Year 8 – Mathematics

WRM – (V3)



Curriculum Overview

In Year 8, students build on the mathematical knowledge and skills developed in Year 7, strengthening their confidence, fluency and problem-solving abilities. Following the White Rose Maths Foundation pathway, students develop a deeper understanding of key mathematical concepts through carefully sequenced lessons that encourage logical thinking, mathematical reasoning and greater independence in learning.

What Students Will Learn

Autumn Term – Ratio, Algebra and Number

Students begin by developing their understanding of ratio, proportion and scale, learning how these concepts are applied in everyday situations. They strengthen their algebraic skills by simplifying and manipulating expressions before exploring coordinates and graphs to understand mathematical relationships.

Students also develop their confidence in multiplying and dividing fractions and explore symmetry and reflection, applying their knowledge to solve mathematical problems.

Spring Term – Geometry, Algebra and Statistics

Students develop their understanding of area, volume and density, applying mathematical skills to calculate measurements involving different shapes and objects. They extend their algebraic knowledge by solving equations and inequalities and explore percentages in a range of practical situations.

Students are introduced to indices and standard form, developing their understanding of how numbers can be represented and calculated. They also learn to interpret and represent data, using statistical information to make comparisons and draw conclusions.

Summer Term – Geometry, Probability and Data

Students explore angles in parallel lines and polygons, developing their ability to calculate missing angles and explain mathematical relationships. They strengthen their understanding of probability through tables and practical examples, learning how to describe and calculate the likelihood of different events.

Students also investigate the properties of circles, develop their skills in interpreting graphs and charts, and revisit sequences to strengthen their algebraic understanding. The term concludes with opportunities to revise and consolidate key mathematical concepts taught throughout the year.

Assessment and Retrieval of Learning

Year 8 students complete regular unit assessments designed to strengthen long-term understanding. **After completing a new unit, students are assessed on previously taught content,** allowing them to revisit and retrieve earlier learning rather than focusing only on recent topics**.**

This approach, known as *delayed retrieval*, helps students retain mathematical knowledge, make connections between topics and develop confidence in applying their skills. Teachers use assessment results to identify misconceptions, address gaps and provide appropriate support.

In addition to unit assessments, students complete **a termly assessment at the end of the Autumn, Spring and Summer terms.** These assessments cover key knowledge and skills taught during the year, including previously studied topics, helping teachers monitor progress and identify areas for further development.

How Parents and Carers Can Support Learning

Parents and carers can play an important role in supporting their child's progress in Mathematics. You do not need to be confident in Mathematics yourself to help your child succeed. Showing an interest, offering encouragement and helping your child develop good learning habits can make a real difference.

Here are some simple ways to support learning at home:

- **Autumn Term:** Involve your child in adjusting recipes or comparing quantities to explore ratio and proportion. Encourage them to explain patterns or relationships they notice in graphs and everyday information.
- **Spring Term:** Involve your child in practical activities such as comparing prices, calculating discounts or measuring spaces around the home. Encourage them to explain their methods and mathematical thinking.
- **Summer Term:** Explore shapes and angles in everyday surroundings, discuss the likelihood of familiar events and look at graphs or charts together to help develop interpretation and reasoning skills.

Supporting Learning Throughout the Year: As students move into Year 8, the encouragement and support they received at home during Year 7 continue to play an important role in their mathematical development. Parents and carers can build on these positive foundations by encouraging regular homework and revision, revisiting previously taught topics and discussing feedback from assessments. Taking an interest in their child's learning and encouraging them to explain their mathematical thinking can help strengthen understanding and develop greater independence.