

WC Maths Curriculum Overview - KS3



	Year 7	Year 8	Year 9
Half Term 1	Algebraic Thinking <ul style="list-style-type: none"> - 7.1 Sequences - 7.2 Understand & Use of Algebraic Notation 	Proportional Thinking <ul style="list-style-type: none"> - 8.1 Ratio and Proportion - 8.2 Multiplicative Change 	Reasoning with Algebra <ul style="list-style-type: none"> - 9.1 Straight Line Graphs - 9.2 Forming and Solving Equations
Half Term 2	Algebraic Thinking <ul style="list-style-type: none"> - 7.3 Equality & Equivalence 	Proportional Thinking <ul style="list-style-type: none"> - 8.3 Multiplying and Dividing Fractions Representations <ul style="list-style-type: none"> - 8.4 Working in the Cartesian Plane 	Shape <ul style="list-style-type: none"> - 9.3 Three Dimensional Shapes Reasoning with Number <ul style="list-style-type: none"> - 9.5 Number
Half Term 3	Developing Number <ul style="list-style-type: none"> - 7.4 Place Value - 7.5 Fraction, Decimal & Percentage Equivalence 	Representations <ul style="list-style-type: none"> - 8.5 Representing Data - 8.6 Tables and Probability 	Reasoning with Number <ul style="list-style-type: none"> - 9.6 Using Percentages - 9.7 Maths and Money
Half Term 4	Developing Number <ul style="list-style-type: none"> - 7.6 Solving problems with addition & subtraction - 7.7 Solving problems with multiplication & division 	Algebraic Techniques <ul style="list-style-type: none"> - 8.7 Brackets, Equations and Inequalities - 8.8 Sequences 	Proportional Thinking <ul style="list-style-type: none"> - 9.8 Ratio and Proportion - 9.9 Pythagoras' Theorem
Half Term 5	Developing Number <ul style="list-style-type: none"> - 7.8 Fractions & Percentages of Amounts - 7.9 Operations & Equations with Directed Numbers 	Algebraic Techniques <ul style="list-style-type: none"> - 8.9 Indices Line and Angles <ul style="list-style-type: none"> - 8.10 Measuring using Geometric Notation - 8.11 Developing Geometric Reasoning 	Reasoning with Geometry <ul style="list-style-type: none"> - 9.10 Rotation and Translation - 9.11 Enlargement and Similarity
Half Term 6	REVISION and END OF YEAR EXAM Developing Number <ul style="list-style-type: none"> - Addition & Subtraction of Fractions 	REVISION and END OF YEAR EXAM Developing Number <ul style="list-style-type: none"> - 8.12 Fractions and Percentages 	REVISION and END OF YEAR EXAM Reasoning with Geometry <ul style="list-style-type: none"> - 9.12 Rates - 9.4 Deduction (if time allows)

WC Maths Curriculum Overview - KS4



	Year 10	Year 11
Half Term 1	<p>NUMBER: Directed numbers, multiplication, division, rounding, indices with numbers, standard form, surds, estimation</p> <p>SHAPE: Pythagoras, length of a line segment, coordinates of the midpoint of a line, Trigonometry in 2D and 3D</p> <p>ALGEBRA: simplifying algebraic expressions, Index rules, expanding one bracket/two brackets, (factorising including simple quadratics), substitution,, recognising Expression/Equation/Identity/Formula/Term</p>	<p>ALGEBRA: algebraic fractions (simplifying, adding, subtracting , multiplying and division) , expanding 3 brackets , factorising harder quadratics, solving quadratic equations by factorisation, using the quadratic formula and by completing the square.</p> <p>SHAPE: volumes and surface area , volume units and capacity units conversions</p> <p>ALGEBRA: Sequences (recognise all types) , generating a sequence, finding the nth term of an arithmetic / quadratic sequence</p>
Half Term 2	<p>NUMBER: Fractions, percentages, decimals, recurring decimals , reciprocals</p> <p>ALGEBRA: changing the subject, Solving linear equations and forming equations , changing the subject</p> <p>NUMBER: Ratios, scales, conversion graphs, currency exchange, recipes , direct proportion, best value</p>	<p>ALGEBRA: Plotting Non-linear Graphs –(quadratic, cubic, reciprocal), graphical solutions from graph, Draw and recognise equations of circles, finding the tangent at a point on a graph, identifying turning points and equation of line of symmetry in a quadratic graph, work out the equation of a tangent to a circle algebraically. Direct & Inverse proportion (solving worded problems and filling tables), recognise the graphs of direct and inverse proportion</p>
Half Term 3	<p>SHAPE: Angles, polygons, bearings , scale drawing Tessellation, Circle Theorems</p> <p>STATISTICS: Statistical Graphs, Averages, Two-way tables, Types of data</p>	<p>ALGEBRA: Solving quadratic equations using the formula and completing the square, solving equations with algebraic fractions, forming and solving equations.</p> <p>PROBABILITY: Basic probability, frequency trees, two- way tables, Sample space diagram, Venn diagram. Relative frequency, mutually exclusive and independent events, listing, product rule for counting, conditional probability, probability tree diagram, writing answers in set notation</p> <p>ALGEBRA: Sketching non-linear Graphs, solving simultaneous equations of a quadratic and a circle or a straight line, finding an approximate solutions to quadratic equation using graphs graph</p>

