Intent

At Hyde Park Infant School we recognise the importance in providing children a plethora of technological resources and activities to prepare and upskill them for the digital world they live in. Technology is an integral part of teaching and learning and is used discretely as well as embedded in our creative cross-curriculum. Our high-quality Computing curriculum equips pupils to not only use information technology to create, search or collaborate with others; ensuring they are digitally literate but equips them to apply computational thinking through developing logical thinking to their learning and thus, the world around them.

The Computing curriculum is divided into:

- Computer Science
- Information Technology
- Digital Literacy

Computer Science teaches the early understanding of science and engineering in which pupils are taught how digital systems work, how they are designed and programmed, how to create simple programs and, investigating solutions and 'fixing' problems.

Pupils are equipped to use information technology as a search tool as well as to create content. To ensure all pupils are digitally literate we give experience of using information and communication technology to express themselves and collaborate with others, focussing on online safety at a level suitable for the future workplace and as active participants in a digital world.

Implementation

Computer Science

In Early Years children use BeeBots to develop an understanding of programming, and I-Pad apps such as Beebot, Daisy Dinosaur and Cargo bot, and practical yet creative resources are used to support computational thinking and logical reasoning, such as building towers and patterns. In Year One computational thinking is developed further through programming a sequence of instructions, predicating and describing what will/has happened and beginning to know and to use the language of algorithm and debug. Year two sees a further progression of skills through watching a program execute such as in Scratch Junior, recognise what has gone wrong and then debug/fix it. The children are able to program a Beebot or software to complete a particular task and to make objects move. All children experience a plethora of programmable toys e.g. remote control cars, metal detectors, easi- scope (digital microscopes), easi- speaks (voice recorders) and recordable pegs (recording voices for instant playback).

Information Technology

All pupils have access daily to classroom interactive whiteboards, networked pcs and tablets as well as voice recorders and cameras. Early Years pupils explore creating shapes and simple text on screen and explore using a range of technology such as taking photographs and recording narration. Year One pupils progress into discussing different ways of showing information (recognising they can use text, image or sounds). They are equipped to use technology to collect photographs, videos and sound and are beginning to collaborate to present this information to others (such as through a PowerPoint presentation which can include text). Year One pupils are developing an understanding of saving and retrieving their information.

In Year 2 pupils use the range of technology in school to collect information, as well as using online searches to gather information and are able to present their ideas to others and independently save and retrieve their work.

Digital Literacy

We recognise the huge importance that online safety holds for all pupils and all pupils participate in the annual Internet safety day with differentiated activities to support their understanding of the range of technologies available in their wider life and the 'Screen cross code' of Zip it, Block it, Flag it. All pupils recognise that technology is in our world with Key Stage One children able to discuss technology they see in their home, school and community.

Early Years pupils use Smartie the penguin to recognise when it is important to tell someone you feel worried or need help. Year One pupils begin to understand what personal information is, explain why it is important to be kind to others as well as understanding there are rules to keep them safe when using online technologies both in school and at home. Year Two pupils can explain why we must keep personal information private, recognising not everything they see online is the truth and explain why we need show kindness in real life as well as online.

In Year 3 there is an expectation that children will consolidate the skills taught in Key Stage One and develop further through: to design, write and debug own apps; practise using time in code to create an animation exploration of live video and editing this recorded information, beginning to develop an understanding of computer networks, to gain skills in shooting live video, such as framing shots, holding the camera steady & reviewing and then to edit video, including adding narration, to use the web to facilitate data collection, to gain skills in using charts to analyse data, to gain skills in interpreting results and to develop a basic understanding of how email works, to gain skills in using email and to be aware of broader issues surrounding email, including 'netiquette' and e-safety.

Impact

Through the implementation of our high quality Computing curriculum, pupils at Hyde Park Infant School will be digitally literate and able to access the world around them through the technologies. They will be equipped with the understanding and skills to use technology for a purpose use technology effectively and collaborate with others; and will remain safe while doing so. Our curriculum supports all pupils to understand the wonder of the internet, yet understanding not everything seen or heard online may be truthful and therefore that they are aware of how to keep themselves safe online.

Through the experiences of Computer Science, our pupils will develop the invaluable skills of computational thinking: problem solving, logical thinking and self-evaluation; skills that can be transferred to all areas of learning both in school and at home in the community.