KS4 Curriculum Plan

Year 10F

	LP1	LP2	LP3	LP4	LP5
TOPIC	*Statistical, Numerical & Algebraic thinking*	*Numerical & geometrical thinking*	*Geometrical & algebraic thinking, Ratio & Proportion*	*Statistical, Numerical & Algebraic thinking*	*Numerical, algebraic & geometrical thinking*
Knowledge	Data Cycle, Primes, factors & multiples, Algebraic manipulation	Accuracy & rounding, Circles, Spheres & pyramids, right-angled triangles, Proof & formulae, Geometric constructions & calculations	Geometric constructions & calculations, ratio, direct & inverse proportion, percentage change, solving equations graphically	Solving equations algebraically, fractions & decimals, bivariate data, Indices & standard form, exact calculations	Equations & inequalities, straight line graphs, compound units, 2D & 3D representations
Skills	Apply and demonstrate knowledge and understanding of mathematical skills to problem solve, using a range of modelling & mathematical representations. Use reasoning strategies to investigate mathematical concepts. Prove conjectures within the maths content taught.				
Key Vocab	Inequality, Discrete data, continuous data, grouped frequency table, two-way table, composite bar chart, line graph, trend, time series, pie chart, outlier, estimate, random sample, Highest common factor (HCF), lowest common multiple (LCM), index (indices), power, prefix, prime factor decomposition, Term, like term, variable, common factor, multiply out, factorise, linear, quadratic	Expression, equation, identity, formula, variables, substitute, rearrange, subject, estimate, significant digit, error interval, Perpendicular, parallelogram, triangle, trapezium, isosceles trapezium, compound shape, surface area, volume, cuboid, prism, cross-section, circumference, pi, chord, arc, segment, sector, tangent, pyramid, cone, slant height, sphere, Hypothenuse, Pythagoras' theorem, surd, opposite, adjacent, sine, cosine, tangent, Equation, identity, Construct, Sketch, Scale, Locus (plural: loci), Equidistant, Bisector, Congruent, perpendicular	Parallel lines, corresponding angles, alternate angles, co-interior angles, exterior angle, interior angles, regular, irregular. Polygon, tessellate, vertex, ratio, highest common factor, simplify, simplest form, share into, unit ratio, proportion, unitary method, direct proportion, inverse proportion, original amount, multiplier, percentage change, investment, profit, loss, compound interest, annual, salary, half-life, simple interest,	Intersection, simultaneous equation, intercept, estimate, equation, inequality, solve, solution, expand, variable, formula (plural: Formulae) subject, rearrange, brackets, linear, quadratic, integer, factorise, unit fraction, numerator, improper fraction, mixed number, reciprocal, scatter graph, correlation, variables, outlier, estimate, line of best fit, interpolation, extrapolation, index (indices), power, prefix, standard form, ordinary form	Round, decimal place, significant figure, estimate, surd, pi, trigonometric ratios, sine, cosine, tangent, equation, solve, brackets, inequality, integer, two-sided inequality, coordinate, parallel, axis, midpoint, linear, gradient, steepness, linear equation, intercept, density, pressure, speed, force, rates of pay, scale, ratio, plan, side elevation, front elevation, dimensions, isometric, surface area, volume, cone, sphere

Year 10H

	LP1	LP2	LP3	LP4	LP5
TOPIC	*Statistical, Numerical & Algebraic thinking*	*Numerical & geometrical thinking*	*Geometrical & algebraic thinking, Ratio & Proportion*	*Statistical, Numerical & Algebraic thinking*	*Numerical, algebraic & geometrical thinking*
Knowledge	Data Cycle, Primes, factors & multiples, Algebraic manipulation	Accuracy & rounding, Circles, Spheres & pyramids, right-angled triangles, Proof & formulae, constructions & loci, geometric proof.	Geometric proof, ratio, direct & inverse proportion, percentage change, solving equations graphically	Solving equations algebraically, fractions & decimals, bivariate data, Indices & standard form, surds	Surds, inequalities, compound units, 2D & 3D representations, non-right angles triangles
Skills	Apply and demonstrate knowledge and understanding of mathematical skills to problem solve, using a range of modelling & mathematical representations. Use reasoning strategies to investigate mathematical concepts. Prove conjectures within the maths content taught.				
Key Vocab	Inequality, Discrete data, continuous data, grouped frequency table, two-way table, composite bar chart, line graph, trend, time series, pie chart, outlier, estimate, random sample, Population, census, sample, bias, random, stratified sample, cumulative frequency, lower quartile, upper quartile, interquartile range, box-plot, histogram, Highest common factor (HCF), lowest common multiple (LCM), index (indices), power, prefix, prime factor decomposition, Term, like term, variable, common factor, multiply out, factorise, linear, quadratic, completing the square, perfect squares	Expression, equation, identity, formula, variables, substitute, rearrange, subject, estimate, significant digit, error interval, Perpendicular, parallelogram, triangle, trapezium, isosceles trapezium, compound shape, surface area, volume, cuboid, prism, cross-section, circumference, pi, chord, arc, segment, sector, tangent, pyramid, cone, slant height, sphere, Hypothenuse, Pythagoras' theorem, surd, opposite, adjacent, sine, cosine, tangent, Elevation, depression, Equation, identity, Construct, Sketch, Scale, Locus (plural: loci), Equidistant, Bisector, Congruent, perpendicular	Parallel lines, corresponding angles, alternate angles, co-interior angles, exterior angle, interior angles, regular, irregular. Polygon, tessellate, vertex, ratio, highest common factor, simplify, simplest form, share into, unit ratio, proportion, unitary method, direct proportion, inverse proportion, gradient, constant, original amount, multiplier, percentage change, investment, profit, loss, compound interest, annual, salary, half-life, simple interest, value added tax (VAT), depreciate	Intersection, simultaneous equation, intercept, estimate, iterative, equation, inequality, solve, solution, expand, variable, formula (plural: formulae) subject, rearrange, brackets, linear, quadratic, integer, factorise, unit fraction, numerator, improper fraction, mixed number, reciprocal, scatter graph, correlation, variables, outlier, estimate, line of best fit, interpolation, extrapolation, index (indices), power, prefix, standard form, ordinary form, negative indices, fractional indices	Round, decimal place, significant figure, estimate, surd, pi, trigonometric ratios, sine, cosine, tangent, irrational, rational, rationalise the denominator, equation, solve, brackets, inequality, integer, two-sided inequality, quadratic formula, complete the square, roots, perfect squares, region, coordinate, parallel, axis, midpoint, linear, gradient, steepness, linear equation, intercept, exponential, cubic, density, pressure, speed, force, rates of pay, scale, ratio, plan, side elevation, front elevation, dimensions, isometric, surface area, volume, cone, sphere, sine rule, cosine rule, unknown angle, diagonal, plane

