Compass School Southwark KS3 Plan – Maths

	Year 7	Year 8	Year 9
Term 1	**Solve word problems** • Place value (including decimals) • Median • Rounding • Add and subtract (including decimals) • Estimation • Perimeter • Sequences (arithmetic) • Word problems	**Number** • Primes and indices • Prime factorisation to find LCM, HCF, squares, cubes • Enumerating sets • Set notation • Fraction recap • Multiplying & dividing fractions • Significant figures • Estimation	**Graphs and proportion** • Cartesian coordinates • Linear graphs (y=mx + c) • Graphs linked to sequences • Direct and inverse proportion • Calculate with scales • Standard form
Term 2	**Explain and investigate** • Factors, HCF, multiples, LCM • Venn diagrams • Multiply and divide (including decimals) • Area of rectangle and triangle • Calculate the mean • Sequences (geometric)	**Algebraic expressions** • Inequality statements • Formulate and evaluate expressions • Linear equations • Expressions and equations from real-world situations • Linear graphs • Conversion graphs • Linear sequences: nth term	**Algebraic expressions** • Sequences including arithmetic and nth term) • Algebraic manipulation • Change the subject of a formula • Expansion • Factorisation
Term 3	**Geometry** • Draw, measure and name acute and obtuse angles • Time (clock faces) • Find unknown angles (straight lines, at a point, vertically opposite) • Properties of triangles and quadrilaterals inc. symmetry • Logo programme	**2-D geometry** • Find unknown angles (including parallel lines) • Conversion between length units and between area units • Circumference and area of a circle • Areas and perimeters of composite figures • Areas of parallelograms and trapeziums	**2-D geometry** • Construction and loci • Pythagoras' theorem • Congruent & similar • Scale drawing • Transformations (translation, enlargement, rotation, reflection)

Term 4	**Fractions** • Equivalent fractions • Compare and order fractions and decimals • Change mixed numbers to improper fractions and vice versa • Fraction of a quantity • Add and subtract fractions	**Proportional reasoning** • Convert between FDP • Percentage increase and decrease, finding the whole given the part and the percentage • Ratio (equivalent, of a quantity) • Speed, density and pressure formulae triangles	**Equations and inequalities** • Construct and solve equations and inequalities • Graphical solutions to simultaneous linear equations • Quadratic and other graphs • Solving quadratics by factorisation • Difference of two squares
Term 5	**Applications of algebra** • Order of operations • Negatives • Algebraic notation • Substitution • Simplify algebraic expressions • Solve word problems with expressions • Sequences (term-to-term, not nth term)	**3-D geometry & construction** • Draw accurate triangles and quadrilaterals (ruler, protractor, compasses) • Visualise and identify 3-D shapes and their nets • Surface areas of nets • Volume of cuboid, prism, cylinder, composite solids • Plans and elevations	**Geometry** • Trig ratios • Exploring trigonometry with a 30-60-90 triangle • Circle theorems • Use known angle and shape facts to obtain simple proofs • Angles in polygons
Term 6	**Percentages and statistics** • Convert between simple FDP • Percentage of a quantity • Find the whole, given the part and the percentage • Data handling cycle • Primary & secondary data (inc. questionnaires) • Construct and interpret pictograms, bar charts, pie charts and line graphs	**Statistics (discrete)** • Everyday data e.g. timetables • Grouping data • Collect and organise data • Interpret and compare statistical representations • Mean, median and mode averages (inc. from tables) • The range and outliers • Scatter graphs • Stem and leaf	**Statistics (continuous)** • Probability (or/not) • Listing outcomes • Mean of grouped data • Compare two data sets • Estimate of the mean • Cumulative frequency • Box plots • Histograms (equal widths) • Frequency polygon • Continuous data project