

Heamoor School Computing

Intent

Our intent for Computing is to have a high-quality computing curriculum which equips pupils to use computational thinking and creativity to understand and change the world. Technology is everywhere and will play a pivotal part in our pupil's lives, therefore, we want to model and educate our pupils on how to use technology positively, responsibly and safely. We aim for all children to become digitally literate, to use and express themselves, developing ideas through information and communication technology. This will prepare children for an exciting futuristic career in technology and or become active participants in a digital world.

We want our pupils to understand that there is always a choice with using technology and as a school we utilise technology (especially social media) to model positive use. We recognise that the best prevention for a lot of issues we currently see with technology/social media is through education. Building our knowledge in this subject will allow pupils to effectively demonstrate their learning through creatively using technology.

We aim to ensure that all pupils:

- can understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation
- can analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems
- can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems
- are responsible, competent, confident and creative users of information and communication technology

Implementation

The core of computing is computer science, in which pupils are taught the principles of information and computation, how digital systems work, and how to put this knowledge to use through programming. Building on this knowledge and understanding, pupils are equipped to use information technology to create programs, systems and a range of content.

Through the DFE approved NCCE planning, we ensure children have the key skills and foundational knowledge. The planning does not always require the use of an actual device and this means that children can develop their computational thinking and understand how computers work. The children are regularly introduced to new vocabulary, which is built upon during their time in school. The NCCE planning allows us to focus on computational thinking and creativity. Within this there are opportunities for creative work in programming and digital media. The three main aspects of our computing curriculum are: Computer Science, Information Technology and Digital Literacy.

Computing is taught through explicit lessons from the NCCE curriculum alongside discrete learning opportunities that allow our learners to fully utilise their taught skills. Computing from the NCCE ensures that staff can teach the Computing curriculum fully, ensuring progression and opportunities to link with prior learning and retrieval practise. The plans

from the NCCE define what we will teach and ensure we balance the work appropriately across each half term. This planning also provides links to previous learning in prior year groups to support retrieval practise.

The teachers are provided with a long-term plan, which shares the strand of Computing (Computing systems and networks, creating media, Data and information, followed by 2 programming topics.) These are then broken down into 6 sequential lessons, which are planned and resourced for the teacher to adapt, for use in their class. Teachers use the plans to support their subject knowledge and they are able to differentiate for children.

During each lesson, teachers assess the children's ability against the Learning Intentions for the lesson and provide immediate support for children when needed, so as many children as possible can achieve the Intention.

Each year, we take part in the Safer Internet Day to promote online safety. This takes place across EYFS, KSI and KS2.

Impact

We encourage children to enjoy and value the curriculum we deliver. We want learners to discuss, reflect and appreciate the impact computing has on their learning, development and well-being. Finding the right balance with technology is key to an effective education and a healthy lifestyle.

In addition, pupils

- will be confident, responsible and creative users of technology, able to use it to accomplish a wide variety of goals, both at home and in school.
- can understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation
- will be able to analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems
- will have a secure and comprehensive knowledge of the implications of technology and digital systems. This is important in a society where technologies and trends are rapidly evolving.

Pupil Voice

- Children enjoy computing. From pupil conferencing (Dec 23) , children were asked what they would improve and nearly all the children said they would like to have computing more often and for longer.
- All children have been taught about E-Safety and know what to do if they feel unsafe online. However, password security was something children felt less confident about.
- Blue Class children have really enjoyed learning about podcasts