# St. Teresa's Computing Policy

*This policy should be read in conjunction with the Online Safety Policy and Safeguarding and Child Protection Policy.*

## Rationale

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.

*National Curriculum 2014*

## Aims of Computing

St. Teresa's Primary School aims to ensure that all our 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 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

## Intent

All pupils at St. Teresa's Catholic Primary school have the right to rich, deep learning experiences that balance all the aspects of computing. With technology playing such a significant role in society today, we believe 'computational thinking' is a skill that children must be taught if they are to be able to participate effectively and safely in this digital world. A high-quality computing education equips pupils to use creativity to

understand and change the world. At St. Teresa's, the core of computing is Computer Science in which pupils are introduced to a wide range of technology, including laptops, iPads and interactive whiteboards, allowing them to continually practice and improve the skills they learn. This ensures they become digitally literate so that they are able to express themselves and develop their ideas through information and computer technology– at a level suitable for the future workplace and as active participants in a digital world. We teach a curriculum that enables children to become effective users of technology.

## Implementation

The curriculum leader provides a long term plan for each year group, which is part of the Purple Mash scheme of work. Teachers within each year group are provided with the progression of skills and detailed lesson plans to ensure a rich delivery of the computing curriculum. We also prioritise online safety and have adopted the Project EVOLVE scheme, which resources each of the 330 statements from UK Council for Internet Safety's (UKCIS) framework "Education for a Connected World" with lessons, activities, outcomes, supporting resources and professional development materials.

## Impact

Progress is measured through regular teacher assessments. Assessment takes place during every lesson and at the end of each unit. Evidence folders are kept to provide hard-copy samples of pupil's work and work done through Purple Mash is saved electronically in the children's personal document folders. Children are also able to save any work completed at home into their personal folder for their Class Teacher to see.

## Safeguarding Children: Online Safety

At St. Teresa's 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.

## Curriculum

As a school, we have chosen the Purple Mash Computing Scheme of Work from Reception to Year 6. We follow a mixed age two year rolling programme to ensure all children access their year group content. The scheme of work supports our teachers in delivering fun and engaging lessons which help to raise standards and allow all pupils to achieve to their full potential. We are confident that the scheme of work more than adequately meets the national vision for Computing. It provides immense flexibility, strong cross-curricular links and integrates perfectly with the 2Simple Computing Assessment Tool. Furthermore, it gives excellent supporting material for less confident teachers.

**KS1 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.

**KS2 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 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.

## Aims of the Purple Mash Scheme of Work

Through the teaching of the Purple Mash scheme, we will:

- Provide an exciting, rich, relevant and challenging Computing curriculum for all pupils.
- Enthuse and equip children with the capability to use technology throughout their lives.
- Give children access to a variety of high quality hardware, software and unplugged resources.
- Instil critical thinking, reflective learning and a 'can do' attitude for all our pupils, particularly when engaging with technology and its associated resources.
- Teach pupils to become responsible, respectful and competent users of data, information and communication technology.
- Teach pupils to understand the importance of governance and legislation regarding how information is used, stored, created, retrieved, shared and manipulated.
- Equip pupils with skills, strategies and knowledge that will enable them to reap the benefits of the online world, whilst being able to minimise risk to themselves or others.
- Use technology imaginatively and creatively to inspire and engage all pupils, as well as using it to be more efficient in the tasks associated with running an effective school.
- Provide technology solutions for forging better home and school links.
- Utilise computational thinking beyond the Computing curriculum.
- Exceed the minimum government recommended/statutory guidance for programmes of study for Computing and other related legislative guidance (online safety).

# Roles and Responsibilities

**The Computing Subject Leader is responsible for:**

- Developing, resourcing and reviewing the school's Computing Policy.
- Planning, instigating and monitoring teaching programmes.
- Liaising with colleagues, including the SENCO, to differentiate teaching programmes in accordance with the needs of individual pupils.
- Working with other staff to teach the subject content.
- Keeping staff informed of visits and courses.
- Facilitating the assessment of children's work.
- Keeping up-to-date with current affairs and best practice regarding Computing.
- Providing guidance and CPD for staff, as part of their ongoing professional development.
- Celebrating and promoting the Computing curriculum and the work of pupils throughout the school.

**Teaching staff will be responsible for:**

- Contributing to the development of the Computing Policy and teaching programmes, with the Computing Subject Leader.
- Following schemes of work and lesson plans in line with the school's Computing Policy and the objectives of the Computing curriculum.
- Using adaptive teaching strategies to support children and allow them to make progress.
- Provide verbal feedback to children to move them on in their learning.
- Facilitating the teaching of their Computing curriculum, including coordinating activities and resources within their specific areas.
- Assessing and recording pupils' progress and keeping the Computing Subject Leader apprised of this.
- Attending and contributing to any CPD days organised by the Computing Subject Leader.
- Keeping apprised on current affairs and best practice on their Computing curriculum, and applying this to their schemes of work.