Holy Trinity Church of England Primary School

To be the best we can be: for God, for others and for ourselves

Computing Policy

Policy to be reviewed as necessary within 3 years

Subject leader: B HILL

Agreed by Governors

Summer 2020

Due for review

Summer 2023

Our curriculum intent statement below forms the basis of all our curriculum planning so that children's learning is firmly rooted in everything they need to flourish academically, personally and spiritually.

At Holy Trinity Church of England Primary School, every child is recognised as a unique individual. We celebrate and welcome differences within our diverse school community, encouraging all to grow and flourish as precious children of God. Learning is centred around experiencing the joy of discovery. The ability to learn is underpinned by the teaching of basic skills, knowledge, concepts and values, with a vision to prepare our children to be life-long learners, rooted in our school motto: To be the best we can be: For God, for others and for ourselves.

Christian Values

Love	Hope	Forgiveness	Trust	Peace	Reverence	Justice

Purpose and Aims of Computing

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.

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

Organisation of Teaching

The computing curriculum is carefully and coherently sequenced to enable our children to develop a growing knowledge of the themes outlined above. Pupils' knowledge builds towards clearly defined end points so teachers and leaders know what we expect our pupils to achieve by the end of each topic, each year and each key stage. *To meet the educational needs of our school community we have selected the following core knowledge concepts as a focus for our teaching. These are explored in increasing depth as pupils move through the school.*

- *Computer Science*
- *Information Technology*
- *Digital Literacy*

Computing is taught as a discrete subject, though meaningful links are made with other subjects in our curriculum *(such as creating digital storybooks written in literacy lessons).* The topics we teach are outlined in the curriculum map for computing (see Appendix 1). This is published on our website.

To support the high quality knowledge rich teaching lessons we aim for, the school subscribes to 'Purple Mash' teaching scheme. All teaching materials are adapted to meet the requirements of our Christian vision and curriculum intent.

Knowledge Organisers

Every topic has a knowledge organiser. This outlines the core knowledge taught within the topic, how many hours of teaching time allocated to the topic and the key vocabulary pupils are expected to understand and use. It also includes key learning and resources, as well as which Internet safety units will be taught. Pupils have a copy of the knowledge organiser in the class scrapbook and these are used to help pupils remember the key concepts. Knowledge organisers may also be taken home to support learning. All knowledge organisers can be seen on the relevant class pages of our website.

Teaching Time

Computing is allocated the following time on our weekly timetables. Timetables are published on our website every half term.

Early Years Foundation Stage: 1 hour a week

Key Stage 1: 1 hour a week

Key Stage 2: 1 hour a week

The Teaching of Computing (Implementation)

Teachers use a range of teaching strategies that best support the objectives of the lesson. The following list shows the most common methods of effective teaching related to computing

- teacher instruction, explanation and modelling using resources such as the interactive whiteboard, online programmes and texts
- pupil discussion, investigation and problem solving
- regular review of previous learning or linked topics to enable pupils to remember key concepts. This may involve quizzes or other games to help embed knowledge and vocabulary

Resources

Teachers use the following schemes of work to support the teaching of computing:

- Purple Mash
- Twinkl
- CEOP

Recording Learning

In computing, pupils record their learning in the following ways

- class scrapbooks

Meeting The Needs of All Pupils

All pupils are entitled to a broad and balanced curriculum that meets their needs. Computing is taught in class groups with all pupils included. All our teachers know the pupils in their class and their differing needs very well. They plan and adapt lessons to help all pupils know and remember more so they make very good progress.

Some pupils, including those with special educational needs or disabilities, or those with English an as additional language, may need extra support to access, understand and remember key concepts. For these pupils, teachers use a range of effective strategies, whilst promoting independent learning as far as possible. These may include:

- adapting and scaffolding pupil activities and resources
- focussed additional support from an adult in class

Some pupils very quickly grasp the main concepts being taught and are able to think more deeply to extend their learning. To ensure they reach their full potential, teachers may:

- set more complex activities that require thinking at greater depth
- ask pupils to apply their knowledge to a different situation

Homework

Homework is not usually given in computing but children are encouraged to use their Purple Mash logins on home devices to access activities and computing games.

High Quality Teaching and Subject Knowledge

To ensure the highest quality teaching and make sure teachers have the subject knowledge they need to meet the requirements of teaching computing in their class, teachers (and teaching assistants) receive a range of guidance and support, including:

- face to face and online training
- latest research and guidance in the best ways of teaching computing
- mutual support and discussion with colleagues, including joint planning, team teaching and paired marking

    In addition, the subject leader for computing stays up to date with developments in the subject through leadership training and support from other subject leaders locally and within the LDST.

