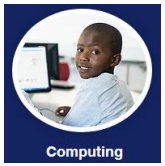
Individually Strong, Collectively Stronger!



Computing

Intent:

At Allen Edwards, staff aim to provide a high-quality computing education, which equips children to use computational thinking and creativity to understand and change the world. We acknowledge that the children we teach today will rely heavily on computational confidence and digital skills in order to access chosen career paths. Central to our curriculum is ensuring children understand the importance of a safe space where they can navigate and interact with the digital world, while also developing core knowledge about what they should do if they feel unsafe online. In line with the National Curriculum, we teach children key knowledge about how computers and computer systems work and how they are designed and programmed. Staff recognise the importance of equipping children with the relevant skills and knowledge that is required to understand the three core areas of Computing - computer science, information technology and digital literacy and ensuring a solid grounding for their future learning and beyond. Computing is taught using the scheme Strictly Education 3BM, which has been designed to help primary schools raise pupils' standards in Computing and ensure pupils are working at high-quality, age-appropriate levels. The scheme is regularly reviewed, improved and updated to meet changes in school technologies and curriculum content.

Impact:

By the end of each Key Stage, pupils are expected to know, apply and understand the matters, skills and processes specified in the curriculum. When pupils leave Allen Edwards, they are secondary ready, having learnt the necessary knowledge and skills through their practical, hands-on experiences using standard software and devices, such as Chromebooks and Google Classroom. Children are enthusiastic about computing and confident in the core skills of computing. They are able to think creatively to solve problems they encounter and know how to keep themselves safe online.

Implementation:

We implement computing in a range of ways across school. Teachers focus on building on previous knowledge and previous lessons to embed and deepen knowledge across the three strands of computing: 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). Learning contexts are meaningful within computing lessons - allowing children to clearly see the computing through real-life contexts and its place in an increasingly technological world.

Through clear modelling processes and extended opportunities to practise within lessons, teachers ensure pupils have a clear understanding of the learning and are able to define and use vocabulary appropriately. Explanations are clear and concise and are often broken down into smaller, more manageable steps for pupils to be successful. Because of this clear development of knowledge and understanding, children are engaged and enthusiastic about computing with a motivation to try new and different processes and practises out for themselves. This self-exploration, in a safe and stimulating environment, is supported further by a range of different resources to support or extend pupils, the development of pace for different groups of children, adjustments to tasks and through the support of additional adults to facilitate learning.

Teacher questioning enables clarity and consistency of understanding in the acquisition of knowledge. Open and closed questions are used to systematically check understanding, extend thinking and develop conceptual ideas that motivate children to make further changes to refine their projects. Adaptive questioning allows all children to develop their knowledge of computing and prompts discussions amongst peers to allow children to learn from one another in a safe space. Misconceptions are clearly outlined and planned for and addressed in lessons. Questioning forms one aspect of how knowledge is understood by the teacher and acted upon within the lesson to ensure security of content. For those working outside of their year group for computing, differentiated learning is used to ensure they are able to make progress from their starting points within all strands of computing.

Alongside teacher support, children are encouraged to collaboratively with one another to understand the three different computing strands and reach an end goal an outcome. This allows for support networks during computing lessons to be wider as well as developing opportunities for those who are work at a more-able level to ensure their explanations are clear and modelling uses their own device – so that pupils can then try and apply their new understanding on their own device. The curriculum is delivered to provide opportunities for pupils to work collaboratively with their peers - through the use of Google Drive and Google Classroom. Pupils are also afforded many opportunities for practical, hands-on experiences with a wide range of computing resources, such as: Busy Things, Bee Bots, Microbits, Stop Frame Animation, JiT5, J2Code and Scratch.

Children learn through a range of computing topics and units across each year group. This allows children to apply their knowledge of key concepts across multiple units or topics and building independence each year. In each year group, children are provided with a number of opportunities to tackle real-life problems when they arise and discuss with their peers or an adult to consolidate understanding. Verbal feedback is given in all lessons to further develop discussion, support learning and to provide opportunities to extend learning when secure.

Knowledge of online safety procedures and processes is prioritised across the school to ensure that all children recognise and understand how to keep themselves safe online. This links to PSHE allowing for cross-curricular learning to embed safety knowledge. The important role of parents is recognised and information is shared with parents using Class Dojo. Parents are kept informed about online material that their child maybe accessing at home and the dangers that could be associated with that application or game. Support is given to parents, through half termly workshops, to help them in understanding how to keep their children safe at home online.