

Curriculum Implementation Mapping – Skills and Knowledge

Subject: Maths

Year group: 7

Topic	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
Knowledge	Sequences - linear and non-linear sequences in listed, tabular and graphical forms Algebraic Notation - links between numerical, algebraic and *graphical* representations. Structure of arithmetic and relationships between operations Equality and Equivalence - understand equivalence in algebraic context. Like & unlike terms.	Place Value and Ordering Integers & Decimals - understand the number system and place value including decimals and negative numbers. Median & range. *Powers of 10 leading to standard form* Fraction, Decimal & Percentage Equivalence - links between FDP (Including real life context). Concept of fractions and percentages. Interpret pie charts.	Solving Problems with the four operations - written and mental methods of addition, subtraction, multiplication and division with positive integers and decimals. Inverse operations. Formulae. Frequency tables/trees, bar charts and pictograms. Perimeter and Area. The mean. Solve equations. Multiples & Factors (including HCF and LCM). Unit conversions. Calculator use. Fractions & Percentages of Amounts - fractions & % of quantities	Operations & Equations with Directed Number - 4 ops with directed number. Links between the operations. Squares and square roots. Substitution. Concepts of equations, expressions, inequalities, terms and factors. Standard mathematical formulae. Addition & Subtraction with fractions - different representations of fractions and decimals. Four operations with fractions.	Construction, Measurement & Geometric Notation - language and properties relating to 2D shapes. Concept of an angle. Types of triangles, quadrilaterals and polygons (up to decagon). Parallel & Perpendicular lines Geometric Reasoning - angle rules (at a point, on a line, vertically opposite, triangles, quadrilaterals and *polygons and parallel lines*)	Developing Number Sense - mental strategies with integers, fractions and decimals. Estimations. Number and algebraic facts. Sets & Probability - sets and Venn Diagrams (notation). Probability vocabulary. Sample spaces, Probability of a single event. Probability scale. Exhaustive events. Prime Numbers & Proof - factors, multiples, primes and triangular numbers. Prime factors and common multiples and factors
Skills	S - describe, draw and continue sequences. Find next and *missing* terms. AN - use algebraic notation to model situations/ procedures. Use inverse operations to find output. Substitution. *Generate sequences & represent graphically*. E & E - form and solve one-step equations. Collect like terms.	PV & O - Round to the nearest 10, use equality and inequality notation to compare numbers. Order integers. Find the median & range. Round to one significant figure. Position decimals on a number line. *Write (and investigate) numbers to powers of 10. Write positive integers in standard form.* FDP - represent fractions on diagrams and a number line. Convert between FDP. Use simple fractions and write one number as a fraction of another. Use & interpret simple pie charts.	SP 4 op - problem solving (including with calculator) with the 4 operations (money, data and mensuration). Derive formulae and equations. Use inverse operations and solve one step equations and problems involving perimeter. Use and interpret the mean. Convert between standard units. Use multiples, factors (including simple HCF and LCM). Construct and interpret frequency tables, bar charts & pictograms. F & P of amounts - use the 4 operations with integers, decimals and fractions. Work out fractions and percentages of amounts.	O & E with DN - Use 4 ops with positive and negative integers & develop problem solving strategies. Use squares and square roots. Use calculator (and other technologies) and interpret results. Understand and use algebraic vocabulary. Simplify and manipulate expressions. Substitute into and simplify formulae (including standard). A & S with f - add and subtract fractions with the same denominator and where one is a multiple of the other (*different denominators and algebraically*)	CM & GN - draw and measure angles. Identify parallel and perpendicular lines. Recognise types of polygons (including special triangles and quadrilaterals). Construct triangles (*and more complex polygons*). *Use protractor to draw and interpret pie charts* GR - know and apply the given angles rules to identify missing angles and to solve problems	DNS - use mental strategies with the four operations involving integers, fractions and decimals. Use estimation to check answers. Use factors to simplify calculations. *Use known algebraic and number facts to derive other facts. Select the best strategy* S & P - identify and represent sets using correct notation on Venn Diagrams and in Sample Space Diagrams. Calculate simple probabilities and use the probability scale PN & P - identify and use multiples, factors, square and triangular numbers. Find common multiples and factors including HCF and LCM (*Venn Diagram method with prime factors*). *conjecture and proof*
Assessment Pattern		Term 2 Summary Assessment		Term 4 Summary Assessment		Term 6 (End of Year) Summary Assessment

**** extension topics**