

Mathematics Subject Intent

As a core subject, Mathematics is important as it has the capacity to enable us to think more deeply and intuitively about the wider world. The study of Mathematics is not just about learning the core content, but also about training students to think logically and approach problems with resilience and the tools to unpick the problem and find a solution. Students who are comfortable and confident with Mathematics are able to develop critical thinking skills, enabling them to effectively problem-solve and solution-find. Young people who are able to leave school with these skills are better equipped to be numerate in multiple settings across society and are able to flourish in a variety of fields.

At Oswaldtwistle School we have 3 different spiralling schemes of work to support student's ability during their different stages of progression in Mathematics. Each SOW spans different levels of ability by topic to allow teachers to decrease or increase the difficulty in order to cater for all the varying abilities in one class.

The Schemes of Work are delivered by a determined, hardworking and passionate team of teachers and TA's who strive to share their excitement for mathematics with all students. The Mathematics curriculum at Oswaldtwistle School is designed to deepen students' understanding of core mathematical principles through a fluency/mastery approach.

The curriculum focuses on developing students in three strands of mathematical thinking – fluency, reasoning and problem-solving – so that the key skills and processes learnt in the classroom can be applied to practical, real-world scenarios. The sequencing of our curriculum has been designed to allow all our students, irrelevant of ability, to progress successfully through the content. This helps students recall prior knowledge and understanding from the National Curriculum, allowing them to apply and extend further. It is our aim that through the sequencing of the curriculum we will be encouraging students to develop and use their long-term memory more thus freeing up their short-term memory to allow them to interact with new material more productively.

Students at Oswaldtwistle school arrive with many different experiences towards Mathematics and education. It is paramount that from the outset, students are made to feel that they are achieving and making progress and being 'THE BEST THEY CAN BE'. We have found that this approach allows our students to develop a growth mindset towards all new learning experiences. Following a nurturing and positive approach has helped to develop strong, professional relationships between staff and students, leading to trust and confidence.

When planning our curriculum, we looked at how best to sequence lessons to ensure all students are given every opportunity to build on prior learning, develop skills further and then use those skills to gain a deeper understanding with in subject. For example, we teach:

- Place value before addition and subtraction
- Number and calculations before applying these to perimeter and angles facts
- Multiplication and division before area and substitution
- Law of indices before simplifying expressions, expanding brackets and calculating with standard form
- Solving linear equations before re-arranging formulae
- Solving linear equations before applying these to more advanced angles topics

In addition to learning Mathematical concepts and skills, we also put a great emphasis on Literacy and word recognition within the subject. Our students are encouraged to learn Mathematical key words and command words and then use them when discussing their work or learning. These can be set as a literacy target as per the school literacy policy or as a starter in a lesson. Students are asked to explain Mathematical methods throughout lessons to promote oracy. The intent here is to promote mathematical language and in doing so helps to show students understanding of the different topics.