

KS3 Curriculum Plan

| | | LP1 | LP2 | LP3 | LP4 | LP5 |
|--------|----------------------|---|--|---|---|--|
| Year 7 | TOPIC | <i>Algebraic Thinking</i> | <i>Place value & proportion, Application of number</i> | <i>Application of number & Directed number</i> | <i>Fractional thinking & Lines & angles</i> | <i>Lines & Angles & Reasoning with number</i> |
| | Knowledge | Sequences, Algebraic notation, Equality & equivalence | Place value & ordering integers & decimals, Fractions, decimals & percentages equivalence, Using addition & subtraction | Using multiplication & division, Fractions & percentages of amounts, Operations & equations with directed number | Addition & subtracting with fractions, constructing, measuring & using geometric notation, developing geometric reasoning | Developing geometric reasoning, developing number sense, sets & probability, prime numbers & proof |
| | Procedural knowledge | Apply and demonstrate knowledge and understanding of mathematical skills to problem solve, using a range of modelling & mathematical representations. Use reasoning strategies to investigate mathematical concepts. Prove conjectures within the maths content taught. | | | | |
| | Key Vocab | Sequences: Sequence, term, position, rule, linear, non-linear, difference Algebraic notation: function, input, output, inverse, commutative, substitute, expression, evaluate, linear, sequence Equality and equivalence: equality, equation, equals, commutative, solve, solution, inverse, like terms, coefficient, expression | Place value and ordering integers and decimals: Integer, interval, range, median, negative, place holder, place value, significant figures Fractions, decimals, percentages: Fraction, decimal, percentage, place value, place holder, place value, interval, tenth, hundredth, sector, recurring Addition & subtraction: commutative, associative, inverse, placeholder, perimeter, polygon, credit, debit, balance, | Multiplication & division: Array, Factor, multiple, centi, milli, kilo, dividend, divisor, quotient Fractions & percentages of amounts: fraction, equivalent, whole, percentage, place value, convert Directed number: Subtract, negative commutative, product, inverse, square root, square, expression | Fractional thinking: Numerator, denominator, equivalent, mixed numbers, improper fractions, substitute, place value Construction & measuring: Polygon, scalene triangle, isosceles triangle, right angled triangle, frequency, sector, rotation, protractor, compass | Geometric reasoning: Vertically opposite, interior angles, sum, convex quadrilateral, concave quadrilateral, polygon, scalene triangle, isosceles triangle, right angled triangle Developing number sense: commutative, associative, dividend, divisor, expression, equation, quotient Sets & probability: set, element, intersection, union, mutually exclusive, probability, bias, fair, random Prime numbers & proof: prime, factor, multiple, conjecture, counter example, expression, HCF, LCM |

