## Year 7

| Year 7 | Autumn (1) | Autumn (2) | Spring (1) | Spring (2) | Summer (1) | Summer (2) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Algebraic Thinking Sequences <br> Algebraic Notation Place Value and Proportion <br> Place Vaue and Ordering Integers and Decimals | Algebraic Thinking <br> Algebraic Notation Equality and Equivalence Applications of Number <br> Addition and Subtraction <br> Place Value and Proportion <br> Fraction, Decimal and Percentage <br> Equivalence Directed Number Directed Number | Applications of Number Addition and Subtraction Multipication and Division Directed Number Directed Number | Applications of Number Multipication and Division Fractional Thinking Addition and Subtraction of Fractions | Applications of Number Fractions and Percentages of Amounts Lines and Angles <br> Constructing and Measuring Using Geometric Notation Reasoning with Number <br> Developing Number Sence Sets and Probability | Lines and Angles <br> Constructing and Measuring <br> Using Geometric Notation Developing Geomtric Reasoning <br> Reasoning with Number <br> Sets and Probability <br> Priime Numbers and Proof |
| Assessment | End of Topic Tests <br> Sequences <br> Place Value and Ordering Intergers and Decimals | End of Topic Tests <br> Alegebraic Notation Fraction and Decimal and Percentage Equivalence | End of Topic Tests Addition and Subtraction Operations and Equations with Directed Number | Exam Week <br> Sequences <br> Algebraic Notation Place Vaue and Ordering Integers and Decimals Fraction and Decimal and Percentage Equivalence <br> Algebraic Notation Equality and Equivalence Addition and Subtraction <br> Directed Number Multipication and Division Addition and Subtraction of Fractions | End of Topic Tests <br> Fractions of Amounts Percentages of Amounts Developing Number Sence | End of Topic Tests <br> Constructing, Measuring and Using Geometric Notation Sets and Probability |
| Link with Year 7 skills and AO | A01: Use and apply standard techniques <br> AO2: Reason, interpret and communicate mathematically <br> AO3: Solve problems within mathematics and in other contexts |  |  |  |  |  |
| Enrichment | 1. Scholarship Programme <br> 2. UK Maths Challenge <br> 3. Nrich challenge tasks <br> 4. Chess club |  |  |  |  |  |

