

### KS3 Curriculum INTENT

Our Maths Curriculum Intent is for students to achieve a **deep, secure and long-term understanding** of the subject that creates mathematical tools for life.

Our teaching is planned to **close gaps** in students' knowledge (including those arising due to the global pandemic) and **address misconceptions** in students' understanding.

Our students will be successful in **applying maths to solve problems** in a range of contexts.

### KS3 Curriculum Information

Our schemes of work show a **carefully planned progression** through topics, **making links** clear between different areas of maths.

The Caldey Key Stage 3 scheme of work is based on the Mathematics Mastery scheme, which uses the principles of teaching for mastery, similar to the White Rose schemes which is widely used by our primary feeder schools. This enables a smooth transition between KS2 and KS3 and allows us to build on the knowledge and skills that our pupils bring from primary school.

The scheme of work shows clear progression in topics across the key stage, deepening knowledge across all topics year on year. There is an emphasis on the use of multiple representations, connections between topics and application of knowledge and skills to enable problem solving.

Our curriculum covers the content and aims of the national curriculum:

Mathematics is a creative and highly inter-connected discipline that has been developed over centuries, providing the solution to some of history's most intriguing problems.

It is essential to everyday life, critical to science, technology and engineering, and necessary for financial literacy and most forms of employment.

A high-quality mathematics education therefore provides a foundation for understanding the world, the ability to reason mathematically, an appreciation of the beauty and power of mathematics, and a sense of enjoyment and curiosity about the subject.

The national curriculum for mathematics aims to ensure that all pupils:

- become **fluent** in the fundamentals of mathematics ... so that pupils develop **conceptual understanding** and the ability to **recall and apply knowledge** rapidly and accurately
- **reason** mathematically ... using mathematical language
- can **solve problems** by applying their mathematics to a variety of routine and non-routine problems
- Mathematics is an interconnected subject in which pupils need to be able to move fluently between **representations** of mathematical ideas.
- Decisions about progression should be based on the **security of pupils' understanding** and their readiness to progress to the next stage.
- Pupils who grasp concepts rapidly should be challenged through being offered **rich and sophisticated problems**

Our lessons include aspects of **teaching for mastery** to promote **conceptual understanding** in tandem with **procedural fluency**.

The Caldew Maths department embraces the principles and practices of NCETM's Teaching for Mastery approach:

- We have high expectations of success for all students and encourage students to work hard and engage in productive struggle.
- Planning is based on small steps of learning that are grasped securely by students before moving on.
- Students are provided with scaffolding and support where appropriate and challenge is provided by exploring topics in greater depth, rather than through acceleration.
- Misconceptions are identified and explored to ensure they are addressed head-on.
- Worked examples, guided practice and exercises designed using the principles of variation and intelligent practice, enable students to develop procedural fluency while supporting conceptual understanding.