Computing Curriculum: Intent

At Robin Hood Junior School, we believe a high-quality computing education equips all children, including disadvantaged children and children with SEND, with the skills and knowledge in computational thinking and creativity to help them to understand the world that they live in and be able to be ambitious, successful young people.

Computing is a significant part of everyone's lives and we believe that children should be at the forefront of new technology to complement and enhance their learning and experiences in a broad and balanced way. Computing has strong links to a variety of other subjects such as mathematics, science, design and technology and therefore we believe that, as an essential part of the curriculum, it is also integrated into all areas of learning, using a range of hardware, software and opportunities. At Robin Hood, we recognise that pupils are entitled to quality software and hardware and a structured and progressive approach to the learning of the skills needed, to enable them to use it effectively. We also recognise the importance of responding to new developments in technology and aim to equip pupils with the confidence and capability to use a range of different devices to enhance their experiences. We strive to provide a relevant, progressive and enjoyable curriculum for all pupils, as well as using it for a tool to enhance learning throughout the wider curriculum.

Computing as a stand-alone subject has a number of key components, each of which we aim to teach and fully instil the value of amongst our pupils. These are:

- Computer Science – Pupils are taught the principles of information and computation, how digital systems work, and how to put this knowledge to use through programming.

- Information Technology – Pupils are equipped to purposefully create programs, systems and a range of content in order to develop products and solutions. They will be able to collect, analyse, evaluate and present data and information.

- Digital Literacy – Pupils are taught to use, access and express oneself through digital technology, including a critical understanding of technology's impact on the individual and society, at a level suitable for the future and as active participants in a digital world.

We also firmly believe the importance of delivering a high-quality E-Safety curriculum, alongside the core values of these three stands. E-safety is embedded throughout the computing curriculum and supports and consolidates the strong presence of E-safety within our PSHE curriculum. As technology develops, so does the need for a better understanding of how to use it in a responsible manner. The education of E-safety is therefore essential, to ensure children are equipped with the skills to recognise risks online, to be critically aware of the materials and content they access online, along with guidance on how to accurately validate information accessed via the internet.

Implementation

Pupils participate in weekly Computing lessons in order to achieve the intent of the Computing and E-safety curriculum at Robin Hood. In addition to stand-alone lessons, skills taught are incorporated into other subjects. Lessons are delivered using a range of devices and through un-plugged activities where necessary. The delivery of computing and E-safety at Robin Hood is planned in line with the National Curriculum and allows for clear progression as children move through each stage of their education with us. Teachers use 'Purple Mash' as a scheme to support their planning and delivery, which caters for all children, including those with SEND and from disadvantaged backgrounds.

Each year, children are taught the three main components of computing (Computer Science, Digital Literacy and Information Technology) This allows children to build on and progress from their previous experiences, developing their skills, vocabulary and understanding in order to be active, responsible digital participants. Our PSHE curriculum (Jigsaw) also contributes to our delivery of e-safety in addition to other resources, such as SMART CREW and 'Internet Safety Centre' to keep up with new issues and development. Our E-safety lessons build on prior knowledge and are adapted/modified to suit the requirements of the pupils within the class and current issues that may be relevant. Our pupils also take part annually in 'Internet Safety Day', following the suggested theme, which reflects current issues. We recognise the need to continually maintain, update and develop resources to ensure the effective delivery of the National Curriculum and support the use of technology throughout the school. This includes:

- Interactive whiteboards in every classroom to enhance and promote effective use of technology for learning.
- A chromebook for every pupil in every class
- 32 iPads for pupil use in both discrete lessons and across the wider curriculum.
- An in each classroom as an additional resource to support teaching and learning.
- 45 Microbits
- Data Loggers to collect and analyse data
- Subscription to online content such as Purple Mash, TTRockstars, Spelling Shed and Singup to promote learning in school and remotely through home access.
- The use of 'Microsoft Teams' to promote and support communication and collaboration across the curriculum such as on STEM days.

Lessons are planned to provide for and include all children, including those with SEND, higher achieving/gifted and talented pupils, pupils with EAL needs and pupils from all social and cultural backgrounds. Pupils without home access are supported and catered for accordingly. Pupils 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. They will design, write and debug programs that accomplish specific goals 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 their own and existing programs. Pupils 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 and selected and ranked, and be discerning in evaluating digital content. Pupils 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 achieve given goals. They will be taught to use technology safely, respectfully and responsibly; recognise acceptable and unacceptable behaviour and be clear how to identify a range of ways to report concerns about content and contact to keep themselves and others safe.

Impact

After each unit of work, teachers will make a judgement on whether pupils have met, exceeded or are working towards the objectives set. This will also provide information for the subject leader and will be submitted for analysis to track and monitor achievement and progress and the impact that this has had. Evidence of progression and achievement will be seen in examples of pupils' work stored on the server. As a result of effective implementation, pupils will be able to apply their skills and knowledge in other areas of learning. Pupils will be able to share their knowledge of how to be a responsible user of technology through discussion when questioned. They will be prepared for the next stage in their lives, knowing how to be a responsible user of technology in the wider world and most importantly, know where to seek support. Pupils will be familiar with and will discuss their understanding of the three main strands and will know key vocabulary associated with these. Confidence in this subject will also mean that pupils are able to be more independent and competent in life skills such as problem solving and logical thinking.

Year 3 units –

- Online safety
- Coding
- Touch Typing
- Spreadsheets
- Branching Databases
- Email

Year 4 units –

- Online Safety
- Animation
- Logo
- Coding
- Effective Searching / AI
- Making Music

Year 5 units –

- Online Safety
- Coding
- Spreadsheets
- Databases
- Game Creator
- Microbits

Year 6 units –

- Online Safety
- Coding
- Blogging
- Quizzing
- Spreadsheets
- Networks