ST JOSEPH'S CATHOLIC PRIMARY SCHOOL

Computing Policy

July 2021

Introduction

The use of 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 Computing is an important tool in both the society we live in and in the process of teaching and learning. Pupils use computing tools to find, explore, analyse, exchange and present information responsibly, creatively and with discrimination. They learn how to employ computing to enable rapid access to ideas and experiences from a wide range of sources.

Our vision to give all children the tools to use technology safely, responsibly and confidently. Children will leave St Joseph's digitally literate, prepared for the rapidly changing world of technology.

Aims

The **school's** aims are to:

- Meet the requirements of the National Curriculum programmes of study for computing.
- Provide a relevant, challenging and enjoyable curriculum for computing for all pupils.
- Use ICT and computing as a tool to enhance learning throughout the curriculum.
- To respond to new developments in technology.
- To equip pupils with the confidence and capability to use ICT and computing throughout their later life.
- To develop the understanding of how to use ICT and computing safely and responsibly.

The **National Curriculum for Computing** aims to ensure that all pupils:

- Can understand and apply the fundamental principles of computer science, including logic, algorithms, data representation, and communication.
- 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.

Objectives

Early Years
It is important in the Foundation Stage to give children a broad, play-based experience of Computing in a range of contexts, including outdoor play. Computing is not just about computers. Early years learning environments should feature Computing scenarios based on experience in the real world; such as role play. Children gain confidence, control and language skills through opportunities to explore using non-computer based resources such as metal detectors, controllable traffic lights and walkie-talkie sets. Recording devices can support children to develop their communication skills. This is particularly useful with children who have English as an additional language.

By the end of Key Stage One, 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

By the end of Key Stage Two, 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 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

Intent, Implementation, Impact

Intent:

At St Joseph's, we aim to provide high-quality computing education that balances all the aspects of computing and prepares our children for a rapidly changing world through the use of technology. The computing framework consists of 6 strands, with an additional strand focussing solely on online safety. We want children to know more, remember more and understand more in computing so that they leave primary school digitally literate.

Computing is a subject that not only stands alone but is an integral part of our creative curriculum at St Joseph's. Our curriculum design has deep links with mathematics, science, PSHE and design and technology

Implementation:

Our computing curriculum is based primarily on the Teach Computing scheme of work, comprised of 6 strands, including; key skills; communication through text images and multimedia; understanding and sharing data; programming and computational thinking. It also includes a separate module of online safety, which links directly with PSHE at St. Joseph's. This covers a broad range of issues including understanding current issues such as 'social media anxiety' and 'fake news'.

We encourage the use of technology across the curriculum, as well as having standalone computing lessons. This will consolidate learning and increase their confidence in using a variety of technological devices.

Teach Computing provides teachers with individual lesson plans with suggestions on 'scaffolded activities' and 'explorer tasks', flipchart resources, task sheets, printed resources, and summative assessments. There is also a wealth of professional development courses and reading information. At St. Joseph's, we utilise a qualified teacher to cover the six main strands of the computing curriculum in Year 2, 4, 5 & 6, whereas Year 1 & 3 class teachers deliver the Teach Computing curriculum to their own classes. All staff have been introduced to the scheme, and the support on offer. One aspect of the Teach Computing scheme shows how some units can have further national curricular links to other subject areas. This is useful in conveying our vision that computing isn't a standalone subject, but does and will continue to filter through into all other subject areas and everyday life.

The lessons delivered are set out in a six-part format: introduction, activity 1, activity 2, activity 3, plenary, and post-lesson assessment. Through the parts of the lesson, children are introduced to the learning and assessed on any prior knowledge they may have, they then develop their understanding of the new learning through a series of short activities, before finishing the lesson with a recap and assessment questions.

Impact:

• Children will leave St Joseph's digitally literate and be confident users of technology, able to use it to accomplish a wide variety of goals.

• Children will have a secure understanding of the consequences of using the internet and technology.

• Children will understand how to use technology safely and be able to recognise and avoid dangers online

Planning

Modules are planned in line with the National Curriculum. Medium term plans are designed to enable pupils to achieve stated objectives, allowing for clear progression as they move up the school. Pupil progress towards these objectives is recorded by teachers as part of their class recording system.

Assessment

Key objectives to be assessed are taken from the National Curriculum. Teachers regularly assess capability through observations, discussions with pupils and looking at completed work. Regular assessment of computing work is an integral part of teaching and learning and central to good practice.

We assess the children's work in computing by making informal judgements as we observe and talk to the children during lessons. Once the children complete a unit of work, we make a summary judgement of the work for each pupil as to whether they are working towards, met the expectations or exceeded the expectations of the unit.

Inclusivity

At St Joseph's Primary School, we teach computing to all children, whatever their ability, age, gender or race. Computing forms part of our school curriculum policy to provide a broad and balanced education for all children.

We provide learning opportunities that are matched to the specific 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 and allows access to parts of the curriculum to which the children would otherwise not have had. When planning work in computing, we take into account any targets which are evident on a class' provision map.

Teachers identify children who are gifted and talented in the area of computing. It is the teacher's responsibility to ensure that these children are suitably challenged in their use of computing both in specific computing lessons and in using computing in other curriculum areas. Opportunities are identified for these children to actively participate in more challenging aspects of computing.

Monitoring and Reviewing

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. 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 computing subject leader gives the head teacher an annual summary report in which s/he evaluates the strengths and weaknesses in the subject and indicates areas for further improvement. The computing subject leader has specially-allocated time for carrying out the vital task of reviewing samples of the children's work and for visiting classes to observe the teaching of computing.

Resources

We have a set of laptops for both Key Stage One and Key Stage Two kept in accessible laptop trolleys. We also have two iPad trolleys (one kept for EYFS and KS1, one for KS2) each containing more than a class set. These are timetabled for use by all children and are used regularly both in computing lessons and cross-curricular lessons. Computers, laptops and iPads around the school are networked and have Internet access. Internet use is restricted to safe websites only.

Governing Body:

We have identified a computing governor.

The computing governor visits the school yearly (formally) to talk with the computing co-ordinator and other teachers; and when possible, observes some weekly computing lessons.

The computing governor reports back to the learning and development committee half termly and feedback is given at full governing body.