ORCHARD MEAD ACADEMY

Year 7 Maths Learning Map

- TERM 1 -

Directed Number
Students will learn about positive and negative numbers, understanding their value and position on a number line. They will develop confidence in performing addition, subtraction, multiplication, and division with directed numbers in a variety of contexts.

Place Value, Ordering and Rounding
Students will deepen their understanding of place value across large and small numbers. They will practice comparing, ordering, and rounding numbers to different levels of accuracy, building strong estimation skills and numerical fluency for problem-solving.

Types of Number
Students will explore prime numbers, factors, multiples, square numbers, and square roots. They will also begin to understand indices to show repeated multiplication, strengthening number sense and laying the groundwork for algebraic thinking.

Algebraic notations and expressions
Students will be introduced to algebraic ideas, learning conventions, writing expressions, and combining like terms. They will develop confidence in using simple formulae, preparing them for more advanced algebra in secondary mathematics.

- TERM 2 -

Averages and the Range
Students learn to calculate and interpret the mean, median, mode, and range from data sets. They understand what each measure represents, identify which average is most appropriate in different contexts, and use these skills to compare and describe data effectively.

Graphing Data
In Year 7, students learn to represent and interpret data using bar charts, pie charts, pictograms, and line graphs. They construct graphs accurately using appropriate scales and labels, compare data sets, and draw conclusions.

Fractions Decimals and Percentages
Students learn to convert between fractions, decimals, and percentages, compare and order values in different forms, and apply these skills to real-life contexts such as proportion and money problems. They also add, subtract, multiply, and divide fractions, and use percentages to calculate proportions of quantities.

Perimeter and Area
In Year 7, students calculate and compare the perimeter and area of rectangles, triangles, and compound shapes, applying formulas accurately and using correct units

- TERM 3 -

Speed Distance and Time
In Year 7, students explore the relationship between speed, distance, and time, using the formula speed = $\frac{disatnce}{time}$ to solve problems and interpret real-life contexts.

Properties of Number
Students further embed the properties of numbers, including odd and even numbers, multiples, factors, primes, squares, and cubes, and use these to solve problems and recognize patterns in calculations

Add and Subtract Fractions
In Year 7, students revisit addition and subtract fractions with the same or different denominators, including mixed numbers, and apply these skills to solve word problems and real-life contexts.

Angles and Polygons
Students explore angles and polygons, learning to calculate missing angles in triangles, quadrilaterals, and other polygons, understand angle properties, and apply these to solve geometric problems.

PRIOR LEARNING

Year 7 term 1 builds on KS2 foundations: directed numbers, place value, ordering, and rounding. This facilitates a deeper understanding of large numbers and decimals; types of number, expanding, squares, roots, indices, primes, factors, and multiples; algebraic notation develops from simple unknowns to writing, simplifying, and substituting expressions

PRIOR LEARNING

Year 7 term 2 builds on KS2 by extending data handling from simple charts and averages, FDP from basic fractions, decimals, percentages, and perimeter and area from rectangles and simple shapes. Students deepen understanding, apply calculations in wider contexts, and develop accuracy, comparison, and problem-solving skills

PRIOR LEARNING

Year 7 term 3 builds on KS2 by extending speed, distance, and time from simple rate problems, number properties from basic factors, multiples, and primes, fractions from adding and subtracting like fractions to mixed and unlike fractions, and angles and polygons from basic angle facts to calculating missing angles in complex shapes and applying geometric reasoning.