Birches First School
Believe, Grow, Succeed

Computing

Intent

In line with the 2014 National Curriculum for Computing, our aim is to provide a high-quality Computing education which equips children to use computational thinking and creativity to understand and change the world. The curriculum will teach children key knowledge about how computers and computer systems work, how they are designed and programmed and how technological developments contribute to society.

By the time they leave Birches First, children will have gained key knowledge and skills in the three main areas of the Computing curriculum: computer science (programming and understanding how digital systems work), 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 future learning and beyond. Children leave Birches First School confident and competent to use their skills to further their learning and widen their opportunities. They know the importance of Online Safety to themselves and others and how to keep themselves safe.

Implementation

At Birches First, Computing is taught using a blocked curriculum approach. This ensures children are able to develop depth in their knowledge and skills over the duration of each of their Computing topics. Teachers use the 'Purple Mash' Computing scheme, published by 2simple, as a starting point for the planning of their Computing lessons, which are often richly linked to engaging contexts in other subjects and topics. We have a laptop trolley to ensure that Computing is embedded in classroom life. Class sets of iPads are used to ensure that all year groups have the opportunity to use a range of devices and programs for many purposes across the wider curriculum, as well as in discrete Computing lessons. Employing cross-curricular links motivates pupils and supports them to make connections and remember the steps they have been taught.

The implementation of the curriculum also ensures a balanced coverage of computer science, information technology and digital literacy. The children will have experiences of all three strands in each year group, but the subject knowledge imparted becomes increasingly specific and in depth, with more complex skills being taught, thus ensuring that learning is built upon. For example, children in Key Stage 1 learn what algorithms are, which leads them to the design stage of programming in Key

Stage 2, where they design, write and debug programs, explaining the thinking behind their algorithms.

The quality of children's learning is evident on the children's online creative space within Purple Mash, a platform where pupils can share and evaluate their own work, as well as that of their peers. Evidence such as this is used to feed into teachers' future planning, and as a topic-based approach continues to be developed, teachers are able to revisit misconceptions and knowledge gaps in Computing when teaching other curriculum areas. This supports varied paces of learning and ensures all pupils make good progress.

Much of the subject-specific knowledge developed in our Computing lessons equip pupils with experiences which will benefit them at Middle School, further education and future workplaces. From research methods, use of presentation and creative tools and critical thinking, Computing at Birches First gives children the building blocks that enable them to pursue a wide range of interests and vocations in the next stage of their lives.

Children are assessed using the Purple Mash assessment tool which assesses each learner against National Curriculum objectives. The outcome of these assessments are used to judge a child's attainment at the end of a unit and at the end of the year as well as informing next steps and future planning.

Computing, British Values and SMSC

British Values – Pupils consider the different ways technology can be both used and develop an understanding that there are positive and negative uses. They also begin to consider the consequences and impact of this. They will explore how technology enables us to express our views positively, whilst also developing tolerance and respect for the opinions and viewpoints of others. Technology will enable them to broaden their horizons and develop a better understanding of the diverse world they live in.

SMSC – Pupils are encouraged to ask meaningful questions to extend their understanding about how technology works and the world they live within; to use and apply their learning purposefully and creatively; reflect on the impact of technology in the wider world, and how technology can be used to explore beliefs and new experiences. Pupils will explore different concepts of right and wrong when using technology and how to use technology safely, respectfully and lawfully. Pupils will use technology to effectively communicate and collaborate with others, whilst appreciating the diverse views of others.

Impact

Our approach to the curriculum results in a fun, engaging, and high-quality Computing education.

It is evident through discussion with the children and in their Computing books where necessary or appropriate that children are engaged with their learning.

Children demonstrate their skills confidently and competently.

Children have a secure understanding of the importance of staying safe online and how to do so. This is evidenced through Pupil Voice/discussions, Online Safety committee and number of recorded online safety incidents in school.

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