**SS John & Monica’s Catholic Primary School**

**Policy for Computing**

The Computing curriculum at SS John and Monica’s aims to help equip children for life in a digital world, where the use and understanding of computing systems will underpin much of daily life and work. Computing is an opportunity to develop a wide range of the children’s learning skills. These include communicating, collaborating, expressing ideas and creating digital content. At SS John and Monica’s, opportunities to develop these skills through the use of digital technology are explored throughout a broad and balanced curriculum.

A key role of this Computing Curriculum is to develop the children’s computational thinking, creativity in using technology and understanding of their roles and responsibilities as part of a wider online community. This includes understanding how to behave appropriately online, become discerning consumers of online information and develop a healthy use of technology. In developing their knowledge and curiosity for Computing, this curriculum seeks to nurture the children’s skills to become confident, problem-solving users of digital technology.

**Aims**

The teaching of Computing is important in helping to develop the children into informed, responsible and respectful digital citizens who can use technology with confidence. The aims of Computing are to ensure all children:

* 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.

**Objectives**

Key Stage 1

* Understanding what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions
* Creating and debugging simple programs
* Using logical reasoning to predict the behaviour of simple programs
* Using technology purposefully to create, organise, store, manipulate and retrieve digital content
* Recognising common uses of information technology beyond school
* Using 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

* Designing, writing and debugging programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts
* Using sequence, selection, and repetition in programs; work with variables and various forms of input and output
* Using logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs
* Understanding 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
* Using search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content
* Selecting, using and combining 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
* Using technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.

**Principles of teaching and learning**

Computing can be delivered in a cross-curricular way, or through a discreet lesson to deliver a planned scheme of work. Children’s learning in Computing is fundamentally improved by the positive ethos in our school. Our long-term overview for Computing indicates the areas that we have prioritised and how we timetable them into the school year.

Effective teaching of Computing involves a range of teaching strategies, including group work, debate, discussion and role-play, in particular in exploring Online Safety issues.

Where visitors are used to support and extend classroom teaching, they should be used to complement the school’s scheme of work. The teacher should always be present and retains overall responsibility in the classroom.

**Differentiation and special needs**

Teachers may need to use different resources, activities or provide specific support depending on the needs of their pupils. Where children’s IEP’s identify targets relating to their personal development, the teacher should ensure that opportunities are planned to support the pupil in achieving these. The programme should be broad and balanced and provide for all pupils’ different learning styles.

**Breadth & balance**

The Computing programme should be delivered through a wide range of opportunities:

* + - Practical use of computing devices, such as iPads, laptops and computers
    - Conducting research
    - Offline (‘non-screen’) activities
    - Creative activities using computing, individually and in groups
    - Participation in group discussion
    - Consideration of social and moral dilemmas

**Cross Curricular Links:**

Many areas of the curriculum provide opportunities to develop and apply skills from the Computing Curriculum. Some examples of cross-curricular opportunities are:

* Digital Literacy- The use of digital libraries of e-books such as MyOn or Oxford Owl in English lessons
* Using hardware- Using devices such as iPads to take photos and videos for creative projects, learning to edit the videos for a desired effect
* Computational Thinking- Using logical reasoning to design step-by-step instructions for Science experiment investigations
* Using software- Developing their word processing skills to produce presentations and documents to share their topic learning with their peers
* Using data- Linking their understanding of data analysis to the studying of Statistics in Maths

**Online Safety**

Each year group has direct teaching of a unit of Online Safety lessons, which are outlined in our Online Safety Curriculum Overview document. Furthermore, this subject area is additionally taught within PSHE lessons. Each Spring Term, in conjunction with Safer Internet Day, SS John and Monica’s take part in Online Safety activities and assemblies linked to the key focus of that academic year.

Online Safety is consistently promoted through teaching opportunities throughout the curriculum and in daily interactions with the children. Children are encouraged to share any questions or concerns that they have about Online Safety and any issues concerning Online Safety are dealt with in-line with SS John and Monica’s Safeguarding policy.

**Confidentiality**

Teachers cannot and should not promise total confidentiality. The nature of the subject is such that teachers may find themselves party to personal information which does not normally surface within the school environment. When a pupil discloses information which is sensitive, not generally known and which the pupil asks not to be passed on the request will be honoured unless child protection issues, police investigation or the need for referral to external services becomes apparent.

**Schemes of Work/Resources**

The Computing Subject Lead will ensure that a bank of resources is created to support children and teachers in this subject area.

Teachers at SS John and Monica use a range of appropriate materials for each topic they teach. Once this subject area is resourced, they will be kept centrally to allow staff to access the materials they need as they want them.

The core scheme that SS John and Monica follows for Computing is the Kapow learning scheme. This learning scheme provides a rich bank of resources for learning from Foundation Stage Level through to Year 6, including information slides, activity resources and assessment tools. The Computing Curriculum for SS John and Monica has been designed to directly link with this scheme, ensuring good coverage of the three key curriculum areas of Computing: Digital Literacy, Computer Science and Information Technology.

In addition to the Kapow learning scheme, other resources are used in the teaching and promotion of Online Safety, including:

* UK Safer Internet Centre
* Internet Matters.Org
* Twinkl
* SCARF (Corum Life Education)

**Assessment recording & reporting**

Teachers make regular informal assessments of children’s progress in Computing and parents are kept informed of their child’s progress in the annual school report. In addition, children may be given the opportunity to assess themselves, and within a positive and supportive framework, assess their peers.

**Monitoring and Review**

This policy will be monitored by the Computing Subject Lead and will be reviewed/updated annually.