The Ellesmere Port C of E College

Maths

Part of the Frank Field Education Trust

KS3 Curriculum Plan 2026-2027

	TOPIC	LP1	LP2	LP3	LP4	LP5
Year 7		***Algebraic Thinking & Place Value***	***Applications of Number***	***Application of Number and Algebra & Geometrical Thinking***	***Lines and Angles & Handling Data & Ratio***	***Reasoning with Number***
		Algebraic Thinking – sequences, understanding and using algebraic notation, equality and equivalence Place Value – place value, ordering integers a decimals.	Number - problem solving with addition, subtraction, multiplication and division, introduction to fractions, metric measures	Application of Number and Algebra –, factors, multiples and primes, brackets. Geometrical Thinking – properties of shapes, area and perimeter.	Lines and Angles – constructing, measuring and using geometric notation, developing geometric reasoning Data Handling - averages, range, charts, comparing data Ratio and Proportion	.Reasoning with Number – developing number sense, proportional reasoning, sets and probability
	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	Linear, function, algebraic terms, equivalence, equality, integer, negative	Estimate, integer, divisor, metric, numerator, denominator, improper fraction.	Perpendicular, line of symmetry, perimeter, area, prime, divisible, factorise	Obtuse, vertically opposite, average, pictogram, frequency, ratio, proportion	Proportion, percentage, multiplier, independent, mutually exclusive.

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Year 8		***Proportional Reasoning***	***Algebraic & Numerical Techniques***	***Developing Geometry & Representations***	***Graphs & Reasoning in Geometry***	***Reasoning with Data, Algebra and Number***
	Knowledge	Proportional Reasoning – ratio and scale, multiplicative change, percentages multiplying and dividing with fractions	Algebraic Techniques – brackets, equations and identities, sequences, indices and rounding.	Representations and Probability – working in the cartesian plane, prime factor trees, Venn diagrams, sample space diagrams. Developing Geometry - area of trapezia and circles, volume and surface area, units of measure	Graphs - linear graphs Reasoning in Geometry – angles in parallel lines and polygons, linear graphs, transformations.	Reasoning with Data – the data handling cycle and measures of spread Algebraic Reasoning - inequalities, brackets and algebraic fractions Proportional reasoning - fractions, decimals and percentages
	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, proportion, scale, convert, interest, multiplier, percentage.	Percentage, variable, sequences, indices, standard form, compare, significant figure.	Midpoint, circumference, radius, vertices, prism, independent, prime	Linear, gradient, translation, transformation, corresponding, co-interior, exterior.	Primary source, correlation, discrete, continuous, inequality, factorise, denominator.

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Year 9		***Numerical and Algebraic Reasoning***	***Geometrical Techniques***	***Proportional Reasoning & Graphs***	***Graphs and Reasoning with Geometry***	***Representation for Data and Further Geometry***
	Knowledge	Numerical Reasoning - fractions, percentages, percentage change, compound interest Reasoning with Algebra – forming and solving equations, expanding and factorising and factorising quadratic expressions	Constructing in 2 and 3 Dimensions – Three dimensional shapes, constructions, volume and surface area and congruency	Proportional reasoning - ratio, proportion, compound measures and Pythagoras' Theorem Graphs - straight line graphs, real life graphs	Graphs - real life graphs, quadratic graphs Reasoning with Geometry - reflection, rotation, translation, enlargement, similarity, congruency	Geometry - vectors, surface area, volume Representations for data – scatter graphs, frequency polygons, averages
	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	Tax, inverse, relative frequency, index, inequality, factorise, quadratic	Formulae, circumference, volume, bisector, perpendicular, loci, elevation, truncate	Hypotenuse, ratio, proportional, gradient, y-intercept, speed, velocity	Velocity, root, co-interior, bearing, vector, similar, congruent	Data, correlation, scatter graph, relationship, average, mid-point, vectors.