WC Maths Curriculum Overview - KS4



	Year 10	Year 11
Half Term 4	<p>STATISTICS: Box plots, cumulative frequency, histograms, Comparing IQR and the median, estimate the median and the mean from a histogram, Capture and recapture</p> <p>ALGEBRA: Density/Speed / pressure , distance- time graphs, velocity- time graphs, Graphs of straight line, gradients, parallel and perpendicular lines , y-intercepts, writing the equation of a line from 2 coordinates , rate of change, area under the graph, tangent to a point (the rate of change)</p>	<p>ALGEBRA: Functions (composite, inverse)</p> <p>SHAPE: Transformation of graphs (Translation and reflection only), enlargement of similar shapes (scale factor) , Congruency, Similar areas and volumes, using formal geometric proof to prove similar triangles, Geometric proofs</p>
Half Term 5	<p>SHAPE: Perimeter, area of 2D shapes , circles, length of arcs ,area of sectors, forming equations for more complex shapes</p> <p>NUMBER: Accuracy, estimation, significant figures (N15 N16)</p> <p>SHAPE: <u>3D shapes:</u>3D shapes: Properties and names , identify and describe, (plans and elevations), planes of symmetry , <u>construction of:</u> triangles SSS SAS ASA , angles 90,45,60, perpendicular bisectors and bisecting angles ,</p>	<p>SHAPE: Vectors (magnitude, drawing), using vectors in 2D shapes to prove an argument</p> <p>ALGEBRA: Solving equations by iteration and approximation, Set up, solve and interpret the answers in growth and decay problems and work with general iterative processes.</p> <p>Inequalities (drawing solving linear inequalities) , setting up inequalities in context, solving inequalities involving quadratics , writing solutions as a set notation, solving two inequalities simultaneously</p>
Half Term 6	<p>REVISION and END OF YEAR EXAM</p> <p>SHAPE: Loci and transformation of shapes (reflection, translation, rotation) and enlargements</p>	<p>Summer examination</p>

WC Maths Curriculum Overview - KS5



	Year 12	Year 13
Half Term 1	P1 Ch1: Algebraic Expressions P1 Ch2: Quadratics P1 Ch3: Equations and Inequalities P1 Ch4: Graphs and Transformation P1 Ch14: Exponentials and Logs	P2 Ch3: Sequences and Series P2 Ch4: Binomial Expansion S2 Ch1: Regression, Correlation and Hypothesis Testing S2 Ch2: Conditional Probability
Half Term 2	P1 Ch5: Straight Line Graphs P1 Ch6: Circles P1 Ch7 Algebraic Methods P1 Ch8: Binomial Expansion S1 Ch1: Data Collection S1 Ch2: Measures of Location and Spread	P2 Ch5: Radians P2 Ch6: Trigonometric Functions P2 Ch7: Trigonometry and Modelling S2 Ch3: Normal Distribution
Half Term 3	P1 Ch11: Vectors P1 Ch9: Trigonometric Ratios S1 Ch3: Representation of Data S1 Ch4: Correlation	P2 Ch8: Parametric Equations P2 Ch9: Differentiation M2 Ch4: Moments M2 Ch5: Friction
Half Term 4	P1 Ch10: Trig Identities and Equations P1 Ch12: Differentiation S1 Ch5: Probability S1 Ch6: Statistical Distributions S1 Ch7 Hypothesis Testing	P2 Ch11: Integration P2 Ch10: Numerical Methods M2 Ch6: Projectile Motion M2 Ch7: Applications of forces M2 Ch8: Further Kinematics
Half Term 5	P1 Ch13: Integration M1 Ch1/2: Introduction/Constant Acceleration M1 Ch3: Forces and Motion M1 Ch4: Variable Acceleration	Exam revision
Half Term 6	P2 Ch1: Algebraic Methods P2 Ch2: Functions and Graphs	Key: P = Pure mathematics S = Statistics M = Mechanics