching and learning approach for the class, groups of pupils or individual pupils.

Approaches and strategies used may include:

- 'plugged' activities which allow pupils to practise and demonstrate their levels of understanding.
- using presentation technology to demonstrate something to a group of pupils or the whole class
- leading a group or class discussion about the benefits and risks of technology
- individual or paired work
- collaborative group work
- pupil led demonstrations/peer mentoring (where one pupil is used to demonstrate or teach a skill to others, the teacher must feel confident that this is of benefit to all those involved).
- differentiated activities planned to allow different levels of achievement by pupils or to incorporate possibilities for extension work.
- teacher intervention where appropriate to support a pupil, reinforce an idea, teach a new point or challenge pupils' thinking.

Access and Inclusion

Each pupil's access to technology varies greatly dependent on the nature of the activity they are involved in (e.g. some activities benefit from prolonged access to a computer whilst other are best served with brief access to a digital device for a focused purpose). However, on average, pupils have one hour allocated to Computing each fortnight using a mixture of activities and the following technology:

- Computing Suite
- Laptops
- Tablets
- Cameras
- Bee-Bots
- Data Loggers

In addition to discrete Computing sessions, opportunities to develop and extend Computing capability are provided in other curriculum areas and technology is used to support most other subject areas.

All children have equality of access to appropriate technology in order to develop their personal Computing capability. When children are working in groups, we endeavour to ensure that their hands-on experience is equitable. We check resources, software and documentation to ensure that gender and ethnicity are reflected in a balanced way without stereotyping.

We believe that all children have the right to access IT and Computing. In order to ensure that children with special educational needs achieve to the best of their ability, it may be necessary to adapt the delivery of the computing curriculum for some pupils. The SEND lead and Computing Subject Leader jointly advise teachers on examples of technology which can be provided to support individual children with particular physical, linguistic and educational needs, including gifted and talented pupils. Where appropriate, an external specialist is used to assess a child's specific needs.

Children with access to technology at home are encouraged to use it for educational benefit and online safety guidance is offered to both pupils and parents where appropriate. The school has identified those pupils who have limited or no access to appropriate technology outside of school and provide additional opportunities for these pupils to gain access during the school day/after school.

Extended Opportunities for Learning

The school uses a variety of online tools and environments to extend learning opportunities beyond the classroom. In addition to facilitating remote learning (see separate policy), our online learning tools allow pupils to access learning materials and tools anytime, anywhere and provide channels of communication to both adults and children alike and break down barriers to learning. Our online learning tools are also used to teach children the skills and capabilities they need to stay safe and well in the digital world.

Other examples of Extended Opportunities for Learning at St. Bernadette's Catholic Primary School include:

- Coding clubs
- Drone clubs
- Parental Online Safety events

Each year band will learn about a Computing key figure during class time.

Monitoring

The Computing Subject Leader follows a systematic and regular programme of evaluation and monitoring of the Computing curriculum, across the school. This is so that she can monitor the quality of education being provided to all pupils, including:

- Checking that the school's curriculum 'Implementation' matches its 'Intent'
- Evaluating the success (or otherwise) of curriculum planning and delivery
- Having an awareness of impact and be able to demonstrate progression and attainment
- Having an overview of resource and staff training needs

Monitoring is completed via a variety of methods including:

- Work scrutinies
- Pupil interviews/pupils voice
- Staff interviews/feedback

As a result of monitoring, appropriate CPD opportunities are provided for staff on an individual, group and whole school basis in line with the school's wider CPD policy. A record of these opportunities is kept by the Subject Leader.

Recording and Assessment

We ensure that:

- appropriate Assessment for Learning approaches are applied to formative assessment to inform future planning
- pupils' achievement and attainment is assessed and recorded on at least a termly basis
- pupils' achievement and attainment is measured against the relevant National Curriculum requirements at the end of each Key Stage and this is reported according to government guidelines through end of year reports.

Roles and Responsibilities

The role and impact of technology stretches beyond the National Curriculum for Computing and it is therefore important to acknowledge the roles and responsibilities held by key people across the school.

The following responsibilities are carried out by the faculty lead and head teacher:

- ensuring the consistent implementation of Computing policy
- overseeing health and safety policy and practice
- resources budget management
- ratifying the school's Strategic Development Plan for Technology

The following responsibilities are carried out by the Computing Subject Leader:

- ensuring continuity between year groups
- leading the development and implementation of the school's Online Safety policy
- presenting exemplary practice in the teaching of Computing
- advising colleagues on planning, delivering and assessing Computing
- monitoring the effective use of technology and giving advice where appropriate
- ensuring progression in Computing
- suggested purchasing plans for hardware and software
- organising Computing resources
- identifying what support/CPD is needed by individual staff/groups of staff/the whole school
- arranging in-service support
- reviewing and revising the Computing policy and other associated documents
- creation of a school portfolio of evidence
- co-ordinating and overseeing equipment maintenance

The following responsibilities are carried out by Teachers:

- plan and deliver the requirements of the KS1 and KS2 computing programmes of study to the best of their abilities
- set high expectations for all their pupils, including pupils with special educational needs and/or disabilities (SEND), pupils from various social, cultural and linguistic backgrounds, and academically more able pupils
- encourage pupils to apply their knowledge, skills and understanding of computers and IT across the curriculum.
- maintain up-to-date records of assessment
- tailor lesson delivery according to pupils' respective abilities

Responsibilities carried out by an ICT Support Technician

All equipment is supported and maintained by an in-house technician who works under the direction of the Computing Subject Leader.

Safe Disposal of Equipment

Government regulations state that any old electrical or electronic equipment must be disposed of in an environmentally responsible way. Schools are therefore required to have a compliant process for disposing of waste electronic and electrical equipment.

Health and safety

The school is aware of the health and safety issues involved in children's use of IT. All fixed electrical appliances in school are tested by a Local Authority.

It is advised that staff should not bring their own electrical equipment in to school but, if this is necessary, equipment must be PAT tested before being used in school. This also applies to any equipment brought into school by, for example, visitors running workshops, activities, etc. and it is the responsibility of the member of staff organising the workshop, etc. to advise those people.

Both staff and children are aware of the need for health and safety to be kept in mind when using technology. Signs displaying relevant warnings are displayed around the school and regular attention is drawn to the issue of safe use of equipment. In particular, the following safety issues have been considered when using technology in school:

Comfort - users should be comfortably positioned with easy access to all equipment.

Space - There should be enough space around a workstation including special educational equipment and peripherals.

Seating – this has been chosen so that it is the correct height for knees to fit comfortably under the desk.

Monitors - These should be moved to suit the needs of the users.

Keyboards - Users should have the option to have their keyboard flat or tilted and move it to a comfortable position.

Cables - Are covered and secure. Children are not to connect or unplug electrical equipment.

All pupils are taught to handle equipment correctly and to switch computers on and off using the correct procedures. The dangers of electricity are stressed and all of the above are presented so as to ensure the pupils respect the equipment and respect other people's work on the computer. All users are also reminded of the need to take regular breaks when using electrical equipment.

Copyright

St. Bernadette's Catholic Primary School has a responsibility to teach and uphold the laws and guidance on copyright. Images on the internet are not freely available and we have a responsibility to teach children how to check and use information and images appropriately.

C Manders

Computing Co-Ordinator

July 2023