Curriculum Overview

Mathematics

Year Group	Autumn 1 (7 weeks)	Autumn 2 (8 weeks)	Spring 1 (5 weeks)	Spring 2 (5 weeks)	Summer 1 (7 weeks)	Summer 2 (7weeks)
7	Algebraic Thinking	Place Value and Proportion	Applications of Number	Directed Number and Fractional Thinking	Lines and Angles	Reasoning with Number
KS3 ASSESSMENT CRITERIA (includes low stakes testing at the end of each unit)	Sequences Understand and use algebraic notation Equality and equivalence	Place value, ordering integers and decimals Fraction, decimal and percentage equivalence	Solving problems with addition and subtraction Solving problems with multiplication and division Fractions and percentages of amounts	Operations and equations with directed number Addition and subtraction of fractions	Constructing, measuring and using geometric notation Developing geometric reasoning	Developing number sense Sets and probability Prime numbers and proof
Assessment Week	2, 4, 6	3, 6	3, 5	3, 5	3, 6	2, 4, 6
Vocabulary	Linear Non-linear, Difference Ascending Descending Geometric Simplify Equal	Tenth Hundredth Decimal Integer Numerator Denominator Percent Equivalent	Sum Difference Add Subtract Multiply Divide Finance Frequency tree	Positive Negative Numerator Denominator Mixed number Two-step equations Order of operations Roots	Geometric Parallel Line segment Decagon Polygon Quadrilateral Pie chart Proportion	Integer Venn diagram Union Intersection Complement Probability Sample space Prime number

Year Group	Autumn 1 (7 weeks)	Autumn 2 (8 weeks)	Spring 1 (5 weeks)	Spring 2 (5 weeks)	Summer 1 (7 weeks)	Summer 2 (7weeks)
8	Proportional Reasoning	Representations	Algebraic techniques	Developing Number	Developing Geometry	Reasoning with Data
KS3 ASSESSMENT CRITERIA (includes low stakes testing at the end of each unit)	Ratio and scale Multiplicative change Multiplying and dividing fractions	Working in the Cartesian plane Representing data Tables and probability	Brackets, equations and inequalities Sequences Indices	Fractions and percentages Standard index form Number sense	Angles in parallel lines and polygons Area of trapezia and circles Line symmetry and reflection	The handling data cycle Measures of location
Assessment Week	2, 4, 6	2, 4, 6	4, 5	3, 5	3, 5	4, 6
Vocabulary	Compare Gradient Conversion Currency Proportion Similar Scale	Co-ordinate Probability Parallel Scale Linear Scatter graph Correlation	Expression Factorise Expand Binomial Inequality Bracket Identity	Multiplier Percentage change Standard form Indices Decimal places Error interval Capacity	Parallel Transversal Alternate Interior Exterior Co-interior Corresponding	Mean Median Mode Frequency Outlier Questionnaire Range Bar graph

Year Group	Autumn 1 (7 weeks)	Autumn 2 (8 weeks)	Spring 1 (5 weeks)	Spring 2 (5 weeks)	Summer 1 (7 weeks)	Summer 2 (7weeks)
9	Reasoning with Algebra	Constructing in 2 and 3 dimensions	Reasoning with Number	Reasoning with Geometry	Reasoning with Proportion	Representations and Revision
KS3 ASSESSMENT CRITERIA (includes low stakes testing at the end of each unit)	Straight line graphs Forming and solving equations Testing Conjectures	Three dimensional shapes Constructions and congruency	Numbers Using percentages Maths and Money	Deduction Rotation and translation Pythagoras' Theorem	Enlargement and similarity Solving ratio and proportion problems Rates	Probability Algebraic representations Revision
Assessment Week	2, 4, 6	3, 6	2, 4	2, 4	2, 4, 6	2, 3, 6
Vocabulary	Axis Parallel Gradient Intercept Inequality Solve Rearrange	Prism Edge Vertex Net Locus Bisect Perpendicular	Rational Surd HCF LCM Increase Compound interest Value Added Tax	Conjecture Rotate Symmetry Reflect Translate Vector Transformation	Enlarge Scale factor Similar Direct proportion Inverse proportion Speed Density	Probability Relative frequency Tree diagram Independent event Quadratic Simultaneous Inequality

