Technology is changing the lives of everyone. Through teaching computing we equip our children to participate in a rapid changing world where work and leisure activities are increasingly transformed by technology. We feel it is essential for children to become digitally literate in order to thrive in an increasingly changing and fast-paced world.

Intent

At High Clarence we aim for a high quality computing curriculum which will inspire and enable children to find, explore, analyse, exchange and present information. We also focus on the knowledge and skills necessary for children to be able to use information in an effective way. Our curriculum takes in to account the content of the National Curriculum to ensure that our children have an accurate understanding of the progressive and wide array of computing skills necessary to be successful. Development of declarative and procedural knowledge are major factors in enabling children to be confident, creative and independent learners and it is our intention that children have every opportunity available to achieve this.

In our curriculum we identify the vital elements to becoming a successful and responsible user of technology, via carefully sequenced lessons to ensure it builds within a year, across years and across subjects. The core of our computing curriculum 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. Computing also ensures that pupils become digitally literate – able to use, and express themselves and develop their ideas through, information and communication technology – a at level suitable for their future workplace and as active participants in a digital world.

Our ambitious computing curriculum is structured into 3 areas that allow all pupils from EYFS to Year 6 to progress through different categories of knowledge. These are:

- Computer Science
- Digital Literacy
- Information Technology

Via the national curriculum and our progression of skills, we will ensure that all pupils:

- 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 in order to solve such problems
- Effectively develop and build a wide and varied range of skills in order to apply, analyse and evaluate information that is presented in a variety of ways
- Able to connect with others responsibly and are competent, confident and creative users of information and communication technology.
- Will have the awareness of key issues in computing such as: consent, bullying, plagiarism, copyright and privacy.
- The ability to think critically about computing and communicate ideas confidently and to a range of audiences
- A passion for computing and an enthusiastic engagement in learning, which develops their sense of curiosity about the world and technology around them
- A desire to embrace challenging activities, including opportunities to undertake high-quality tasks across a variety of computing aspects

Implementation

Leaders have carefully selected the knowledge and skills children at High Clarence required to fulfil the aims of the subject. The long-term plan takes in to account the content of the National Curriculum and the current knowledge and understanding of the children at our school. Key concepts have been identified that children encounter at different stages of their educational journey and then revisit repeatedly. Our computing curriculum offers a cross curricular scheme of work for EYFS, Key Stage 1 and Key Stage 2 which matches the expectations of the National Curriculum. The curriculum looks at the progression needed for all pupils to develop and embed skills and knowledge within the strands of: computer science, information technology and digital literacy.

In Foundation Stage, children study the basics of e-safety focusing on knowing the difference between online and real-life events and examples of how people can be unkind online. They will the progress onto discovering the fundamentals of digital literacy, computer science and information technology. In Key Stage 1, core skills will be taught in a sequential manner across differing units, which will then form the foundations for the progressive nature of the curriculum that follows. In Key Stage 2, children will revisit and built upon previously learnt knowledge and offer opportunities for children to build and test their understanding across computer science, digital literacy and information technology. Learning is chronological in nature and builds progressively and where possible links have been made to other subject areas.

Within a block of computing the key knowledge, understanding and vocabulary have been identified for teachers to ensure that content and concepts are progressive across the whole school. All units begin with children investigating what key concepts are and what they are not. This is designed to support children in making links in their learning. Opportunities are provided to present their acquired knowledge, learning and understanding in a range of ways. Consideration is given to how children who grasp concepts more rapidly and those learners who need more support are catered for within computing lessons.

Impact

Our computing curriculum is high quality, well thought out and is planned to demonstrate progressions of knowledge and understanding across computer science, digital literacy and information technology. The impact of this will show children that are confident uses of technology, who have a secure and comprehensive knowledge of the implications of technology. As well as, allowing children to use computational thinking in order to solve problems and the ability to evaluate and apply their knowledge and understanding of information technology as responsible and competent users.

Outcomes for computing are evidenced via the use of a variety of applications and software. Currently a wide range of knowledge and understanding are practiced and taught via the use of iPads and laptops to ensure that children are accessing a broad range of technologies and given opportunities to improve and apply their knowledge in different ways. This is evidenced via the documents, images and projects saved directly to children's iPads. In addition, evidence of children's skills and outcomes are saved to individual year group folders on the School Drive.

The ultimate impact of our computing curriculum is that our children will have gained a balanced and broad range of knowledge and understanding of computer science, digital literacy and information technology. It is the aim that all children will leave with the knowledge and understanding required that will allow them to develop into computer literate and confidence when using a wide range of technologies.