Computing at St Bartholomew's CE (VC) Primary School

"If we teach today as we taught yesterday, we rob our children of tomorrow"

John Devey

With technology being at the forefront of today's **ever-changing world**, it is important that Computing is embraced and pupils can access a rich, broad, and balanced computing curriculum.

At St Bartholomew's Primary School, we aim to ensure every child can enjoy and succeed in computing, by providing a creative and engaging curriculum which highlights the real-life application of technology in ways relevant to pupils. Our ambitious curriculum is designed to develop **resilience**, **persistence**, and **confidence** in our pupils computing abilities, real life skills than can be transferable to the **ever-evolving challenges of life.** We believe that mastery in computing is the acquisition of a deep, long-term, secure, and adaptable understanding of the subject. This is demonstrated by how skilfully pupils can apply their learning in computing to new situations in unfamiliar contexts. All pupils are encouraged to **believe in their ability to master computing** and are empowered **to succeed through curiosity, tinkering** and **perseverance**.

The teaching of Computing follows three main strands;

- Computer Science
- Information technology
- Digital literacy.

Computer science is taught as a discrete subject and progressively teaches the scientific and practical study of computation; what can be computed, how to compute it, and how computation may be applied to the solution of problems. Computational thinking is a thought process. It is identifying a problem and expressing solutions.
The progression within this strand is to explore in an 'unplugged' scenario that is tangible, move onto using concrete resources to practise the skills and finally to apply the learning to create something more purposely and independently.

Information technology is integrated within all subjects and allows the children to use a variety of software and devices for purpose. They will learn how computers and telecommunications equipment work, and how they may be applied to the storage, retrieval, transmission and manipulation of data.

Digital literacy is taught discretely and reinforced in all subjects. It is the ability to effectively, responsibly, safely and critically navigate, evaluate and create digital artefacts using a range of digital technologies.

Children's online activity and behaviour will be different both within and across the age ranges. The following eight units will be taught flexibly in order to support learning that is relevant to the children's' online behaviour and experiences and matched to their readiness for new learning. The eight units are as follows; **self-image and identity, online relationships, online reputation, online bullying, managing online information, health, well-being and lifestyle, privacy and security, copyright and ownership.**

The Computing curriculum at St Bartholomew's Primary School will allow children the opportunity to become active participants in creating content with purpose rather than being passive receivers. It

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will encourage the children to question and challenge themselves and provide space for them to positively express who they are and how they want their voice to be heard.

E-Safety

At St Bartholomew's CE (VC) Primary we weave e-safety continuously through our delivery of computing ensuring that all the stands of e-safety are provided.

Early Years Foundation Stage

At St Bartholomew's Primary School, the children will explore, discuss and recognise that a range of technology is used in places such as homes and schools. They will interact and tinker with age appropriate computer software and develop their fine motor skills whilst doing so. In their role play areas they can use technology and understand its purpose. In guided practise, they will be able to explore how the keyboard and mouse works. Through computer science they will develop their communication and language skills by learning to follow and give precise, unambiguous instructions. Both through physical movement and drawing shapes. It is a fantastic way for the children to develop their speaking and listening skills with their peers.

Key Stage 1

In Key Stage 1 skills are further developed. Building on from EYFS knowledge of precise instructions they will learn supporting computing vocabulary as well as use pictorial code. They will begin to write their own simple algorithms like getting ready for school and making a sandwich. When designing simple programmes children will have a growing awareness of needing to be precise with their algorithms so that they can be successfully converted into code. Beebots will feature heavily to allow children tinkering and purposeful application in computer science. They will begin to evaluate and fix errors, which supports our promotion of a growth mind-set for all children.

Children will continue to identify a variety of examples both in and out of school and understand what is meant by technology. This will lead into discussions about the difference between objects that use modern technology and those that do not. Children will learn about the importance of staying safe online and develop ways of doing this.

Key Stage 2

Building on KS1 knowledge of computer science and information technology children will demonstrate the ability to design and code a program that follows a simple sequence. Children demonstrate the ability to design and code a program with increasing difficulty and they will make more intuitive attempts to debug their own programmes. Scratch and other online platforms will be used to support their learning and apply their skills.

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Through other subjects across the curriculum they will make informed software choices when presenting information and data. Using technology collaboratively is an important part of using technology and will support them in their future beyond school. They will begin to share digital content with others and apply skills in Microsoft Word to create purposeful documents. Children will explore different software through creating stop animations, vlogs, coding, programing and exploring algorithms.

Children will have a greater understanding of the internet and how to challenge information presented to them. They will explore and discuss topics like fake news, online identity and staying safe online with deeper questioning.

Impact

As children progress through St Bartholomew's Primary School they develop a deep knowledge, understanding and appreciation for how they use technology. They have the skills to independently question their reasoning for using technology and how they can use it safely and purposefully. They are able to challenge, question and solve problems presented to them with resilience and perseverance.