Year Group	Autumn 1 (7 weeks)	Autumn 2 (8 weeks)	Spring 1 (5 weeks)	Spring 2 (5 weeks)	Summer 1 (7 weeks)	Summer 2 (7weeks)
10 Foundation	1 Number 2 Algebra	3 Graphs, Tables and Charts 4 Fractions and Percentages	5 Equations, Inequalities and Sequences 6 Angles	7 Averages and Range 8 Perimeter, area and volume 1	9 Graphs 10 Transformations	11 Ratio and Proportion 12 Right-Angled Triangles
KS4 ASSESSMENT CRITERIA (includes low stakes testing at the end of each unit)	Calculations Decimal numbers Place value Factors and multiples Squares, cubes, and roots Index notation Prime factors Algebraic expressions Simplifying expressions Substitution Formulae Expanding brackets Factorising Using expressions and formulae	Frequency tables Two-way tables Representing data Time series Stem and leaf diagrams Pie charts Scatter graphs Line of best fit Working with fractions Operations wth fractions Multiplying fractions Dividing fractions Fractions and decimals Fractions and percentages Calculating percentages 1 Calculating percentages 2	Solving equations 1 Solving equations 2 Solving equations with brackets Introducing inequalities More inequalities Using formulae Generating sequences Using the nth term. Properties of shapes Angles in parallel lines Angles in triangles Interior and exterior angles More exterior and interior angles Geometrical problems	Mean and range Mode, median and range Types of average Estimating the mean Sampling Rectangles, parallelograms, and triangles Trapezia and changing units Area of compound shapes Surface area of 3D solids Volume of prisms More volume and surface area	Co-ordinates Linear graphs Gradient Y = mx + c Real Life Graphs Distance –time graphs More real-life graphs Translation Reflection Rotation Enlargement Describe enlargements Combine transformations	Writing ratios Using ratios 1 Ratios and measures Using ratios 2 Comparing using ratios Using proportion Proportion and graphs Proportion problems Pythagoras' Theorem 1 Pythagoras' Theorem 2 Trigonometry – Sine ratio Cosine ratio Tangent ratio Finding lengths and angles
Assessment Week	4, 7	4, 8	3, 5	3, 5	3, 7	3, 6
Vocabulary	Hundredth Cube Root Indices Substitute Expand Factorise	Frequency Median Range Correlation Reciprocal Divisor Multiplier	Solve Expand Less than Term Nth term Interior Exterior	Mean Median Mode Range Sigma Parallelogram Prism	Gradient Intercept Speed Reflection Rotation Enlargement Translation	Hypotenuse Square Square root Trigonometry Sine Cosine Tangent

Year Group	Autumn 1 (7 weeks)	Autumn 2 (8 weeks)	Spring 1 (5 weeks)	Spring 2 (5 weeks)	Summer 1 (7 weeks)	Summer 2 (7weeks)
11 Foundation	13 Probability 14 Multiplicative Reasoning	15 Constructions, loci and bearings 16 Quadratic Equations and Graphs	17 Perimeter, Area and Volume 2 18 Fractions, Indices and Standard Form	19 Congruence, similarity and vectors 20 More Algebra	Revision	
KS3 ASSESSMENT CRITERIA (includes low stakes testing at the end of each unit)	Calculating probability Two events Experimental probability Venn diagrams Tree diagrams Percentages Growth and decay Compound Measures Distance, speed and time Direct and inverse proportion	3D solids Plans and elevations Accurate drawing 1 Scales and maps Accurate drawing 2 Constructions Loci and regions Bearings Expanding double brackets Plotting quadratic graphs Using quadratic graphs Factoring quadratic expressions Solving quadratic equations algebraically	Circumference of a circle Area of a circle Semicircles and sectors Composite 2D shapes and cylinders Pyramids and cones Spheres and composite solids Multiplying and dividing fractions The laws of indices Writing large numbers in standard form Writing small numbers in standard form Calculating with standard form	Similarity and enlargement More similarity Using similarity Congruence 1 Congruence 2 Vectors 1 Vectors 1 Graphs of cubic and reciprocal functions Non-linear graphs Solving simultaneous equations graphically Solving simultaneous equations algebraically Rearranging formula Proof		
Assessment Week	3, 6	4, 7	3, 5	3, 5		
Vocabulary	Probability Venn diagram Union Intersection Tree diagram Speed Density	Prism Elevation Plan Net Locus Bisect Perpendicular	Circumference Radius Area Diameter Cone Standard form Indices	Enlarge Scale factor Similar Solve Coefficient Cubic Reciprocal		

