Maths Curriculum Overview 2025-2026

This overview document details what students will be studying in this subject area over the course of their time with us and the skills and knowledge they will be covering. Students will be formally assessed across the year and their progress and ATL (Attitude to Learning) will be reported home at the end of each term. Assessments will aim to assess the knowledge and skills a student has covered up to that point in their education, including the curriculum covered in the previous year/s.

Year Group	Autumn Assessment (w/c)	Spring Assessment (w/c)	Summer Assessment (w/c)
7	1/12/25	2/3/26	22/6/26
8	10/11/25	9/3/26	22/6/26
9	1/12/25	2/3/26	22/6/26
10	10/11/25	9/3/26	29/6/26
11	17/11/25	23/2/26	22/6/26
12	10/11/25	9/3/26	29/6/26
13	17/11/25	23/2/26	22/6/26

Half term	02.09.25 - 23.10.25	03.11.25 - 19.12.25	05.01.26 - 13.02.26	23.02.26 - 26.03.26	13.04.26 - 22.05.26	01.06.26 - 17.07.26
	Autumn 1 - 8 weeks	Autumn 2 - 7 weeks	Spring 1 - 6 weeks	Spring 2 - 5 weeks	Summer 1 - 5 weeks	Summer 2 - 7 weeks
Year 7	***Algebra - Sequences*** Describe, continue and find missing terms in sequences, predict next terms, recognise linear and non-linear sequences, explain the term-to-term rule. ***Algebra - Algebraic notation*** Using function machines to find output and inverse functions to find inputs, using numbers, diagrams and letters with functions machines, substituting values in two-step expressions. ***Algebra - Equality and equivalence*** Understand terminology, solve one step equations, simplifying expressions by collecting like terms	***Number - Place value and ordering integers and decimals*** Write, understand and order any numbers up to one billion, rounding, writing numbers as powers of 10, standard form ***Number - Fraction, decimals and percentages*** Looking at tenths, hundredths, fifths, quarters, eighths and thousandths, convert and link between FDP, pie charts, exploring fractions above one	***Number - Addition and subtraction*** Using mental and written strategies to add and subtract integers and decimals, financial problems, frequency trees, bar and line charts, standard form ***Number - Multiplication and division*** Using formal methods to multiply and divide integers and decimals, area of shapes, mean, multiplication in algebraic expressions ***Number - Fractions and percentages of amounts*** Finding percentage of an amount, find fraction of an amount	***Number -Operations with directed number*** Add, subtract, multiply, divide directed number, two-step equations, roots and powers ***Number - Addition and subtraction of fractions*** Convert between mixed numbers and fractions, arithmetic problems with fractions, equivalent fractions, fractions in algebraic contexts,	***Geometry -Geometric notation*** Angle notation, draw and measure angles, compass skills, basic angle facts, angles in triangles and quadrilaterals, constructing triangles, interpreting and drawing pie charts ***Geometry - Geometric reasoning*** Angles on parallel lines, angle facts, interior/exterior angles in polygons, proofs with angles, using angle facts, properties of quadrilaterals and properties of special triangles. ***Number - Number sense*** Deepen knowledge and revisit different strategies to add, subtract, multiply and divide integers and decimals, use number facts to derive other facts	***Probability - Sets and probability*** Probability vocabulary, scales, Venn diagrams, union of sets, complement of a set, express probability, sample space ***Number - Prime numbers and proof*** Prime numbers, square numbers, triangular numbers, factors, multiples, prime decomposition (HCF/LCM)
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Year 8	***Ratio and proportion - Ratio and scale*** Meaning and representation of ratio, simplify ratios, solve problems with ratios 1:n/m:n, share into a ratio, compare ratios and fractions ***Ratio and proportion - Multiplicative change***	***Algebra - Working in the Cartesian plane*** Identify lines parallel to x and y axis, recognise the line y=x, explore positive and negative gradients, plot graphs in the form y=mx+c, linear and non-linear graphs, midpoint of a line segment ***Statistics - Representing data***	***Algebra - Brackets, equations and inequalities*** Identify and use formulae, expressions, identities and equations, forming expressions, multiply out single bracket and pair of binomials, form and solve equations and inequalities, unknowns on both sides, solving equations with brackets ***Algebra - Sequences***	***Number - Fractions and percentages*** Convert fluently between FDP, FDP of an amount, using multipliers, percentage change, reverse percentages, ***Number - Standard index form*** Convert between standard form and ordinary numbers, order numbers in	***Geometry - Angles in parallel lines and polygons*** Angle notation, transversal, alternate angles, corresponding angles, co-interior angles, construct, identify and calculate sides and angles of triangles and quadrilaterals, use the sum of interior or exterior angles of polygons,	***Statistics - Data handling cycle*** Set up a statistical enquiry, collect data, design questionnaires, draw and interpret tables and charts, draw and interpret pie charts, grouped quantitative data, finding the range, compare distributions, misleading graphs

