COMPUTING POLICY

St. Joseph's Catholic Primary School, a Voluntary Academy

"Trusting in God; Creating Tomorrow; Helping Today"

Intent

As a Catholic Academy, religious education and faith development are at the heart of our school curriculum developing the Catholicism and spirituality of our pupils.

All pupils at St. Joseph's have the right to have rich, deep learning experiences that balance all the aspects of computing.

The computing curriculum is split into three strands:

- **Computer Science** is the 'foundation' of the subject and the underlying principles that make up the subject (programming, coding, problem solving, computer systems & networks and search technologies).
- **Information Technology** is how to 'apply' this knowledge and understanding to purposefully create and make things (using particular products and software such as spreadsheets, creating presentations, manipulating graphics and sound and creating art).
- **Digital Literacy** is about considering the 'implications' of how to go about doing this (E-safety and teaching pupils how to select the most appropriate digital content).

With technology playing such a significant role in society today, we believe **'computational thinking'** and **'creativity'** are skills children must be taught if they are able to participate effectively and safely in this digital world.

Computing at St. Joseph's also reflects our wider curriculum drivers, including Catholic Social Teaching, British Values and preparation for future careers, ensuring that children use technology to contribute positively to society.

Implementation

The curriculum at St. Joseph's is rooted in the teachings of the Catholic Church; the Early Years Foundation Stage Curriculum and the National Curriculum.

At St. Joseph's, each strand of the computing curriculum is taught in blocks, with skills being revisited throughout the year. This is to ensure that children are able to develop an in-depth knowledge and understanding of each of the computing strands. All pupils will experience all three strands in each year group, but the subject knowledge imparted becomes increasingly specific and in-depth, ensuring that prior learning is built upon. Lessons are sequenced to ensure that they have covered the skills required to meet the aims of the national curriculum. The content

allows for a broad, deep understanding of computing. Where appropriate, employing cross-curricular links motivates pupils and supports them to make connections and embed prior learning and skills. Pupils are also introduced to emerging technologies such as Artificial Intelligence in age-appropriate ways (particularly UKS2), helping them to develop awareness and responsibility for the digital tools they will encounter in their future education and working lives and recognising that the use of AI can potentially be abused and learn to recognise what is true and what may have been fabricated.

Substantive and disciplinary knowledge.

Substantive knowledge in computer science includes: logic- predicting and analyzing, algorithms-making steps and rules, decomposition-breaking down into parts and abstraction- removing unnecessary detail. Children learn how to program and code, how computer systems, networks and search technologies work.

Substantive knowledge in IT teaches children how to use a range of software to collect and present data. For example, using spreadsheets, creating presentations, manipulating graphics and sound and creating art.

Substantive knowledge in Digital Literacy teaches children about the dangers of being online.

Most lessons start with an E safety or knowing and remembering starter to allow children to keep revisiting prior learning.

Disciplinary knowledge in computing (identified in national curriculum) aims to ensure that all pupils:

- 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.

Methods

Computing is taught in class groups on a weekly basis with further opportunities available within many other lessons for children to continually practice and improve the skills they learn. For example, searching safely online within topic lessons, creating digital information sheets on a particular topic or creating digital artworks. This ensures that they are able to become digitally literate active participants in a digital world. A variety of teaching methods are used. These cover a range of activities which may include:

- Unplugged activities (which do not include the use of a device).
- Plugged activities which allow pupils to practise using particular software.
- Individual, paired or group work.
- Differentiated activities planned to allow different levels of achievement by pupils or to incorporate possibilities for extension work.

Children have access to a range of technology including Ipads, laptops, programming equipment e.g Beebots and a range of software. We also use Purple Mash, a cross curricular website for primary school children, enabling them to explore and enhance their knowledge in a fun and creative way. Cloud-based, it delivers exciting activities, creative tools, programs and games.

E safety

E safety is a top priority at St Joseph's. We ensure that this subject is revisited throughout the whole year. Online safety sits within the Digital Literacy strand of the curriculum and is now also statutory to teach pupils since the introduction of the new statutory RSE framework. Online safety lessons are therefore also taught within our RSE & PSHE curriculum. Children participate in **Safer Internet Day** to help them gain a deeper understanding of the wider implications of their online activity, encouraging them to help make the internet a safer and more positive place to be. Alongside Safer Internet Day, our Digital Leaders (I-Vengers) are actively involved in shaping our e-safety strategy, running assemblies, peer workshops and surveys to ensure children's voices inform how we keep our school community safe online.

