Armfield Academy – Mathematics Department

Year 8 Curriculum Overview

Note: Objectives in blue are additional higher content for extension

Maths home Learning is completed using Century Learning.

Half Term 1	
Date	**Curriculum Overview**
WC 29/08 WC 05/09	**Prime Number and Proof** - Identify factors of a number - Identify multiples of a number - Find the HCF, LCM of two numbers - Write a number as a product of its prime factors
WC 12/09 WC 19/09 WC 26/09	**Ratio and Scale** - Understand ratio and its link to multiplication - Circumference of a circle - Use ratio notation - Reduce ratios to simplest form - Solve ratio problems - **Ratio in the form 1:n** - **Comparing ratios**
WC 03/10 WC 10/10	**Multiplicative Change** - Use Scale factors, linking to ratio, to solve simple directional proportion problems - Explore conversion graphs - Convert between currencies - Explore direct proportion graphs (H) - Explore relationships between similar shapes - Understand scale factors as multiplicative representations - Draw and interpret scale diagrams - Interpret maps using scale factors and ratio - Scale diagrams and maps
Date	**Curriculum Overview**
WC 31/10 WC 07/11	**Multiplying and dividing fractions** - Represent multiplication of fractions - Multiply a fraction by an integer - Find the product of a pair of unit fractions - Find the product of a pair of any fractions - Divide an integer by a fraction - Divide a fraction by a unit fraction - Understand and use the reciprocal - Divide any pair of fractions - Multiply and divide improper and mixed fractions - Multiply and divide algebraic fractions **Multiplying and dividing mixed numbers**
WC 14/11 WC 21/11 WC 28/11	**Working in a Cartesian plane** - Plotting and interpreting straight line graphs - Equations of lines parallel to the axes - Model situations by translating them into expressions, formulae and graphs - **Find the equation of a straight line (H)** - **Find the mid-point of a line segment (H)** - **Find the gradient of a line segment (H)**

	- **Drawing quadratic graphs (H)**
WC 05/12	**Revision and assessment**
WC 12/12	**Collecting and Representing data** - Scatter graphs and correlation (and line of best fit) - Listing outcomes - Read, interpret and collect data in frequency tables - Represent and interpret data in two way tables

Date	**Curriculum Overview**
WC 02/01	**Collecting and Representing data** - Scatter graphs and correlation (and line of best fit) - Listing outcomes - Read, interpret and collect data in frequency tables - Represent and interpret data in two way tables
WC 09/01 WC 16/01	**Tables and Probability (Further)** - Sample space diagrams - Probabilities from two way tables - Probabilities from venn diagrams - **Product rule for number of outcomes (H)**
WC 23/01 WC 30/01 WC 06/02	**Brackets, equations and inequalities** - Forming and using expressions, formulae and identities - Multiplying out single brackets - Factorise into a single bracket - Forming and solving equations and inequalities, with and without brackets - **Solving equations with unknowns on both sides** - **Expanding binomials**

Date	**Curriculum Overview**
WC 20/02	**Brackets, equations and inequalities** - Forming and using expressions, formulae and identities - Multiplying out single brackets - Factorise into a single bracket - Forming and solving equations and inequalities, with and without brackets - **Solving equations with unknowns on both sides** - **Expanding binomials**
WC 27/02 WC 06/03	**Sequences** - Generate sequences given a rule in words - Generate sequences given a simple algebraic rule - Generate sequences given a complex algebraic rule - **Find the rule for the nth term of a linear sequence** **Indices** - Investigate positive powers of 10 - Investigate negative powers of 10 - Work with numbers in standard form - Compare and order numbers in standard form - Calculate with numbers in standard form - Use a calculator to work with numbers in standard form - **Understand and use negative indices** - **Understand and use fractional indices**
WC 13/03	**Indices** - Investigate positive powers of 10 - Investigate negative powers of 10 - Work with numbers in standard form - Compare and order numbers in standard form - Calculate with numbers in standard form - Use a calculator to work with numbers in standard form - **Understand and use negative indices** - **Understand and use fractional indices**
WC 20/03	**Revision and assessment**

WC 27/03	**Fractions and Percentages** ● Calculate percentages of amounts (no calculator and calculator methods) ● Using multipliers for calculating percentage increase/decrease ● One number as a percentage of another ● **Finding the original given any percentage** ● Revisit Fraction, Decimal and Percentage equivalence ● Calculate fractions of amounts

Date	Curriculum Overview
WC 17/04 WC 24/04	**Fractions and Percentages** ● Calculate percentages of amounts (no calculator and calculator methods) ● Using multipliers for calculating percentage increase/decrease ● One number as a percentage of another ● **Finding the original given any percentage** ● Revisit Fraction, Decimal and Percentage equivalence ● Calculate fractions of amounts
WC 01/05 WC 08/05	**Standard Index Form** - Conversion between numbers in ordinary and standard form - Comparing numbers in standard form - **Calculating with standard form** - **Negative and simple fractional indices**
WC 15/05 WC 22/05	**Number Sense** - Developing mental strategies - Measure and units - Estimation, including rounding to a given number of decimal places - Revisit order of operations - **Simple surds** - **Converting area units** - **Error interval notation** - Developing mental strategies - Measure and units - Estimation, including rounding to a given number of decimal places - Revisit order of operations - **Simple surds** - **Converting area units**

Date	Curriculum Overview
WC 05/06 WC 12/06 WC 19/06	**Angles in parallel lines and polygons** - Angles in parallel lines - Angles in special quadrilaterals - Angles in polygons - **Standard constructions including perpendicular** **Diagonal properties of quadrilaterals**
WC 26/06	**Angles of trapezia and circles** - Calculate the area of a trapezium - Investigate the area of a circle - Calculate the area of a circle and parts of a circle without a calculator - Calculate the area of a circle and parts of a circle with a calculator
WC 03/07	**Revision and assessment**

WC 10/07	**Angles of trapezia and circles** - Calculate the area of a trapezium - Investigate the area of a circle - Calculate the area of a circle and parts of a circle without a calculator - Calculate the area of a circle and parts of a circle with a calculator
WC 17/07	**Exam review and consolidation**