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| Year 8 | TOPIC | <i>Proportional reasoning</i> | <i>Representations & Algebraic techniques</i> | <i>Algebraic techniques & Developing number</i> | <i>Developing number & geometry</i> | <i>Developing Geometry & reasoning with data</i> |
| | Knowledge | Ratio & scale, Multiplicative change, Multiplying & dividing fractions | Working in the Cartesian plane, Representing data, tables & probability, brackets, equations & inequalities | Brackets, equations & inequalities, sequences, indices, fractions & percentages | Standard index form, number sense, angles in parallel lines & polygons, area of trapezia & circles | Line symmetry & reflection, the data handling cycle, measures of location |
| | Procedural knowledge | Apply and demonstrate knowledge and understanding of mathematical skills to problem solve, using a range of modelling & mathematical representations. Use reasoning strategies to investigate mathematical concepts. Prove conjectures within the maths content taught. | | | | |
| | Key Vocab | Ratio & scale: Ratio, equal parts, proportion, order, part, equivalent, factors, scale Multiplicative change: Proportion, variable, conversion, axes, approximation, scale factor, scale, currency Multiplying & dividing fractions: Numerator, denominator, whole, commutative, unit fraction, non-unit fraction, dividend, divisor, quotient, reciprocal | Working in the Cartesian plane: Quadrant, origin, coordinate, parallel, gradient, intercept, horizontal, vertical Representing data, Tables & probability: Variable, relationship, correlation, origin, line of best fit, outlier, continuous, qualitative, quantitative, discrete, frequency, outcomes, probability, set, chance, event, biased, union Brackets Equations and Inequalities: coefficient, simplify, substitute, equivalent, product, HCF, inequality | Sequences: Sequence, term, linear, non-linear sequence, position, difference, arithmetic, geometric Indices: Exponent, power, indices, base, simplify, coefficient, product Fractions and Percentages: Equivalent, reduce, percent, decimal, fraction, growth, integer, invest | Standard Index Form: Base, indices, power, standard form, commutative, exponent, negative Number sense: Significant, round, decimal, overestimate, underestimate, metric, balance, deposit Angles in parallel lines and polygons: Parallel, angle, transversal, isosceles, polygon, sum, regular polygon Area of trapezia and circles: Area, formula, perpendicular, Pi, congruent, perimeter, infinity, sector | Line of symmetry & reflection: Mirror line, line of symmetry, reflect, vertex, perpendicular, horizontal, vertical The data handling cycle & Measures of location: Hypothesis, primary data, sampling, secondary data, discrete data, continuous data, spread, average, proportion, total, frequency, represent, outlier, consistent |

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|--------|----------------------|--|---|--|--|---|
| Year 9 | TOPIC | <i>Reasoning with algebra</i> | <i>Constructing in 2 & 3 dimensions, Reasoning with number</i> | <i>Reasoning with number & geometry</i> | <i>Reasoning with geometry & proportion</i> | <i>Reasoning with proportion & representations</i> |
| | Knowledge | Straight line graphs, forming & solving equations, Testing conjectures | Three dimensional shapes, constructions & congruency, numbers | Using percentages, maths & money, deduction | Rotation & translation, Pythagoras' theorem, enlargement & similarity, solving ratio & proportion | Solving ratio & proportion, rates, probability, algebraic representations |
| | Procedural knowledge | Apply and demonstrate knowledge and understanding of mathematical skills to problem solve, using a range of modelling & mathematical representations. Use reasoning strategies to investigate mathematical concepts. Prove conjectures within the maths content taught. | | | | |
| | Key Vocab | Straight Line Graphs: Parallel, coordinate, gradient, intercept, linear, asymptote, perpendicular, reciprocal Forming and solving equations: Inequality, solve, variable, rearrange, inverse operation, substitute Testing Conjectures: Factor, multiple, prime, binomial, proof, HCF, LCM, verify, quadratic | Three Dimensional Shapes: 2D, 3D, edge, vertex, face, plan, cross-section, perspective Constructions and Congruency: Protractor, locus, equidistant, perpendicular, arc bisector, congruent, Numbers: Integer, rational, irrational, inverse operation, quotient, product, factor, multiple, | Using Percentages: Equivalent, Multiplier, Profit, percent, reduce, growth, integer, invest, profit, depreciate Maths & money: Balance, credit, debit, expense, deposit, multiplier, per annum, currency, unitary Deduction: Parallel, perpendicular transversal, sum, equation, polygon, conjecture, counterexample Rotation & Translation: Rotate, symmetry, regular, invariant, vertex, horizontal, vertical | Rotation & translation: Rotate, symmetry, regular, invariant, vertex, horizontal, vertical Pythagoras Theorem: Square root, square number, hypotenuse, opposite, adjacent Enlargement and similarity: Enlarge, similar, scale factor, corresponding, image Solving ratio & proportion: Proportion, ratio, direct proportion, inverse proportion | Solving ratio & proportion: Proportion, ratio, direct proportion, inverse proportion Rates: Convert, mass, origin, volume, substitute Probability: Probability, relative frequency, independent, chance, event, biased. Algebraic Representation: Quadratic, inequality, reciprocal, cubic, origin, parabola |