Trinity St. Peter's

Church of England Primary School

where children shine

Computing Policy

At Trinity St. Peter's, we take pride in the teachings of our unique school values that underpin all learning. We promote the British fundamental values where British law, democracy and a mutual respect and tolerance for those of other faiths, cultures and beliefs is embedded through all areas of the curriculum.

Purpose of Study

At Trinity St. Peter's we recognise that today's generation of children are surrounded by a vast array of technologies, therefore, a high-quality computing education is provided to equip pupils to understand and change the world through logical thinking and creativity, including by making links with mathematics, science, and design and technology. The core of computing is computer science, in which pupils are taught the principles of information and computation, and how digital systems work. Computing equips pupils to use information technology to create programs, systems and a range of media. It 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. Laptops, iPads and programmable robots (BeeBots) are a few of the tools that can be used to acquire, organise, store, manipulate, interpret, communicate and present information. At Trinity St Peter's Primary School, we recognise that pupils are entitled to quality hardware and software and a structured and progressive approach to the learning of the skills needed to enable them to use it effectively.

Aims

The national curriculum for computing 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.

Teaching and Learning

ICT has great flexibility to be used across the curriculum. Computing challenges children's thinking skills supports the school value of imagination – creating new possibilities and endless solutions – and promotes resilience in their learning as children encounter endless new learning experiences.

When teaching the computing curriculum, teachers plan activities where the children can work individually, with partners or as part of a small group; just as programming and information technology happens in the 'real world'. Where possible, learning is linked to pupil's own interest, other curriculum areas or their interests beyond school.

The audience for pupils work is always to be considered; whether they're presenting to one another, writing for a blog, creating software or digital content or planning to upload their work for others to use via a programme such as Scratch. There will be a focus during lessons on correct use of terminology and definitions of STAR words, as vocabulary is at the heart of our curriculum.

Planning

As the school develops its resources and expertise to deliver the ICT and computing curriculum, modules are planned in line with the national curriculum and allow for clear progression. The staff follow the Knowsley scheme of work which is used throughout the school to support teachers, ensuring full curriculum coverage.

Staff will include ICT within lessons where possible following on with the teaching of specific skills. A minority of children may have particular teaching and learning requirements that go beyond the provision for their age range and to ensure engagement and challenge, teachers must take account of these requirements and plan, where necessary, to support individuals or groups of pupils where appropriate.

In Early Years and Key Stage 1, Bee-Bots and iPads are used to teach computing, however, in Key Stage 2 laptops/chrome books are also used and pupils in Years 3, 4, 5 and 6 have their own iPads which they can use throughout the day. This means that children are able to constantly develop their computing skills across the curriculum and not just in Computing lessons. This ensures there is full coverage of the Computing curriculum. Children are encouraged to use digital media to enhance their learning and we have recently developed our digital media resources this academic year. The use of iPads encourages the children to work independently, pairs and in small groups. The iPads are used to photograph, video, research as well as support other curriculum areas through the use of relevant Apps. The pupils are assessed each term using Knowsley City Council assessment tool.

Through theme related learning, the children have the opportunities to develop computing skills throughout Key Stages 1 and 2, with links being made to current studied themes and units of work when relevant.

EYFS:

There is no statutory guidance for Early Years. However, it is important to give children a broad, play-based experience of IT and computing in a range of contexts, including off-computer activities and outdoor play. Computing is not just about computers. Early years learning environments should feature IT scenarios based on experience in the real world, such as in role play. Children gain confidence, control and language skills through opportunities such as 'programming' each other using directional language to find toys/objects, creating artwork using digital drawing tools and controlling programmable toys.

By the end of Key Stage 1 pupils are taught to:

Understand what algorithms are, how they are implemented as programs on digital devices, and that programs execute by following a sequence of instructions

write and test simple programs

Use logical reasoning to predict and computing the behaviour of simple programs

Organise, store, manipulate and retrieve data in a range of digital formats

Communicate safely and respectfully online, keeping personal information private, and recognise common uses of information technology beyond school.

By the end of Key Stage 2 pupils are taught to:

Design and write 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; generate appropriate inputs and predicted outputs to test programs

Use logical reasoning to explain how a simple algorithm works 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

Describe how internet search engines find and store data; use search engines effectively; be discerning in evaluating digital content; respect individuals and intellectual property; use technology responsibly, securely and safely

Select, use and combine a variety of software (including internet services) on a range of digital devices to accomplish given goals, including collecting, analysing, evaluating and presenting data and information.

Assessment

The pupils in Nursey and Reception are assessed using specific area checkpoints, these assessments take place termly.

In Key Stages 1 and 2 teachers assess children against the Computing National Curriculum expectations using Knowsley City Council Assessment tool. This provides data for assessment for each unit taught, which enables individual children to be tracked to monitor progress and identify any appropriate support.

Children are assessed as: ‘working towards the expected standard’, ‘working at the expected standard’ or ‘working at a greater depth within the expected standard.’

Online Safety

This policy should be read in line with the school's safeguarding & Online Safety policy.

Global Citizenship

We wish to provide our pupils with the information and skills needed to become aware of the links between the local and the global and enable them to become 'caring global citizens of the world' as stated in our school vision statement. This will involve challenging and supporting all our pupils to become critical thinkers, to develop independent learning skills and to learn about their rights and accept responsibilities. Global Citizenship is assessed by the Subject Leader and Assistant Headteacher using the Oxfam progression grid, in line with the Global Citizenship policy. Global Citizen enriches the Computing Curriculum by enabling pupils to:

- Develop computational thinking, applications and creativity to understand and solve real-world problems.
- Use real-world data on global issues for data logging, data handling, data modelling and control.
- Consider impacts of ICT on individuals, communities and society, including the social, economic and ethical implications of access to and use of ICT (for example, impacts on globalisation, poverty, inequality, democracy, diversity and conflict)
- Develop critical thinking and online media literacy.

Staff also raise awareness of valid and up to date curriculum links, as well as national events relating to Computing. Such examples include:

- Computer Science Week – Hour of Code
- Safer Internet Day

Spirituality

Spiritual education provides opportunities for reflection of awe and wonder about the achievements of ICT today and possibilities for the future. Pupils have the opportunity to reflect on issues – such as how computers can sometimes perform better in certain activities than people. Pupils' spiritual development, their sense of self and will to achieve is promoted by teachers praising their contributions and endeavour.
The Children:

- Reflect on their own and others' lives and the impact computer science has on this.
- Discuss the power and limitations that computing can have – particularly on individual's beliefs.
- Develop self-esteem through the presentation of work to others.
- Explore how ideas in computing have inspired others.
- Experiment with and trust their own beliefs and ideas.

Monitoring and review

The coordination and planning of the computing curriculum are the responsibility of the subject leader, who also:

Supports colleagues in their teaching, by keeping informed about current developments in computing and by providing a strategic lead and direction for this subject;

Evaluates the strengths and weaknesses in Computing and indicates areas for further improvement and;

Reviews the policy every 2 years to ensure that it complies with the latest legislation, guidance and best practice.

Revised and adopted by Governing Body - Spring 2024