

KS3 Curriculum Plan 2023-2024

	LP1	LP2	LP3	LP4	LP5
Year 7	Algebraic Thinking	Place Value & Proportion	Application of Number & Directed Number	Fractional Thinking & Lines and Angles	Reasoning with Number
TOPIC					
Knowledge	Algebraic Thinking – sequences, understanding and using algebraic notation, equality and equivalence	Place Value and Proportion – place value ordering integers and decimals, and Fraction, Decimal and percentage equivalence	Application of Number – problem solving with addition, subtraction, multiplication and division, and fractions and percentages of amounts Directed Number – operations and equations with directed number	Fractional Thinking – addition and subtraction of fractions Lines and Angles – constructing, measuring and using geometric notation, developing geometric reasoning	Reasoning with Number – developing number sense, sets and probability, prime numbers and proof
Skills	Use substitution to generate sequences and evaluate algebraic terms. Use knowledge of fractions, decimals and percentages to solve problems in a real-life context. Use knowledge of the four operations to solve problems involving perimeter, money, frequency tables and frequency trees. Use knowledge of the four operations to work with directed number including solving equations. Pupils will also be able to use knowledge of multiples to add and subtract fractions. Use knowledge of classifying angles to estimate and check answers when calculating with angles.				
Key Vocab	Sequence, linear, algebraic, substitution, equivalence, simplify.	Decimal place, median, equivalent, fraction, percentage, frequency.	Integer, perimeter, estimate, parallelogram, trapezia, negative.	Improper fraction, denominator, numerator, parallel, perpendicular, isosceles.	Estimation, calculation, derive, Venn diagram, probability, counterexample.

	LP1	LP2	LP3	LP4	LP5
Year 8	Proportional Reasoning	Representations & Algebraic Techniques	Developing Number	Developing Geometry	Reasoning with Data
TOPIC					
Knowledge	Proportional Reasoning – ratio and scale, multiplicative change, multiplying and dividing with fractions	Representations – working in the cartesian plane Algebraic Techniques – brackets, equations and identities, sequences and indices	Developing Number – fractions and percentages, standard index form and number sense	Developing Geometry – angles in parallel lines and polygons, area of trapezia and circles, line symmetry and reflection	Representations – representing data, tables and probability Reasoning with Data – the data handling cycle and measures of spread
Skills	Use proportional reasoning to solve numerical and geometrical problems Calculate with fractions, decimals and percentages to solve problems in a real-life context. Use standard form to write, compare and calculate with very large numbers Plot and interpret straight lines graphs and make connections with direct proportion problems. Use algebraic techniques to manipulate terms, expressions, equations and generate terms of a sequence. Use geometrical reasoning to calculate missing angles in polygons. Combine knowledge of area to determine the area of compound shapes. Identify and complete transformations involving reflections Analyse and compare data sets.				
Key Vocab	Ratio, circumference, direct proportion, reciprocal, multiplier, coordinate.	Coordinate, expression, formulae, brackets, equations, sequence, indices.	Indices, ordinary, standard form, fractional, convert, capacity.	Transversal, notation, quadrilateral, interior, exterior, polygon.	Primary source, secondary source, questionnaires, distribution, grouped data, average, measures.

	LP1	LP2	LP3	LP4	LP5
Year 9	Reasoning with Algebra	Constructing in 2 and 3 Dimensions	Reasoning with Number	Reasoning with Geometry	Reasoning with Proportions and Representations
TOPIC					
Knowledge	Reasoning with Algebra – Straight line graphs, forming and solving equations, working with primes, expanding and factorising.	Constructing in 2 and 3 Dimensions – Three dimensional shapes, constructions and congruency	Reasoning with Number – Numbers, using percentages, maths and money	Reasoning with Geometry – Deduction, rotation and translation, Pythagoras' theorem	Reasoning with Proportion – Enlargement and similarity, solving ratio and proportion, rates Representations – Probability, algebraic representation
Skills	Identify and find the equation of straight-line graphs and make connections to linear sequences Solve equations and inequalities and identify points of intersection on a graph Plot and interpret quadratic graphs State the properties of 2-D and 3-D shapes, using them to solve problems involving volume and surface area Use construction and scale drawings to represent 3-D shapes as nets Use knowledge of types of numbers, fraction arithmetic and percentages to solve financial problems in a real-life context Use chains of reasoning to find unknown angles and solve geometrical problems involving polygons Complete and describe a series of transformations Identify and apply Pythagoras' theorem Use the knowledge of enlargements and scale factors to identify missing sides on similar shapes Represent proportion graphically Solve compound measure problems involving speed and density				
Key Vocab	Gradient, intercept, inequalities, probability, formulae, quadratic.	Vertices, prism, volume, perpendicular, bisector, congruency.	Rational, real numbers, denominator, numerator, multiplier, interest.	Translate, vector, variance, invariance, transformation, hypotenuse.	Scale factor, similar, proportion, conversion, density, compound units.