Armfield Academy – Mathematics Department

Year 8 Support Curriculum Overview

This maths scheme of work is structured to build securely on prior learning, with concepts sequenced for progression and depth. Retrieval practice is embedded to strengthen fluency and long-term retention. Teaching is responsive, with assessment informing adaptation to meet learners' needs. All pupils are challenged through high expectations, with scaffolds to ensure inclusivity and access for all. The scheme aims to develop problem-solving, reasoning, and resilience alongside core mathematical skills. In year 8 we have the 'Core' and the 'Support' curriculum, these are intertwined and teachers have flexibility and fluidity to push pupils in their charge while embedding fundamental knowledge needed for the rest of KS3.

****Note: The Core scheme is additional content for extension****

Term 1	
Week	Curriculum Overview
1 2	**Ratio** - Understand ratio - Link ratio and fractions - Simplify ratios - Ratio problems (whole given) - Ratio problems (part given)
3 4	**Proportion and Scale** - The unitary method - The multiplier method - Recipes - Conversion graphs - Convert between currencies - Scale diagrams
5 6	**Directed Number** - Add and subtract directed numbers - Multiply directed numbers - Divide directed numbers - Multiply and divide directed numbers - Four operations with directed numbers
7	**Algebraic Manipulation** - Collect like terms - Expand a single bracket - Factorise into a single bracket
8 9 10	**Coordinates and Graphs** - Plot and read coordinates in all four quadrants - Understand coordinates in all four quadrants - Lines parallel to the axes - Tables of values - Lines of the form y = mx - Lines of the form y = x + c - Lines of the form y = mx + c - Plot straight line graphs

11 12	**Multiplying Fractions** **ASSESSMENT WEEK** - Representations of fractions - Convert improper fractions to mixed numbers - Convert mixed numbers to improper fractions - Simplify a fraction - Multiply a fraction by an integer - Multiply a fraction by a fraction
13	**Area Density and Volume (Week 1)** - Name 2-D shapes - Area of squares, rectangles and parallelograms - Find unknown lengths in rectilinear shapes - Area of a rectilinear shape - Area of a triangle
14	**Review and Reteach** - Here we allocate a week to reviewing and reteaching in order to reinforce key concepts, address gaps in understanding, and ensure a strong foundation before advancing in the curriculum.
Term 2	
Week	Curriculum Overview
1 2	**Area Density and Volume (Week 2 and 3)** - Area of a trapezium - Area of a compound shape - Solve problems with area - Volume of cubes and cuboids (counting cubes) - Volume of cubes and cuboids
3 4	**Equations** - Use bar models - Solve 1-step equations - Solve 2-step equations - Solve equations with brackets - Solve fractional equations - Solve problems with equations
5 6	**Fractions and Percentages** - Convert between fractions and decimals (non-calculator) - Convert between fractions and decimals (calculator) - Fraction of an amount - Increase or decrease an amount by a fraction - Convert percentages to fractions and decimals - Percentage of an amount (non-calculator) - Percentage increase and decrease
7	**Decimal Arithmetic and Rounding** - Multiply decimals by integers - Divide decimals by integers - Round to the nearest integer - Round to decimal places

8	**Expressions and Indices** - Understand index notation - Simplify expressions - Collect like terms - Substitution
9	**Standard Form** - Integers to 1 000 000 - Positive powers of 10 - Multiply by powers of 10 - Numbers greater than 1 in standard form
10 11	**Interpret and Represent Data** **ASSESSMENT WEEK** - Interpret and collect data - Averages and range - Ungrouped frequency tables - Mean from an ungrouped frequency table - Grouped frequency tables
Term 3	
Week	Curriculum Overview
1	**Revision and Reteach** - Here we allocate a week to reviewing and reteaching in order to reinforce key concepts, address gaps in understanding, and ensure a strong foundation before advancing in the curriculum.
2 3 4	**Angles in Parallel Lines and Polygons** - Measure and draw angles - Angles on a straight line - Vertically opposite angles - Angles around a point - Types of triangles - Angles in a triangle - Angles in a special triangle - Types of quadrilaterals - Angles in a quadrilateral - Work out unknown sides lengths and angles
5 6 7	**Tables and Probability** - Probability vocabulary - The probability scale - List outcomes - Probability of a single event - Probability experiments - Sample spaces for 1 or more events - Two-way tables - Frequency trees
8 9	**Circles** - Circle vocabulary - Circumference of a circle (calculator) - Circumference of a circle (non-calculator)

	- Area of a circle (calculator) - Area of a circle (non-calculator)
10 11	**Graphs and Charts** - Draw pie charts (1) - Angles in sectors of pie charts - Draw pie charts (2) - Interpret pie charts
12	**Sequences** **ASSESSMENT WEEK** - Describe and continue sequences - Generate a sequence given a rule in words - Generate a sequence given a simple algebraic rule
13	**Symmetry and Reflection** - Line symmetry - Reflect a shape in a horizontal or vertical line (touching the shape) - Reflect a shape in a horizontal or vertical line (not touching the shape) - Reflect a shape in a diagonal line (touching the shape) - Reflect a shape in a diagonal line (not touching the shape)
14	**Review and Reteach** - Here we allocate a week to reviewing and reteaching in order to reinforce key concepts, address gaps in understanding, and ensure a strong foundation before advancing in the curriculum.