Armfield Academy – Mathematics Department

Year 9 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 9 we have the 'Core' and the 'Support' curriculum, these intertwine and teachers have flexibility and fluidity to push pupils in their charge while embedding fundamental knowledge needed for their GCSE studies in future years.

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

Term 1	
Week	Curriculum Overview
1 2	**Properties of Numbers** - Factors and multiples - Highest common factor (HCF) - Lowest common multiple (LCM) - Prime numbers - Write a number as a product of prime factors - Create Venn diagrams - Interpret Venn diagrams
3 4	**Percentages** - Convert between fractions, decimals and percentages - Percentage of an amount - Percentage increase and decrease - Find the original value given a percentage - Express one number as a percentage of another - Solve problems with percentages
5 6	**Area and Volume** - Name 3-D shapes - Faces, edges and vertices - Nets of cubes and cuboids - Nets of other 3-D shapes - Area of a 2-D shape - Area of a compound shape - Surface area of cubes and cuboids - Volume of a prism - Volume of a cylinder
7 8	**Equations and Inequalities** - Solve equations - Solve equations with brackets - Understand inequalities - Inequalities on a number line - Solve 1-step inequalities - Solve 2-step inequalities
9	**Fractions** - Add and subtract fractions - Multiply with fractions - Divide a fraction by an integer - Divide a fraction by a fraction
10 11	**Rates** - Speed, distance and time

	- Interpret distance-time graphs - Draw distance-time graphs
12	**Standard Form** **ASSESSMENT WEEK** - Compare and order numbers greater than 1 in standard form - Negative powers of 10 - Numbers between 0 and 1 in standard form
13	**Four Operations (Week 1)** - Order of operations - Four operations
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	**Four Operations (Week 2)** - Four operations with decimals - Solve problems with four operations
2	**Maths and Money**
3	- Understand a bank account - Jobs and pay (wages) - Jobs and pay (taxes) - Ways to pay (bills) - Budgeting - Best buy problems - Borrowing (loans) - Spending overseas (holidays)
4	**Straight Line Graphs**
5	- Plot and read coordinates in four quadrants - Lines parallel to the axes - Lines of the form $y=mx$ - Lines of the form $y=x+c$ - Lines of the form $y=mx+c$ - Lines of the form $x+y=a$, $y-x=a$ and $x-y=a$
6	**Ratio and Proportion**
7	- Direct proportion - Direct proportion and conversion graphs - Ratio problems (whole, part or difference given) - Solve problems with ratio - Inverse proportion
8	**Construction and Congruency**
9	- Measure and draw angles up to 180° - Measure and draw angles between 180° and 360° - Construct triangles using ASA - Construct triangles using SSS - Construct triangles using SAS - Understand congruence - Congruent triangles
10	**Similarity** **ASSESSMENT WEEK** - Recognise similar shapes - Work out unknown lengths and angles in similar shapes

11	**Algebraic Manipulation** - Expand single brackets and simplify (numerical coefficients) - Expand single brackets (algebraic coefficients) - Expand double brackets
	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	**Pythagoras' Theorem**
3	- Squares and square roots - Solve equations with squares and square roots - Identify the hypotenuse - Pythagoras' theorem (find the hypotenuse) - Pythagoras' theorem (find a shorter side) - Pythagoras' theorem (find any side)
4	**Non-Linear Graphs** - Substitute into quadratic expressions - Draw quadratic graphs
5	**Probability**
6	- Probability of a single event - Use diagrams to work out probabilities - Probabilities from Venn diagrams - Probability of an event not happening - Probability experiments - Expected outcomes
7	**Transformations**
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9	- Enlargement (on a grid) - Enlargement from a point - Enlargement (on coordinate axes) - Describe an enlargement - Line symmetry - Rotational symmetry - Rotation about a point (on the shape) - Rotation about a point (not on the shape) - Translation (points and line segments) - Translation - Describe a translation
10	**Angles in Polygons**
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12	**Week 11= ASSESSMENT WEEK- FCAT Maths end of KS3 Assessment** - One-step angle problems - Angles in a triangle - Angles in a quadrilateral - Multi-step angle problems - Solve problems with angles and shapes - Polygons up to an octagon - Exterior angles of a regular polygon - Interior angles of a regular polygon - Solve problems with angles in a regular polygon - Solve problems with angles in any polygon
13	**Angles in Parallel Lines** - Alternate angles - Corresponding angles - Co-interior angles - Alternate, corresponding and co-interior angles

	- Solve problems with angles in parallel lines
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.