Year 11F

	LP1	LP2	LP3	LP4	LP5
TOPIC	*Ratio, Proportion & Number*	*Geometry, Probability & Statistics*	*Algebra*	*Preparation for exams*	
Knowledge	Ratio, direct & inverse proportion, percentages, growth & decay	Transformations, similarity, bearings & scale drawings, Area, volume, surface area, Pythagoras' Theorem, right-angled triangle trigonometry. Probability, Draw & use representations of data.	Manipulate algebraic expressions, Equations & inequalities, Sequences, Identify, draw & use graphs, real life graphs, kinematic formulae		
Skills	Apply and demonstrate knowledge and understanding of mathematical skills to problem solve, using a range of modelling & mathematical representations. Use reasoning strategies to investigate mathematical concepts. Prove conjectures within the maths content taught.				
Key Vocab	Highest common factor (HCF), lowest common multiple (LCM), index (indices), power, prefix, prime factor decomposition, Unit fraction, numerator, improper fraction, mixed number, reciprocal, depreciate, simple interest, standard form, ordinary form, estimate, significant digit, error interval, Ratio, highest common factor, simplify, simplest form, proportion, unit ratio, unitary method, direct proportion, inverse proportion, compound interest, per annum, annual, salary, half-life,	Column vector, maps, centre of rotation, centre of enlargement, origin, congruent, similar, corresponding sides, corresponding angles, scale factor, perpendicular, parallelogram, triangle, trapezium, isosceles trapezium, compound shape, surface area, volume, cuboid, prism, cross-section, circumference, pi, chord, arc, segment, sector, tangent, pyramid, cone, slant height, sphere. hypothenuse, Pythagoras' theorem, surd, opposite, adjacent, sine, cosine, tangent, probability, mutually exclusive, exhaustive, experimental probability, relative frequency, Venn diagram, tree diagram, frequency tree, independent, dependent events,	Term, like term, variable, common factor, multiply out, factorise, linear, quadratic, expression, equation, identity, substitute, rearrange, subject Intersection, simultaneous equation, intercept, estimate, inequality, solve, solution, expand, multiply out, variable, formula (plural: formulae) brackets, integer, sequence, terms, term-to-term rule, general term. coordinate, parallel, axis, midpoint, linear, gradient, steepness, linear equation, intercept, distance-time graph, average speed, rate of change, roots, cubic function, asymptotes, intersection		

Year 11H

	LP1	LP2	LP3	LP4	LP5
TOPIC	*Ratio, Proportion & Number*	*Geometry, Probability & Statistics*	*Algebra*	*Preparation for exams*	
Knowledge	Ratio & proportion, percentages, growth & decay, compound measures, using prime factor decomposition	Transformations, Vectors, Similarity & congruency, Bearings, maps & scale drawings, Area, volume & surface area, Sectors & arcs, Non-right angled triangle trigonometry, Probability, Draw and use representations of data.	Manipulate algebraic expressions, Equations & inequalities, Sequences, Identify, draw & use graphs, functions, real life graphs, kinematic formulae		
Skills	Apply and demonstrate knowledge and understanding of mathematical skills to problem solve, using a range of modelling & mathematical representations. Use reasoning strategies to investigate mathematical concepts. Prove conjectures within the maths content taught.				
Key Vocab	Highest common factor (HCF), lowest common multiple (LCM), index (indices), power, prefix, prime factor decomposition, Unit fraction, numerator, improper fraction, mixed number, reciprocal, depreciate, simple interest,	Interior angle, exterior angle, construct, perpendicular bisector, angle bisector, loci, equidistant, chord, tangent, subtended, cyclic quadrilateral, alternate segment, area scale factor,	Term, like term, variable, common factor, multiply out, factorise, linear, quadratic, expression, equation, identity, substitute, rearrange, subject Intersection, simultaneous equation, intercept, estimate, inequality, solve, solution, expand, multiply		