	Direct proportion, direct proportion graphs, currency conversions, scale factors ***Number - Multiplying and dividing fractions*** Find product of fraction and an integer, find product of any fractions, reciprocal of a number, divide any pair of fractions, multiply and divide algebraic fractions	Draw and interpret scatter graphs, line of best fit, describe linear and non-linear correlation, frequency tables (grouped/ungrouped), two-way tables. ***Probability - Tables and probability*** Sample space, two-way tables, Venn diagrams, product rule for probabilities	Generate sequences, use a simple algebraic rule, use a complex algebraic rule, find the nth term **Number - Indices** Add and subtract expressions with indices, simplify algebraic expressions by multiplying and dividing indices, addition and subtraction law, powers of powers.	standard form, calculate with numbers in standard form, negative indices, fractional indices ***Number - Number sense*** Rounding to d.p and s.f, error level notation, estimation, money calculations, convert metric lengths, areas and volume, convert units of weight and capacity, calendar and time problems.	geometric fact proof, angle bisector. ***Geometry - Area of trapezia and circles*** Calculate area of triangles, rectangles, parallelograms, trapeziums, circles, perimeter and area of compound shapes ***Geometry - Line symmetry and reflection*** Line symmetry in shapes, reflect a shape in a horizontal or vertical line, reflect a shape in a diagonal line.	***Statistics - Measures of location*** Averages, mean, mode, median, range, mean from grouped and ungrouped frequency tables, identify outliers, compare distributions using averages and the range.
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Year 9	***Algebra - Straight line graphs*** Using a table of values, gradients, intercepts, understand and write an equation in the form y=mx+c, finding an equation from a line, inverse proportion, perpendicular lines. ***Algebra - Forming and solving equations*** One and two-step equations and inequalities, solve equations and inequalities with unknowns on both sides, rearrange formulae (one step, two step and complex). ***Algebra - Testing conjectures*** Factors, multiples, primes, show that… questions, true or false, expand a pair of binomials, expand three binomials.	***Geometry - Three dimensional shapes*** Recognise 2D and 3D shapes, nets of 3D shapes, plans and elevations, area of 2D shapes, surface area of 3D shapes, volume of 3D shapes including cones, pyramids and spheres. ***Geometry - Constructions and congruency*** Draw and measure angles, locus from a point, locus from a line, locus equidistant from two points, perpendicular bisector, angle bisector, congruency, congruent triangles, construct triangles, SAS, ASA, SSS.	***Number - Numbers*** Understand the difference between, integers, decimals, real and rational numbers, surds, directed number, HCF, LCM, 4 operations with fractions, standard form. ***Number - Using percentages*** Percentage increase and decrease, reverse percentages, repeated percentage change. ***Number - Maths and money*** Calculate simple interest, compound interest, problems with VAT, wages and taxes, exchange rates, unit pricing, best buy problems.	***Geometry - Deduction*** Angles in parallel lines, solve problems using chains of reasoning, angles problems with algebra, conjecture with angles/shapes, linking constructions and geometrical reasoning. ***Geometry - Rotation and translation*** Rotational symmetry, translate using vectors, rotation and reflection of shapes, follow multiple transformations. ***Geometry - Pythagoras Theorem*** Squares and roots, identify sides of a right angles triangle, calculate hypotenuse, calculate any missing side, use Pythagoras Theorem, Pythagoras Theorem in 3D shapes.	***Ratio and proportion - Enlargements and similarity*** Enlarge by positive scale factor, enlarge by fractional scale factor, enlarge by negative scale factor, similar shapes, problems with similar triangles, ratios in right-angled triangles. ***Ratio and proportion - Ratio and proportion problems*** Direct and inverse proportion, conversion graphs, ratio problems, bust buys problems, problems with ratio and algebra. ***Proportion - Rates*** Speed distance and time problems, density mass and volume problems, flow problems, rates of change units, compound unit conversions.	***Probability - Probability*** Single event probability, relative frequency, independent events, tree diagrams, using diagrams to work out probabilities. ***Algebra - Algebraic representation*** Draw and interpret quadratic graphs, reciprocal graphs, simultaneous equations on graphs, represent inequalities. ***Consolidation of all topics***

