Mathematics Foundation

Archdiocese of Liverpool

Curriculum intent:

It is the intention of St Gregory's Mathematics department to deliver a curriculum that will develop the skills set out in the National curriculum and promote an appreciation of Mathematics as a creative and highly interconnected discipline providing the solution to some of history's most intriguing problems. Aiming to provide students with a sense of enjoyment and curiosity about the subject together with an appreciation of the beauty and power of Maths in different cultures.

We endeavour to provide support across a range of subjects with an emphasis on problem-solving and developing Mathematical fluency across the whole school curriculum, narrowing gaps that students may have with the basic numeracy skills essential within everyday life.

Year 10 (F)

	Content	Concepts and Skills
TERM 1	Place Value, Ordering Integers and Decimals, Adding, Subtracting Integers and Decimals, Multiplying, Dividing, Integers, Inverse Operations, Negatives in Real Life, Four Rules of Negatives , BODMAS/BIDMAS, Multiplying and Dividing by Powers of 10, Multiplying and Dividing Decimals, Rounding to the Nearest 10, 100, 1000, Rounding to Decimal places, Rounding to Significant Figures, Factors, Multiples and Primes, Squares, Cubes and Roots, Product of Primes, HCF / LCM, Introduction to Powers/Indices, Working with Indices, Simplifying - Addition and Subtraction, Simplifying - Multiplication and Division, Expanding Brackets Simple Factorisation, Substitution, Tally Charts and Bar Charts, Pictograms,Vertical Line Charts, Frequency Tables and Diagrams, Two-Way Tables,Pie Charts, Scatter Diagrams, Data - Discrete and Continuous, Averages and the Range, Averages from a table, Basic Fractions, Equivalent and Simplifying Fractions, Adding and Subtracting Fractions, Finding a Fraction of an Amount, Multiplying and Dividing Fractions, Fractions, Percentages, Decimals, Introduction to Percentages, Percentage of an Amount (Calc.) Change to a Percentage (Calc.), Increase/Decrease by a Percentage Simple Interest, Solving Equations and Subject of a Formula using Flowcharts, Solving Equations, Rearranging Simple Formulae, Forming Formulae and Equations, Inequalities on a Number Line, Solve Linear Inequalities.	• knowledge of core principles • application of skills • problem solving • evaluation • group work • peer coaching • revision skills • examination technique
TERM 2	Function Machines, Generating a Sequence - Term to Term, Generating a Sequence from the nth Term, Finding the nth Term Special Sequences, Fibonacci Sequences Geometric Progressions, Polygons, Tessellations, Names of Angles, Angles on a Line and at a Point, Measuring and drawing Angles – Measuring, Measuring and drawing Angles – Drawing, Angles and Parallel Lines, Angles in a Triangle, Properties of Special Triangles, Angle Sum of Polygons.	• knowledge of core principles • application of skills • problem solving • evaluation • group work • peer coaching • revision skills • examination technique

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TERM 2	Properties of Solids, Nets, Perimeters, Area of a Rectangle, Area of a Triangle, Area of a Parallelogram, Area of a Trapezium, Metric conversions, Problems on Coordinate Axes, Surface Area of a Prism – Cuboids, Surface Area of a Prism - Triangular Prisms, Volume of a Cuboid, Circle Definitions, Area of a Circle, Circumference of a Circle, Sectors of a Circle, Volume of a Prism, Spheres, Pyramids, Cones, Frustrums, Distance-Time Graphs	• knowledge of core principles • application of skills • problem solving • evaluation • group work • peer coaching • revision skills • examination technique
TERM 3	Coordinates, Straight Line Graphs, The Gradient of a Line Midpoint of a Line on a Graph, Finding the Equation of a Straight Line, Symmetries, Congruent Shapes, Similar Shapes, Symmetries, Reflections, Rotations, Translations, Enlargements, Introduction to Ratio, Sharing using Ratio, Ratios, Fractions and Graphs, Using Ratio for Recipe Questions, Value for Money, Simple Proportion, Exchanging Money, Pythagoras' Theorem, Trigonometry, Exact Trigonometric Values	• knowledge of core principles • application of skills • problem solving • evaluation • group work • peer coaching • revision skills • examination technique