Computing at Rackenford Primary School

Intent

Through the teaching of Computing, we aim to provide:

- children with an environment where they can use their computational thinking and digital literacy to understand the digital world they live in, and use it to enrich their lives in a positive way to achieve a greater depth of knowledge in how technology can benefit them in the future.
- opportunities where children are able to use their creativity to express themselves and develop their ideas through information and communication technology as they become more confident to become active participants in the digital world.
- essential elements and concepts of computer science, programming and data handling as well as building on the children's research, communication and presentation skills.

Computing encourages creativity, logical thinking and problem solving and has strong cross curricular links to Literacy, Maths, Science and Design Technology. We want our children to be confident in their use of various types of computing.

National curriculum for computing and our progress of skills within each milestone aims to ensure that all pupils:

- Are 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 communicate and can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems.
- Able to connect with others responsibly and are competent, confident and creative users of information and communication technology.

Implementation

Rackenford currently follows a clear and concise scheme of work in Computing called Barefoot Computing (through Curriculum Maestro).

Our computing curriculum provides a balance of computer science, digital literacy and internet safety. They are taught the principles and skills of how computer systems work through hardware and software to enable them to use this knowledge to create a range of content including coding programs and presenting data in a variety of ways.

As children move through the school, they develop their knowledge and capabilities using technology and broaden their capacity for creating digital content independently with a wide range of devices and programs.

- Focused Computing lessons intertwined within their other subjects to ensure they get maximum opportunities to engage with the capabilities technology offers.
- Progression across all key stages within the strands of digital literacy, information technology and computer science.
- Differentiated planning and learning for all pupils in each unit to ensure all pupils needs are targeted to specific skills and knowledge needed to progress.
- In KS1 the children are starting to understand simple code and algorithms by using hardware like Bee Bots (programmable robots) and laptops for simple programs to develop their logical reasoning, problem solving and independence.
- In KS2 we move on to more complex programming within software like Scratch and start to expose children to a variety of software to present their work.
- Celebration of Internet Safety Day we look closely at whether the internet allows young people to experiment and express themselves, or if they feel limited in who they can be online.
- Every year group participates in lessons on e-safety at the start of each half term and children understand how to stay safe when using technology.
- Parents are regularly informed via the website, email and weekly school newsletter regarding online safety and current issues surrounding the subject. We use well known organisations like ThinkuKnow, NSPCC, and National Online Safety to help in our efforts to keep up to date in the ever-changing world of online safety.
- Parents are informed when issues relating to online safety arise and further information/support is provided if required.

Impact

Children are able to use their knowledge of fundamental principles to be confident, responsible and competent users of information and communication technology that dominates the ever-changing world around us.

Children will leave us with an enriched exposure to a range of software and hardware that they have been able to use purposefully to develop their understanding of technology. This will scaffold their future learning in Computing in KS3, and help them to understand how it can benefit them in future life for both their personal and professional endeavors.