Assessment (Evaluating The Impact of Teaching)

Teachers constantly assess how far their pupils understand the key concepts they are teaching throughout lessons, mainly through questioning and observation. Quizzes and other games are regularly used to assess how far pupils have remembered learning from the lessons before. Teachers then adapt their teaching to ensure misconceptions or gaps in knowledge are addressed. In addition, they may need to introduce opportunities for more challenge or deeper thinking.

End of Unit Assessments

At the end of every topic teachers assess how far each pupil has understood the knowledge and skills involved. Pupils are assessed overall as either working towards the topic's objectives, meeting the topic's objectives or meeting the topic's objectives at greater depth. This is recorded on a topic assessment sheet in the class scrapbook.

End of Term Assessments

At the end of every term, teachers evaluate the achievement of each child in their class in computing. They record this on a school data base. This helps teachers plan and adapt future lessons. The subject leader collates and analyses assessment data across the school. They pick out trends, strengths and weaknesses across the school and for different classes and groups. This information is shared with senior leaders and governors. All subjects have an action plan and a budget. Analysing pupil achievement helps

the subject leader plan for improvements in the subject. This may take the form of targeted training, staff discussion and problem solving to improve an aspect of the curriculum. If analysis shows a particular group of children are underachieving, for example disadvantaged children, further measures are agreed and put in place to address this gap.

End of Year Assessments and Reporting To Parents

End of term assessments are pulled together at the end of each academic year to evaluate each pupils' overall attainment in computing. A child's attainment in computing is reported to parents through the end of year reports. For pupils in Y1 to Y6 a child's attainment is reported in the following way.

- wts   working towards end of year expectations
- exs   meeting end of year expectations
- gds   meeting end of year expectations at greater depth.

  In Reception class computing comes under the 'Understanding The World' area of learning. Each child in Reception is assessed as emerging, expected or exceeding the early learning goals in that area.

An INSET day is allocated towards the beginning of July where class teachers 'handover' their class to the next teacher. They discuss pupil achievement across the curriculum and ways future teaching should be adapted to meet the differing needs of the class.

Monitoring and Evaluation

The subject leader for computing monitors teaching and learning regularly in accordance with the school's monitoring timetable. At set times during the year the subject leader evaluates the quality of teaching in computing through:

- learning walks and drop ins, usually with a member of the senior leadership team, and sometimes with a governor.
- book looks. The subject leader looks at scrapbooks or other evidence across the school, sometimes with senior leaders or an adviser / officer from the LDST or a governor.
- pupil conferencing
- surveys for pupils and/ or staff
- more formal lesson observations (with a member of the senior leadership team).

Subject leaders have regular support meetings with the senior leadership team where aspects of the subject policy and action plan are monitored and discussed. Resulting actions may emerge with additional leadership support, resources or policy changes implemented. Subject leaders routinely have a teacher appraisal objective linked to an aspect of their subject leadership.

Following all these activities, strengths and areas for development are reported and discussed with staff. Resulting actions are recorded on the subject action plan and reported to governors. At the end of each year the action plan for computing is fully evaluated and published. In addition, the subject leader evaluates how far computing is

meeting our curriculum intent statement. This evaluation feeds into the action plan for the following year. Evaluated action plans and evaluations are reported to the senior leadership team and governors.

Role of Governors (from September 2020)

Every aspect within the school improvement plan has an allocated pair or small group of governors. This pair of governors evaluates the activities within this aspect and the impact on the quality of education and pupil outcomes. They meet with subject leaders on a termly basis and review aspects of the subject, including seeing lessons in practice and talking to children. Their findings are reported to the Local Governing Board. In this way, leaders are held accountable for the aspects they are responsible for and subject leaders are able to access the appropriate support and resources to achieve their aims.

Appendix 1: Curriculum Map for Computing

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Reception	Mouse Control Selecting & Moving	Mouse Control & Logging Off	Logging On	Programmable Toys-BeeBot	Exploring ICT for different purposes	Programmable Toys-BeeBot
Year 1	Coding		Animated Story Books		Lego Builders	Technology Outside School
Year 2	Coding		Spreadsheets		Effective Searching	
Year 3	Coding		Email		Branching Databases	
Year 4	Coding		Online Safety		Effective Searching	
Year 5	Coding		Game Creator		Modelling	
Year 6	Coding		Blogging		Online Safety	Networks