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	Maths Higher					
Year 10	***Geometry - Congruence, similarity and enlargement*** Enlarge by positive / fractional/ negative scale factor, sides and angles in similar shapes, areas of similar shapes, volume of similar shapes, congruent triangles, proof of congruent triangles. **Geometry - Trigonometry** Explore ratio in right-angles triangles, label a right-angles triangles, use the sine, cosine and tangent to find missing sides and angles, key trigonometric angles, Pythagoras Theorem, sine rule, cosine rule, area of non-right angled triangles, trigonometry in 3D shapes.	***Algebra - Representing solutions of equations and inequalities*** Form and solve one and two-step equations, form and solve one and two-step inequalities, show inequality solutions on a number line, set notation, draw straight-line graph, represent solutions to inequalities on a graph, form and solve equations and inequalities with unknowns on both sides, factorise quadratic equations. ***Algebra - Simultaneous equations*** Solve simultaneous equations by substitution, adding, subtracting, using graphs, adjusting one or both equations, form simultaneous equations from information, solve simultaneous equations where one is a quadratic using graphs or algebraically, solve simultaneous equations with a third unknown.	***Geometry - Angles and bearing*** Cardinal directions, scale diagrams, understand bearings, measure and read bearings, calculate bearings using angle rules, Pythagoras and trigonometry, solve bearings problems using the sine and cosine rule. ***Geometry - Working with circles*** Label parts of a circle, fractional parts of a circle, length of an arc, area of a sector, circle theorems, volume of cylinder and cone, volume of a sphere, surface area of cylinder and cone, solve area and volume problems involving similar shapes. ***Geometry - Vectors*** Understand and represent vectors, vector notation, vectors multiplied by a scalar, addition and subtraction of vectors, vector journeys, quadrilaterals using vectors, parallel vectors, co-linear points using vectors, vector proofs.	***Ratio and proportion - Ratios and fractions*** Compare quantities using ratio, share ina ratio, link ratio and graphs, currency conversion problems, link ratio and scales, interpret ratios in the form 1:n and n:1, best buy problems, combine a set of ratios, link ratio and algebra, ratio in area and volume problems. ***Number - Percentages and interest*** Convert between FDP, percentages of amounts, percentage increase and decrease, simple and compound interest, repeated percentage change, solve problems with growth and decay, iterative processes, solve problems using FDP. ***Probability - Probability*** Add, Subtract, multiply and divide fractions, find probabilities from tables, Venn diagrams and frequency trees, sample spaces, tree diagrams, conditional probability (tree diagrams, Venn diagrams and two-way tables).	***Statistics - Collecting, representing and interpreting data*** Understand populations and samples, stratified sample, types of data, frequency tables, frequency polygons, two-way tables, line and bar charts, pie charts, charts and graphs criticism, histograms. averages from a list and a table, time series graph, stem and leaf diagram, cumulative frequency diagram, box plots, comparing distributions, scatter graphs, lines of best fit, extrapolation. ***Number - Non-calculator methods*** Four rules of fraction arithmetic, exact answers, rational and irrational numbers, surds, rounding, estimating, limits of accuracy, upper and lower bounds, financial maths problems, multi-step problems. ***Algebra - Types of number and sequences*** Know the difference between factors and multiples, prime numbers and expressing numbers as a product of their primes, arithmetic sequences, geometric sequences, sequences involving surds, find the nth term for linear and quadratic sequences.	***Number - Indices and roots*** Square and cube numbers, powers and roots, standard form, zero power and negative indices, powers of powers, fractional indices, calculating with numbers in stand form. ***Algebra - Manipulating expressions*** Add and subtract simple and complex algebraic fractions, multiply and divide simple and complex algebraic fractions, form and solve equations and inequalities with fractions including algebraic fractions, represent numbers algebraically, algebraic proofs.

