

INTENT

At Valewood, we aim to provide a high-quality computing education that equips pupils to use computational thinking and creativity to understand and change the world. Our computing curriculum provides deep links with different subjects across the curriculum and provides insights into both natural and artificial systems.

In Reception, our children find out about and use a range of everyday technology. They use the interactive whiteboard to support learning songs and playing interactive games. Children learn to use technology for different purposes, for example the computer to research and the iPad to take photographs of models that they have made and work that they are celebrating.

In key stage 1, our children are taught to understand what algorithms are and how they are implemented as programs on digital devices. They learn to execute precise and unambiguous instructions, which enables them to create and debug simple programs. They use logical reasoning to predict the behaviour of a simple program and learn how to use technology purposefully to create, organise, store, manipulate and retrieve digital content. This helps them to recognise the common uses of information technology beyond our school.

In key stage 2, our children use their understanding of algorithms to design, write and debug programs that accomplish specific goals. The children learn how to use sequence, selection, and repetition in programs, work with variables, such as timers, and use various forms of input and output controls. They use decomposition and logical reasoning skills to explain how some simple algorithms work and to detect and correct errors in algorithms and programs. They learn about computer networks, such as the internet, and how this provides multiple services and creates opportunities for communication and collaboration. They learn how to use search technologies effectively, appreciating how results are selected and ranked, and are discerning in evaluating digital content. They can also select, use and combine a variety of software - on a range of digital devices - to design and create a range of programs, systems and content that accomplishes given goals.

Throughout their time at Valewood, our children learn how to use technology safely, respectfully and responsibly, recognising what acceptable and unacceptable behaviour looks like. They also identify where to go for help and support when they have any concerns about content or contact on the internet and they understand the importance of keeping their personal information private.

IMPLEMENTATION

1. Computing will be taught in blocks by the class teacher each half-term. This is through a mixture of paper-based and digital lessons.
2. Planning involves teachers creating engaging lessons that follow the computing progression from the whole-school curriculum map.
3. Teachers plan to use effective questioning in lessons to provide discussion and further the children's learning.
4. Learning is always built on from the previous year group to make sure progress is consistent. As the children's knowledge and understanding increases, they become more proficient in suggesting ways to improve their computing work and overcome problems.
5. Digital literacy is embedded into every computing lessons to ensure the children become confident in using their computing skills, both in school and at home.
6. Extra-curricular computing clubs and activities are available, both teacher and student led.

IMPACT

Computing learning and progress is monitored by the computing subject leader half-termly and our Digital Leadership Team meet termly to discuss ways to improve computing in our school. Our computing curriculum ensures that all of the children in our school become competent in using a variety of digital devices and use them in purposeful ways. They leave our school with an understanding of how to use technology safely, respectfully and responsibly, recognise acceptable/unacceptable behaviour and identify a range of ways to report concerns about content or contact.

By the time they leave for high school, our children learn how to code and debug algorithms, before applying these skills to different activities and real-life situations. They understand how networks work and how they can use share and receive information purposefully for their learning. They also develop a solid understanding of the need to be responsible when sharing information across a network; this is developed through the importance placed on weaving digital literacy skills throughout each computing lesson, which enables our children to be competent and confident when using digital devices.

To ensure computing knowledge is revised and transferred to the long-term memory year on year, teachers plan their lessons following our whole school progression map, which includes the key skills, knowledge and understanding and vocabulary that the children need to succeed. We prepare our children for the next stage of their education and they leave our school with the knowledge and confidence needed to use computing in their everyday lives.