Year Group	Autumn 1 (7 weeks)	Autumn 2 (8 weeks)	Spring 1 (5 weeks)	Spring 2 (5 weeks)	Summer 1 (7 weeks)	Summer 2 (7weeks)
10 Higher	1 Number 2 Algebra	3 Interpreting and Representing Data 4 Fractions, Ratios and Percentages	5 Angles and Trigonometry 6 Graphs	7 Area and Volume 8 Transformations and Constructions	9 Equations and Inequalities 10 Probability	11 Multiplicative Reasoning 12 Similarity and Congruence
KS4 ASSESSMENT CRITERIA (includes low stakes testing at the end of each unit)	Number problems and reasoning Place value and estimating HCF and LCM Calculating with powers (indices) Zero, fractional and negative powers Powers of 10 and standard form Surds *Algebraic indices* *Expanding and factorising* *Equations* *Formulae* *Linear sequence* *Non-linear sequences* *More expanding and factorising*	*Statistical diagrams 1* *Time series* *Scatter graphs* *Line of best fit* *Averages and range* *Statistical diagrams 2* *Fractions* *Ratios* *Ratio and proportion* *Percentages* *Fractions, decimals and percentages*	*Angle properties of triangles and quadrilaterals* *Interior angles of a polygon* *Exterior angles of a polygon* *Pythagoras' theorem 1* *Pythagoras' theorem 2* *Trigonometry 1* *Trigonometry 2* *Linear graphs* *More linear graphs* *Graphing rates of change* *Real-life graphs* *Line segments* *Quadratic graphs* *Cubic and reciprocal graphs* *More graphs*	*Perimeter and area* *Units and accuracy* *Prisms* *Circles* *Sectors of circles* *Cylinders and spheres* *Pyramids and cones* *3d Solids* *Reflection and rotation* *Enlargement* *Transformations and combinations of different transformations* *Scale drawing and bearings* *Constructions 1* *Constructions 2* *Loci*	*Solving linear inequalities* *Solving quadratic equations 1* *Solving quadratic equations 2* *Completing the square* *Solving simple simultaneous equations* *More simultaneous equations* *Combined events* *Mutually exclusive events* *Experimental probability* *Independent events and tree diagrams* *Conditional probability* *Venn diagrams and set notation*	*Growth and decay* *Compound measures* *More compound measures* *Ratio and proportion* *Geometric proof and congruence* *Similarity* *More similarity* *Similarity in 3d solids*
Assessment Week	4, 7	4, 8	3, 5	3, 5	3, 7	3, 6
Vocabulary	Hundredth Cube Root Indices Expand Factorise Quadratic Fibonacci	Frequency Median Mode Range Correlation Reciprocal Divisor Multiplier	Interior Exterior Polygon Hypotenuse Sine Cosine Tangent Cubic	Sector Sphere Cone Reflection Rotation Enlargement Translation Bisector	Solve Inequality Quadratic Simultaneous equations Coefficient Probability Mutually exclusive	Speed Distance Time Density Mass Volume Proof Similar

Year Group	Autumn 1 (7 weeks)	Autumn 2 (8 weeks)	Spring 1 (5 weeks)	Spring 2 (5 weeks)	Summer 1 (7 weeks)	Summer 2 (7weeks)
11 Higher	13 More Trigonometry 14 Further Statistics	15 Equations and Graphs 16 Circle Theorems	17 More Algebra 18 Vectors and Geometry	19 Proportion and Graphs	Revision	
KS3 ASSESSMENT CRITERIA (includes low stakes testing at the end of each unit)	*Accuracy* *Graph of the sine function* *Graph of the cosine function* *Graph of the tangent function* *Calculating the areas and the sine rule* *The cosine rule and 2d trigonometry problems* *Solving problems in 3d* *Transforming trigonometric graphs 1* *Transforming trigonometric graphs 2* *Sampling* *Cumulative frequency* *Box plots* *Drawing histograms* *Interpreting histograms* *Comparing and describing distributions*	*Solving simultaneous equations graphically* *Representing inequalities graphically* *Quadratic equations* *Using quadratic graphs* *Cubic equations* *Using iterations to solve equations* Radii and chords Tangents Angles in circles Applying circle theorems	Rearranging formulae Algebraic fractions Simplify algebraic fractions More algebraic fractions Proof Surds Solving algebraic fraction equations Vectors and vector notation Vector arithmetic More vector arithmetic Parallel vectors and collinear points Solving geometric problems	Direct proportion More direct proportion Inverse proportion Exponential functions Non-linear graphs Translating graphs of functions Reflecting graphs of functions		
Assessment Week	3, 6	4, 7	3, 5	3		
Vocabulary	Tangent Cosine Cumulative frequency Population Quartile Median Histogram	Intersection Co-ordinates Quadratic Cubic Iteration Tangent Radius Segment	Rearrange Subject Numerator Denominator Surd Vector Parallel Proof	Proportion Inverse proportion Axis Exponential Function Transformation Translation Reflection		