Assessment

Ensuring that teaching is based on an accurate and precise understanding of children's prior knowledge and understanding, is integral to our teaching.

- At the beginning of each unit of work, teachers assess children's prior knowledge and understanding through a pre-learning challenge. This challenge will then inform precise next steps in learning and also how children are grouped for lessons.

- All children are challenged during computing lessons through continuous verbal feedback and through problems presented to them.
- Self/peer- assessments and self-evaluations engage pupils in their own learning and encourages them to reflect on their learning, assessing the progress which they have made, celebrating success and identifying areas for improvement.
- Progress is measured through the use of post learning challenges and Final piece assessments at the end of each unit of learning.

Assessment is further enhanced through:

- We continually measure the impact of our curriculum by scrutinising pupils' books, speaking to pupils about their learning and the use of internal assessments.
- In the summer term of each academic year the children's progress in computing is reported to parents through an annual written report.

These strategies support an accurate assessment of pupils' knowledge and skills, enabling staff to ascertain how learning has been embedded in long term memory and also identifies gaps in learning.

Computing in EYFS

Although there is no computing strand within the EYFS curriculum, computing in EYFS is centred around play-based activities that focus on building children's listening skills, curiosity, creativity and problem solving.

This gives children the opportunity to explore technology in a carefree and child-led way, allowing them to develop a familiarity with equipment and vocabulary and giving them a strong start in Key Stage 1 Computing and all that it demands.

Technology in the Early Years can mean:

- taking a photograph with a camera or tablet
- searching for information on the internet
- playing games on the interactive whiteboard
- exploring an old typewriter or other mechanical toys
- using a Beebot
- watching a video clip
- listening to music

Children with Special Educational Needs

The computing curriculum in our school is designed to provide access and opportunity for all children who attend the school. If we think it necessary, we adapt the curriculum to meet the needs of individual children, based on an accurate understanding of the strengths and gaps in learning, which may exist.

If a child has a special need, our school does all it can to meet their individual needs. We comply with the requirements set out in the SEN Code of Practice in providing for children with special needs. If a child displays signs of having special needs, his/her teacher makes an assessment of this need. In most instances the teacher is able to provide resources and educational opportunities which meet the child's needs within the normal class organisation. If a child's need is more severe, we consider the child for an Education and Health Care Plan, and we involve the appropriate external agencies when making this assessment. We provide additional resources and support for children with special needs.

Health and Safety

Children should be working in a safe environment, both in and out of the classroom. Children are taught how to use technology safely through discrete lessons and whole school assemblies.

Roles and responsibilities:

It is the role of the subject leader, and under the guidance of the Senior leadership team:

- To organise computing within the curriculum and to ensure progression and development.
- To monitor planning and quality of delivery of the computing curriculum.
- To keep up to date with the developments within computing and carry out staff meetings when required.
- To support teachers to understand the requirements of the National Curriculum and support individuals with lesson planning.
- To monitor and update resources.
- To implement the subject leader action plan.
- To attend CPD provided by the Our Lady of Lourdes Multi-Academy Trust.

Impact

Computing Policy

Our curriculum has ambition for high achievement of all pupils irrespective of background and starting point.

After the implementation of this curriculum, our pupils will be **digitally literate** and able to participate in the digital world. Children should be able to **know and remember more** due to the cyclical process of our teaching. Our approach to the curriculum results in a fun, engaging and high-quality computing education. Pupils will be equipped, not only with the skills and knowledge to use technology effectively and for their own benefit, but more importantly – safely. The biggest impact we want on our pupils is that they understand the consequences of using the internet and that they are also aware of how to **keep themselves safe online**.

Much of the subject-specific knowledge developed through the computing curriculum will equip pupils with experiences which will benefit them in secondary school and will allow them to become more independent and develop key life skills such as problem solving, logical thinking and self-evaluation.

The impact of our computing curriculum is measured not only through pupil outcomes but also through evidence of independence, creativity and resilience in problem solving. Monitoring now includes reviewing digital projects, gathering pupil feedback, and tracking the development of digital responsibility across year groups.

By explicitly linking computing with Catholic Social Teaching and preparing pupils for the ethical use of AI and future technologies, we ensure children leave St. Joseph's as responsible, critical and confident digital citizens.

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