	Maths Foundation					
Year 10	**Geometry - Congruence, similarity and enlargement** - Enlarge by positive / fractional scale factor, sides and angles in similar shapes, congruent triangles **Geometry - Trigonometry** - Explore ratio in right-angles triangles, label a right-angles triangles, use the sine, cosine and tangent to find missing sides and angles, key trigonometric angles, Pythagoras Theorem	**Algebra - Representing solutions of equations and inequalities** - Form and solve one and two-step equations, form and solve one and two-step inequalities, show inequality solutions on a number line, draw straight-line graph, form and solve equations and inequalities with unknowns on both sides **Algebra - Simultaneous equations** - Solve simultaneous equations by substitution, adding, subtracting, using graphs, adjusting one or both equations, form simultaneous equations from information	**Geometry - Angles and bearing** - Cardinal directions, scale diagrams, understand bearings, measure and read bearings, calculate bearings using angle rules, Pythagoras and trigonometry **Geometry - Working with circles** - Label parts of a circle, fractional parts of a circle, length of an arc, area of a sector, volume of cylinder and cone, volume of a sphere, surface area of cylinder and cone **Geometry - Vectors** - Understand and represent vectors, vector notation, vectors multiplied by a scalar, addition and subtraction of vectors	**Ratio and proportion - Ratios and fractions** - Compare quantities using ratio, share ina ratio, link ratio and graphs, currency conversion problems, link ratio and scales, interpret ratios in the form 1:n and n:1, best buy problems, combine a set of ratios, link ratio and algebra **Number - Percentages and interest** - Convert between FDP, percentages of amounts, percentage increase and decrease, simple and compound interest, repeated percentage change, solve problems with growth and decay, solve problems using FDP **Probability - Probability** - Add, Subtract, multiply and divide fractions, find probabilities from tables, Venn diagrams and frequency trees, sample spaces, tree diagrams	**Statistics - Collecting, representing and interpreting data** - Understand populations and samples, types of data, frequency tables, frequency polygons, two-way tables, line and bar charts, pie charts, charts and graphs criticism, averages from a list and a table, time series graph, stem and leaf diagram, comparing distributions, scatter graphs, lines of best fit, extrapolation **Number - Non-calculator methods** - Four rules of fraction arithmetic, exact answers, rounding, estimating, limits of accuracy, financial maths problems, multi step problems **Algebra - Types of number and sequences** - Know the difference between factors and multiples, prime numbers and expressing numbers as a product of their primes, arithmetic sequences, geometric sequences, find the nth term for linear sequences	**Number - Indices and roots** - Square and cube numbers, powers and roots, standard form, zero power and negative indices, powers of powers, calculating with numbers in stand form **Algebra - Manipulating expressions** - Form and solve equations and inequalities with fractions, represent numbers algebraically, algebraic proofs
	Maths Higher					
Year 11	***Algebra - Gradients and lines*** Equations of lines parallel to the axis, plot straight line graphs using y=mx+c, find the equation of a straight line graph, find the equation of a line given one point and a gradient of two points. ***Algebra - Non-linear graphs*** Plot and read from quadratic, cubic and reciprocal graphs, recognise graphs shapes, identify roots and intercepts of quadratics, exponential graphs, equations of a centre circle, equations of tangents to a curve	***Algebra - Expanding and factorising*** Expand and factorise with a single bracket, expand binomials, factorise quadratic expressions, solve equations equal to 0, complete the square, use the quadratic formula ***Algebra - Changing the subject*** Solve equations and inequalities, change the subject of simple and complex formula, change the subject where the subject	***Ratio and proportion - Multiplicative reasoning*** Direct proportion, pressure and density, inverse proportion, inverse proportion equations, ratio problems ***Geometry - Geometric reasoning*** Angles at a point, angles in parallel lines, exterior and interior angles of polygons, geometric facts, vectors, circle	***Geometry - Transforming and constructing*** Line symmetry and reflection, translation of shapes, enlargements of shapes, negative enlargements of shapes, invariant points and lines, constructions using protractor/compasses/ruler, loci problems, trigonometrical graphs, sketch and identify translations of graphs of given functions	***Revision PLC based*** - Area - Volume - Circles - FDP - Angles - Pythagoras - Transformations - Directed number

