At Roding, we are 'Free to Achieve.'

Computing

Curriculum Intent

At Roding Primary School, our Computing curriculum is designed to provide students with a broad and well-sequenced understanding of technology, building on prior knowledge as they progress through the school. The curriculum is carefully crafted to ensure that pupils are able to revisit key concepts regularly, deepening their understanding and enhancing their skills over time. Computing is a fundamental part of modern-day life and therefore provides a wealth of learning opportunities, explicitly within computing and also across other curriculum subjects.

The curriculum covers the three strands of Computing:

- **Computer Science**: Understanding coding, algorithms, and the underlying principles of how digital systems work.
- **Information Technology**: The application of technology to solve problems, create content, and enhance productivity.
- **Digital Literacy**: Developing responsible, confident, and competent users of technology, understanding how to stay safe online.

We place a strong emphasis on acquiring and applying technical vocabulary from the earliest stages of learning. Through purposeful and challenging tasks, students build fluency in terms such as 'algorithm,' 'network,' and 'debugging.' The curriculum ensures that vocabulary is taught explicitly and integrated into lessons to empower students to express their ideas with precision.

Internet safety is a key focus throughout the curriculum. We aim to ensure that students understand how to navigate the digital world responsibly and safely. Lessons on safe internet use are embedded within each strand, preparing students to protect themselves and others online.

Curriculum Implementation

The Computing curriculum is delivered through well-structured and carefully planned lessons that are adapted to meet the diverse needs of all learners. Throughout the school, we use the "Purple Mash' scheme in order to achieve the aims of the National Curriculum. Each year group engages with key concepts within the three strands, allowing for progression and challenge:

- **Computer Science** is taught through activities such as coding, programming, and problem-solving, with a focus on understanding algorithms and debugging code. These skills are built incrementally from simple instructions in the early years to more complex programs by Year 6.
- **Information Technology** focuses on applying computing skills in real-world contexts, such as word processing, data handling, multimedia presentations, and using software for design and creation.
- **Digital Literacy** is interwoven throughout the curriculum to ensure students understand the importance of online safety, digital citizenship, and the ethical use of technology.

Opportunities to revisit prior learning are integrated throughout, allowing students to consolidate their knowledge, correct misconceptions, and apply their understanding to new contexts. Key topics are revisited through projects and cross-curricular activities, ensuring concepts are firmly embedded.

Throughout the curriculum, technical vocabulary is introduced systematically and reinforced regularly to support the development of students' understanding. Vocabulary such as "algorithm," "debug," "network," and "cybersecurity" is integrated into lessons to encourage students to use precise language when discussing computing concepts.

Curriculum Impact

By the time students leave Roding Primary School, they will have developed:

- A strong foundation in Computer Science, with the ability to design and debug simple programs, understand the logic of algorithms, and appreciate how computer systems operate.
- Confidence in using a range of Information Technology tools to solve problems, present information, and collaborate with others.
- A clear understanding of Digital Literacy, including how to stay safe online, how to evaluate digital content critically, and how to use technology in an ethical and responsible way.

Students will be proficient in using technical vocabulary, demonstrating an understanding of key concepts that prepares them for the next stages of their education. The curriculum equips students not only with technical skills but also with the ability to think critically about the role of technology in society, ensuring they are prepared for a future in which digital competence is essential.

Internet safety education will empower students to navigate the digital landscape confidently, with a strong understanding of how to protect themselves and others online. The acquisition and consistent use of technical vocabulary will enable students to articulate their ideas clearly and with accuracy, enhancing their communication skills in both computing and other areas of the curriculum.