**Greig City Academy Key Stage 3 Curriculum**

**Mathematics**

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|  | **Autumn Term** | **Spring Term** | **Summer Term** |
| **Year 7** | Reading & Writing Integers & Decimals, Compare and Order Numbers, Rounding, Written Calculations, Multiply & divide by powers of 10, Multiply and Divide with Decimals, Ordering & Comparing Negatives, Adding & Subtracting Negatives, Multiplying & Dividing Negative Numbers | Fraction Notation, Fraction of an Amount Problems, Add and Subtract Fractions, Multiply & Divide Fractions, Positive Indices, Zero and Negative Indices, Multiply & Divide with Indices, Powers & Roots, Order of Operations, Algebraic Notation, Substitution, Simplify Expressions, Expand and Factorise Brackets, Algebraic Fractions | Solve one-step equations, Solving Multi-step Equations including unknowns on both sides, Name and Estimate Angles, Angles around Points & Lines, Angles & Parallel lines, Types of Triangles & Quadrilaterals & Their Angles, Calculation & Estimation with Decimals, Fraction Calculations, FDP Conversion, Percentage & Fraction of an Amount |
| **Year 8** | Collecting Like Terms, Multiplying Variables, Algebraic Fractions & All Four Operations, Writing Expressions, Expanding Brackets & Factorising, Angle Notation, Half Turns & Full Turns, Angles on Parallel Lines, Types of Triangle & Their Angles, Angles in Quadrilaterals | Writing & Using Formulae, Rearranging Formulae (One and Two Step), Expressions for Area, Area of Circles, Part Circles and Compound Shapes, Properties of 3D Shapes & Surface Area, Volume of Cuboids, Prisms & Cylinders, Solving Equations, Double-Sided Equations | Factors, Primes & Composites, Odds, Even & Multiples in Algebra, Sequences: Term to Term Rules, Sequences: Nth Term Rules, Functions, Co-ordinates, Plotting Linear Graphs, Plot Non-Linear Graphs, Reading & Using Graphs, Collecting Data, Charts & Graphs, Averages & Range |
| **Year 9 - Foundation** | Calculations, Decimal Numbers, Place Value, Factors and Multiples, Squares, Cubes and Roots, Index Notation, Prime Factors, Algebraic Expressions, Simplifying Expressions, Substitution, Formulae, Expanding and Factorising Brackets, Using Expressions and Formulae | Frequency tables, Two-way tables, Representing Data, Time-series, Stem and Leaf Diagrams, Pie Charts, Scatter Graphs, Operations with Fractions, Percentages, Solving Equations, Inequalities, Using Formulae, Nth Term, Types of Sequences | Properties of shapes, Angles in Parallel Lines, Angles in Triangles, Interior and Exterior Angles, Geometrical Problems, Averages and Range, Estimating Mean, Sampling, Area of Compound Shapes, Surface Area and Volume of 3-D shapes, Co-ordinates, Linear Graphs, Real-life Graphs, Distance-time Graphs, Transformations |
| **Year 9 –** **Higher** | Estimation, HCF and LCM, Index Laws (including negative and zero), Standard Form, Surds, Algebraic Indices, Expanding and Factorising, Equations, Formulae, Linear and Non-Linear Sequences | Statistical Diagrams, Time-Series, Scatter Graphs, Averages and Range, Fractions, Ratio and Proportion, Percentages, Angles Properties of Triangles and Quadrilaterals, Interior and Exterior Angles, Pythagoras Theorem, Trigonometry | Linear Graphs, Real-Life Graphs, Line Segments, Quadratic Graphs, Cubic and Reciprocal Graphs, Perimeter and Area, Prisms, Circles, Cylinders and Spheres, Pyramids and Cones, Transformations, Loci, Constructions, Solving Inequalities, Solving Quadratics, Completing the Square, Simultaneous Equations, Experimental Probability, Venn Diagrams, Tree Diagrams |