	Algebra - Using graphs Reflect shapes, conversion graphs, real life straight line graphs, distance/time graphs, inverse proportion, solutions to equations using graphs, area under a curve on a graph.	appears more than once, solve by iteration ***Algebra - Functions*** Function machines, substitution, function notation, composite functions, inverse functions, quadratic functions, quadratic inequalities, trigonometric functions.	theorems, Pythagoras Theorem using trigonometric ratios ***Algebra - Algebraic reasoning*** Find the nth term of linear and quadratic sequences, simultaneous equations, simultaneous equations with one quadratic, algebraic proof, inequalities with two variables	***Listing and describing*** Organised lists, product rule for counting, sample space and probability, Venn diagrams, plans and elevations, compare distributions, scatter graphs ***Show that….*** Number, algebra, shape, angles, data, vectors, congruent triangles, proof with congruent triangles	
	Maths Foundation				
Year 11	**Algebra - Gradients and lines** Equations of lines parallel to the axis, plot straight line graphs using y=mx+c, find the equation of a straight line graph, find the equation of a line given one point and a gradient of two points. ***Algebra - Non-linear graphs*** Plot and read from quadratic, cubic and reciprocal graphs, recognise graphs shapes, identify roots and intercepts of quadratics, exponential graphs, equations of a centre circle, equations of tangents to a curve. ***Algebra - Using graphs*** Reflect shapes, conversion graphs, real life straight line graphs, distance/time graphs, inverse proportion, solutions to equations using graphs, area under a curve on a graph.	***Algebra - Expanding and factorising*** Expand and factorise with a single bracket, expand binomials, factorise quadratic expressions, solve equations equal to 0, complete the square, use the quadratic formula. ***Algebra - Changing the subject*** Solve equations and inequalities, change the subject of simple and complex formula, change the subject where the subject appears more than once, solve by iteration. ***Algebra - Functions*** Function machines, substitution, function notation, composite functions, inverse functions, quadratic functions, quadratic inequalities, trigonometric functions.	***Ratio and proportion - Multiplicative reasoning*** Direct proportion, pressure and density, inverse proportion, inverse proportion equations, ratio problems. ***Geometry - Geometric reasoning*** Angles at a point, angles in parallel lines, exterior and interior angles of polygons, geometric facts, vectors, circle theorems, Pythagoras Theorem using trigonometric ratios. ***Algebra - Algebraic reasoning*** Find the nth term of linear and quadratic sequences, simultaneous equations, simultaneous equations with one quadratic, algebraic proof, inequalities with two variables.	***Geometry - Transforming and constructing*** Line symmetry and reflection, translation of shapes, enlargements of shapes, negative enlargements of shapes, invariant points and lines, constructions using protractor/compasses/ruler, loci problems, trigonometric graphs, sketch and identify translations of graphs of given functions. ***Listing and describing*** Organised lists, product rule for counting, sample space and probability, Venn diagrams, plans and elevations, compare distributions, scatter graphs. ***Show that….*** Number, algebra, shape, angles, data, vectors, congruent triangles, proof with congruent triangles.	***Revision PLC based*** • Area • Volume • Circles • FDP • Angles • Pythagoras • Transformations • Directed number

	Statistics		
Year 11	***Collection of data*** Describing data, grouping data, samples, collecting data, hypotheses, designing data collections ***Processing and representing data*** Tables, charts, populations pyramids, cumulative frequency, distributions, misleading graphs ***Summarising data*** Averages, standard deviation, box pots, outliers, skewness, estimation	***Scatter diagrams and correlation*** Scatter diagrams, correlation, line of best fit, equations of lines of best fit, Spearman's rank correlation coefficient ***Time series*** Line graphs, time series, trend lines, variations in time series, moving averages ***Probability*** Experimental probability, sample space diagrams, Venn diagrams, independent events, tree diagrams, conditional probability	***Index numbers*** Index numbers, RPI, CPI, GDP, Chain base index numbers, rates of change ***Probability distributions*** Binomial distributions, normal distributions, standardised distributions, quality assurance and control charts ***Revision***
	Core Maths		
Year 12	***Paper 1*** Key skills Fermi estimation Data and sampling Fair representation Measures of spread Box and whisker plots Cumulative frequency graphs Histograms Income Tax/ NI AER APR ***Paper 2*** Key Skills Normal distribution Calculating probabilities Estimate of the mean The sample mean Confidence intervals Critical analysis Selectivity of data Sampling and trialling Misleading data	***Paper 1*** Mortgages Student loans Exchange rates/ VAT Standard form Estimation techniques (scaling/subdividing/stating assumptions) Fermi Estimation ***Paper 2*** Lines of best fit Regression lines PMCC - Product Moment Correlation Coefficient Critical analysis Critical analysis of models	***Paper 1*** Revision Analysis of data Finance Estimation ***Paper 2*** Revision Critical analysis of data and models Normal distribution Probability and estimation Correlation Regression

	A Level		
Year 12	***Pure*** Algebra and functions Coordinate geometry in the (x,y) plane Further algebra Trigonometry ***Statistics*** Statistical sampling Data presentation and interpretation Probability	***Pure*** Vectors Differentiation Integration ***Statistics*** Statistical distributions Statistical hypothesis testing ***Mechanics*** Quantities and units in mechanics Kinematics 1 Forces and Newton's Laws	***Pure*** Exponentials and logarithms Proof Algebraic and partial fractions ***Mechanics*** Forces and Newton's Laws Kinematics 2
	A Level		
Year 13	***Pure*** Functions and modelling Series and sequences The binomial theorem Trigonometry Parametric equations ***Statistics*** Regression and correlation Probability ***Mechanics*** Moments Forces at any angle	***Pure*** Differentiation Numerical methods for the trapezium rule Integration ***Statistics*** The Normal distribution ***Mechanics*** Applications of kinematics Applications of forces	***Pure*** Vectors (3D) ***Statistics*** The Normal distribution ***Mechanics*** Further kinematics ***Revision***