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| **Computing at Heathcoat Primary School** |

**Intent**

Through the teaching of Computing, we aim to provide:

* children with an environment where they can use their computational thinking and digital literacy to understand the digital world they live in and use it to enrich their lives in a positive way to achieve a greater depth of knowledge in how technology can benefit them in the future.
* opportunities where children can use their creativity to express themselves and develop their ideas through information and communication technology as they become more confident to become active participants in the digital world.
* essential elements and concepts of computer science, programming and data handling as well as building on the children’s research, communication and presentation skills.

Computing encourages creativity, logical thinking and problem solving and has strong cross curricular links to Literacy, Maths, Science and Design Technology. We want our children to be confident in their use of various types of computing.

**National curriculum for computing and our progress of skills within each key stage aims to ensure that all pupils:**

* Are confident in using code and can understand and apply the fundamental principles and concepts of computer science, including logic, algorithms and data representation.
* When coding, pupils can analyse problems in computational terms, and have repeated practical experience of writing computer programs to solve such problems.
* Effectively communicate and can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems.
* Able to connect with others responsibly and are competent, confident and creative users of information and communication technology.

**Implementation**

Heathcoat currently follows a clear and concise scheme of work in Computing from Kapow. This is supplemented with specific targeted themes when they make good links to a topic of work in any particular year group. We believe this offers the greatest opportunity to experience all elements of the Computing curriculum and efficient levels of progress and children move up through each key stage.

Our computing curriculum provides a balance of computer science, digital literacy, information technology and internet safety. They are taught the principles and skills of how computer systems work through hardware and software to enable them to use this knowledge to create a range of content including coding programs and presenting data in a variety of ways. Kapow is organised in five key areas and work though a cyclical route which pupils can develop their computing knowledge and skills by revisiting and building on previous learning. These areas are; Computer systems and networks, Programming, Creating Media, Data handling and Online safety.

As children move through the school, they develop their knowledge and capabilities using technology and broaden their capacity for creating digital content independently with a wide range of devices and programs.

* Focussed Computing lessons intertwined within their other subjects to ensure they get maximum opportunities to engage with the capabilities technology offers.
* Children have access to a large computer suite, laptops that can be used for whole class teaching and laptops when they need them.
* Progression across all key stages within the strands of digital literacy, information technology and computer science.
* Differentiated planning and learning for all pupils in each unit to ensure all pupils needs are targeted to specific skills and knowledge needed to progress.
* In EYFS the children are exploring internet safety though age appropriate guided short sessions via ThinkuKnow, and accessing some of the Kapow units that encourage early programming skills and data handling, within their provision.
* In KS1 the children are starting to understand simple code and algorithms by using hardware like Bee Bots (programmable robots) and laptops and the computer suite for simple programs to develop their logical reasoning, problem solving and independence.
* In KS2 we move on to more complex programming within software like Scratch and Microbits, and start to expose children to a variety of software to present their work and create media.
* An extra-curricular Computing lunchtime club is provided to broaden their opportunities for using technology safely and responsibly.
* Celebration of Internet Safety Day we look closely at whether the internet allows young people to experiment and express themselves, or if they feel limited in who they can be online.
* Regular visits from our local PCSO regarding online safety.
* Years 4, 5 & 6 are visited by specialist Police officer who has a wealth of experience in preparing young people for how to stay safe online and keep both the school and our students up to speed with the current digital climate.
* Every year group participates in age appropriate lessons on e-safety tailored to their Year group via Kapow at the start of each half term and children understand how to stay safe when using technology. There may also be a specific online safety focus at the start of each weekly computing lesson if there has been a particular online safety issue that has arisen in that year group. Our approach to online safety aims to cover these subcategories of online safety; Self-image and identity, Online relationships, Online reputation, Online bullying, Managing online information, Privacy and security and Health, wellbeing and lifestyle.
* The ICT suite celebrates the Computing curriculum we offer at Heathcoat, with a range of examples of children’s work across the key stages, as well as the importance of online safety through display boards.
* Parents are regularly informed via the website, email and weekly school newsletter regarding online safety and current issues surrounding the subject. We use well known organisations like ThinkuKnow, NSPCC, and National Online Safety to help in our efforts to keep up to date in the ever-changing world of online safety.
* Parents are informed when issues relating to online safety arise and further information/support is provided if required and this is documented and recorded using a specific online safety strand on CPOMS.
* Parent workshop with a specialist Police officer, who has a wealth of experience, to engage parents with how to protect their children when online and monitor the current risks within an ever-changing digital world.

**Impact**

Children can use their knowledge of fundamental principles to be confident, responsible and competent users of information and communication technology that dominates the ever-changing world around us.

Children will leave us with an enriched exposure to a range of software and hardware that they have been able to use purposefully to develop their understanding of technology. This will scaffold their future learning in Computing in KS3 and help them to understand how it can benefit them in future life for both their personal and professional endeavours.