COMPUTING

Intent

Our aim is for all pupils to be inspired, knowledgeable and aspirational.

In computing this means children learn through a well-designed sequential curriculum. The different aspects of computing, such as coding, digital literacy and online safety, are taught to support children to acquire the knowledge and skills they will need to be successful in a digital world.

Inspired	Knowledgeable	Aspirational
• Children learn coding skills, how to be safe in the online world, and how to use digital technology in creative and functional ways. • Children develop the knowledge and skills to apply their coding skills across different platforms and be confident, productive and safe when using digital resources.	• Through the teaching of subject specific technical vocabulary, children will be able to explain computer terms such as function, loop, algorithm, optimise and pattern recognition. • Children will be able to tell someone if they feel unsafe whilst using digital technology. They will be able to interrogate information they read, see or hear online. **Categories of knowledge in Computing:** **Practical** - the knowledge required 'to do' **Theoretical** – the thinking and concepts behind what you are doing **Disciplinary** – the knowledge to be a computer scientist	• Wherever possible, diverse role models are used to encourage all children to see themselves as being successful coders and users of technology. • The focus on having a growth mind-set is essential in the teaching of coding. A key skill is to debug code that has gone wrong; it is taught that this is part of the coding process and perseverance is a key and necessary skill for the successful coder. • Children explore the purposes of computing within a context as well as its meaning within their own life and future e.g. using computing lessons to support art, music and topics as well as linking coding skills to maths skills, using logo to build prototypes and test scientific hypothesis. • Children have opportunities to use computing across the curriculum for real life purposes e.g. creating animation etc. • All children, including those who have SEND or are disadvantaged, are supported to fully access the computing curriculum. This may include additional adult support or use of additional or adapted resources.

Implementation

- The computing scheme of work, across all year groups, lays out the sequential steps to be taught so that new knowledge and skills build on what has been taught before and pupils can work towards clearly defined high quality outcomes. The KS1 curriculum builds on knowledge initiated in EYFS and progress through to KS2 teaching.
- Over a fortnightly period, children will have a whole afternoon of computing teaching
- We use a comprehensive range of tools including: MicroBits, Beebots, Chromebooks and iPads. These are regularly updated to ensure children have access to up-to-date technology.
- Computing is taught in units, enabling children to develop and build upon their knowledge and understanding of each area of computing.
- Our scheme is derived from the NCCE (National Centre for Computing Education) 'Teach computing' resource
- Each strand of computing (coding, digital literacy, online safety, digital creativity) is covered and revisited so that pupils retain and build upon prior learning.
- children access key concepts and skills to develop their knowledge, skills and understanding as digital citizens.

Impact

- Children enjoy computer lessons and have opportunities to succeed in the wide variety of digital tasks.
- Children build practical skills to enable them to successfully access technology and prepare them for secondary school and the global market.
- Children understand links between coding and maths and are able to apply skills across and between both subjects.
- Children understand how to keep themselves safe and how to seek help and support if they experience dangers online.