Sir John Offley C.E. (CV) Primary School
'With God, all things are possible'

Computing - The Intent, implementation and Impact of our Curriculum

"Alan Turing gave us a mathematical model of digital computing that has completely withstood the test of time. He gave us a very, very clear description that was truly prophetic."
George Dyson

Intent

At Sir John Offley C.E. (VC) Primary School, we believe that planning and teaching computing is an essential part of the curriculum; a subject that not only stands alone but is woven and should be an integral part of all learning. Computing, in general, is a significant part of everyone's daily life and children should be at the forefront of new technology, with a thirst for learning what is out there. Computing within schools can therefore provide a wealth of learning opportunities and transferrable skills explicitly within the Computing lesson and across other curriculum subjects.
Through the study of Computing, children will be able to develop a wide scope of knowledge, a range of fundamental skills and an understanding that will actually equip them for the rest of their life. Computers and technology are such a ubiquitous and essential part of everyday life that our children would be at a disadvantage would they not be exposed to a thorough and robust Computing curriculum. Children must be taught in the art form of 'Computational Thinking' in order to provide them essential knowledge that will enable them to participate effectively and safely in the digital world beyond our gates.

Implementation

As a school, we have made sure that we have an engaging, enjoyable, informative and challenging computing curriculum in which pupils can explore and enhance their knowledge in a creative way. This has been achieved is and made available to teachers and pupils through Purple Mash by 2Simple. This gives teachers access to thorough planning in a variety of computing topics, along with the accompanying resources and programs that pupils need to take part in high-quality computing lessons.
Through our curriculum, children will be immersed in the three categories of substantive computing knowledge – computer science, information technology and digital literacy. The computing curriculum at Sir John Offley is progressive, with children building on their knowledge and developing their skills as they move through each school year.
In EYFS, pupils will develop their computing knowledge and skills through learning how computers can be useful at home and at school. Pupils will be exposed to the understanding of internet safety as they explore the world around them and how technology is an everyday part of their learning and understanding of the world. Children will also begin to understand computing as an instruction process. They will use instructions, sequencing and repetition when completing tasks, which will give a strong base of knowledge for computing.
In Key Stage 1, the children will learn to understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions. They will be taught to create and debug simple programs and use logical reasoning to predict the behaviour of simple programs. They will be shown how to use a range of technology purposefully to create, organise, store, manipulate and retrieve digital content as well as recognise common uses of information

technology beyond school. They will be taught to use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies. Each of these skills will be taught through exciting half termly units.
In Key Stage 2 the children will design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts. They will use sequence, selection, and repetition in programs, use logical reasoning to explain how some simple algorithms work and correct errors in algorithms and programs. Children will be taught to understand computer networks, including the internet, and the opportunities they offer for communication and collaboration. They will use search technologies effectively, learn to appreciate how results are selected and ranked, and be discerning in evaluating digital content. Children will be taught to select, use and combine a variety of software (including internet services) on a range of digital devices to create a range of programs, systems and content that accomplish given goals. They will use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.
All computing topics have accompanying knowledge organisers (including vocabulary lists) which outline the key knowledge that we want children to learn and help to support teachers' during teaching.
At the end of each topic, teachers will also complete a computing assessment where they will record the pupils that are developing, expected or greater depth in each subject, which will then be passed to the computing subject leader.

Impact

After the implementation of this robust computing curriculum, the impact is that children will be digitally literate and able to join the rest of the world on its digital platform. They will be equipped, not only with the skills and knowledge to use technology effectively and for their own benefit, but more importantly – safely. The biggest impact we want on our children is that they understand the consequences of using the internet and that they are also aware of how to keep themselves safe online.
As children become more confident in their abilities in Computing, they will become more independent and key life skills such as problem-solving, logical thinking and self-evaluation become second nature.
We will measure the impact of the computing curriculum through a celebration of learning in assemblies (demonstrating progression across the school) and through pupil discussions about their learning.