Computing at Surrey Hills All Saints

Intent, Implementation and Impact

Intent

In line with the 2014 National Curriculum for Computing, our aim is to provide a high-quality, inclusive computing education which allows children to use software and computational thinking to understand and thrive in an ever changing technological world.

Children's curiosity is nurtured through the curriculum, it teaches children key knowledge about how computers and computer systems work, and how they are designed and programmed. Learners will have the opportunity to gain an understanding of computational systems of all kinds, whether or not they include computers, by immersing themselves with a variety of software and hardware.

By the time pupils leave Surrey Hills All Saints, they will have gained key knowledge and skills in the four main areas of the computing curriculum: computer science (programming and understanding how digital systems work), computational thinking (solving problems through decomposition, pattern recognition, abstraction and algorithms) information technology (using computer systems to store, retrieve and send information) and digital literacy (evaluating digital content and using technology safely and respectfully). The objectives within each strand support the development of learning across the key stages, ensuring a solid grounding for love of learning and beyond.

Implementation

The teaching of skills

At Surrey Hills All Saints we follow the Kapow scheme of learning to help support the planning of teaching Computing skills. Kapow Primary's Computing scheme is an accessible, yet challenging scheme of work for primary computing. Covering all the national curriculum requirements and more, children will become confident in their use of computers as well as learning to understand and generate algorithms and code. Online safety is an important part of the scheme. Children focus on a topic each half term where they get to explore different software, practise and develop their skills in using it and then create their work using it.

Resources

In KS1, Beebots and Roamers are used to develop children's knowledge and practise of inputting algorithms as well as debugging any problems that may arise from it. In KS2, the Resource Centre ensures that whole classes have access to the software provided through individual laptops. As well as internet access, all software required for different topics can be easily accessed. Both key stages also have access to tablets and notebooks to support computing within the classroom or out and about.

The application of skills

The Kapow primary computing scheme aims to instil a sense of enjoyment around using technology and to develop pupil's appreciation of its capabilities and the opportunities technology offers to, create, manage, organise, and collaborate. Tinkering with software and programs forms a part of the ethos of the scheme as we want to develop pupils' confidence when encountering new technology, which is a vital skill in the ever evolving and changing landscape of technology. Through the curriculum, we aim for pupils to not only be digitally competent and have a range of transferable skills, but also to be responsible online citizens.

Assessment

The impact of the computining scheme is constantly monitored through both formative and summative assessment opportunities. Within lessons teachers can make formative assessments in a variety of ways, such as: informal judgements, ticking formal checklists (which includes next steps), providing verbal feedback to children or by having

pupils assessing their peers. At the end of each unit of work is a unit quiz that is used to assess pupils. All computing work is stored either in children's work files on the school's network or within secure online learning platforms.

Cross Curricular Links

A core aspect of our teaching 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. Computational thinking, breaking down a problem into smaller parts and thinking logically, is also a key skill taught, not only to help with debugging Computing work but also to solve problems faced in other lessons. We aim to make explicit links to maths, science and design and technology.

Online Safety

In regard to online safety, GDPR plays an important role in allowing children to recognise what information is personal to them and who and when it is safe to share it. To do this effectively, children must have a clear understanding of the meaning of personal information and recognise their own responsibility in safeguarding this. Children are be taught about their digital footprint and where to seek support and advice should they need it. We believe a strong understanding of these aspects enable children to access modern technologies and communicate effectively whilst developing an ever-increasing understanding of how to keep themselves safe from evolving dangers in the digital world.

Events

In February, Safer Internet Day takes place in order to raise awareness within school about the potential dangers in using the internet and mobile technologies. Through discussion and activities, it advises pupils on ways in which to reduce risk. However, this is an ongoing focus within our curriculum, newsletters and social media.

Impact

At the end of each year, pupils have developed their computing skills, and have gained a new or developed understanding of online safety issues and how to keep themselves safe online.

Pupil Voice

Through discussion and feedback, children talk enthusiastically about their computing lessons. Across the year groups, pupils can clearly explain about the potential risks of being online, and can suggest ways they and others can keep safe.

Evidence in knowledge

Pupils know how and why technology is used within school as well as in the outside world. They know about different ways that computers can be used and how they can be set up to do so, such as part of a local network or how they connect to other computers/servers using the internet.

Evidence in skills

Pupils use acquired vocabulary in computing. They have the skills to use technology independently, for example accessing age-appropriate software and using a range of computer software independently in KS1 and KS2. Through computational thinking they also show the ability to break a problem down and attempt to correct a bug within their work.