## Year 8

| Year 8 | Autumn (1) | Autumn (2) | Spring (1) | Spring (2) | Summer (1) | Summer (2) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Topic | Ratio \& Scale <br> Ratio notation, simplifying ratio Dividing in a given ratio Multiplicative Change <br> Direct proportion <br> Convert between currencies <br> Similar shapes \& scale factors <br> Multiplying \& Dividing Fractions <br> Multiplying fractions <br> Dividing fractions <br> Working in the Cartesian Plane <br> Coordinates <br> Straight line graphs | Working in the Cartesian Plane <br> Non-linear graphs Midpoint of a line segment <br> Tables \& Probability <br> Sample space diagrams Venn diagrams Two-way tables Product rule Representing Data Scatter graphs \& correlation Lines of best fit Grouped \& ungrouped data Types of data Two-way tables | Brackets, equations \& inequalities <br> Simplifying algebraic terms Forming and solving equations Forming and solving inequalities Fractions \& Percentages <br> Convert between FDP <br> Percentages \& fractions of amount Percentage increase \& decrease Percentage change Reverse percentages | Sequences <br> Generating sequencing Find the nth term Indices <br> Index laws - Add \& subtract <br> Index laws - multiplication \& dividion <br> Number Sense <br> Rounding <br> Converting metric measures <br> Standard Index Form <br> Standard form <br> Calculating with standard form Negative and fractional indices | Angles in parallel line \& polygons <br> Angle rules \& notation <br> Alternate, corresponding \& co-interior <br> Interior \& Exterior Angles <br> Construction <br> Measures of Location <br> Mean, median, mode \& range <br> Finding mean from ungrouped table Estimating mean from grouped table Identify outliers Comparing disributions | Area of trapezia \& circles Area of triangles, rectangles, parallelograms \& trapezium <br> Area of a circle Cpmpound shapes <br> Line Symmetry \& Reflection <br> Recognice line symmetry Reflect shapes in a line <br> The Data Handling Cycle <br> Statistical enquiries \& questionaires Draw and interpret charts line graphs \& pie charts Grouped quantitative data Compare data using graphs |
| Assessment | Topic Assessments <br> Ratio \& Scale <br> Ratio notation, simplifying ratio <br> Dividing in a given ratio <br> Multiplying \& Dividing Fractions <br> Mulltiplying and dividing fractions and mixed numbers <br> Multiplying fractions \& integers Dividing fractions \& integers | Topic Assessments <br> Working in the Cartesian Plane <br> Coordinates <br> Straight line graphs <br> Non-linear graphs <br> Midpoint of a line segment <br> November Mock Exams <br> Ratio \& Scale <br> Multiplicative Change <br> Multiplying \& Dividing Fractions Working in the Cartesian Plane | Topic Assessments <br> Tables \& Probability <br> Sample space diagrams Venn diagrams <br> Two-way tables <br> Product rule <br> Representing Data <br> Scatter graphs \& correlation Lines of best fit Grouped \& ungrouped data Types of data Two-way tables | Topic Assessments <br> Brackets, Equations \& Inequalities <br> Simplifying algebraic terms Forming and solving equations Forming and solving inequalities <br> Standard Index Form <br> Powers of 10 <br> Converting numbers Standard form <br> Calculating with standard form Negative and fractional indices | Topic Assessments <br> Angles in parallel line \& polygons <br> Angle rules \& notation <br> Alternate, corresponding \& co-interior Interior \& Exterior Angles Construction <br> Measures of Location <br> Mean, median, mode \& range <br> Finding mean from ungrouped table Estimating mean from grouped table Identify outliers <br> Compare disributions using range and averages | Topic Assessments Area of trapezia \& circles Area of triangles, rectangles, parallelograms \& trapezium Area of a circle Cpmpound shapes The Data Handling Cycle <br> Statistical enquiries \& questionaires Draw and interpret charts line graphs \& pie charts Compare data using graphs |
| Link with Year 8 Curriculum | AO1. Become fluent in the fundamentals of mathematics. AO2. Reason mathematically by following a line of enquiry. AO3. Solving problems by appying mathematic skills. |  |  |  |  |  |
| Enrichment | 1. Scholarship Programme <br> 2. UK Maths Challenge <br> 3. Nrich tasks <br> 4. Chess club |  |  |  |  |  |

## Year 9

| Year 9 | Autumn (1) | Autumn (2) | Spring (1) | Spring (2) | Summer (1) | Summer (2) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Topics | Straight Line Graphs <br> Using Table of Values <br> Finding and generating equations of straight lines <br> Interpretting real life graphs including proportion <br> Forming \& Solving Equations Solving equations Solving Inequalities Rearranging formulae Testing Conjectures True or False, Always, <br> Sometimes and Never True <br> Conjectures with number and algebra | Three Dimensional Shapes Prisms - drawing and interpretting Plans and elevation Surface Area of 3D Shapes Volume of 3D Shapes Constructions and Congruency Drawing and measuring angles with scale drawings Loci and locus Constructing bisectors Constructing triangles Congruent triangles | Numbers <br> Integers, real and rational numbers Problem solving with integers and decimals <br> Fractional arithmetic <br> Using Percentages <br> Percentage increase, decrease, Percentage change Reverse percentages <br> Solving percentage problems Maths and Money <br> Solving problems with bills and bank statements <br> Calculating with Simple and Compound <br> VAT, Wages and Taxes Exchange Rates and Unit Pricing | Deduction <br> Angles in Parallel Lines Chains of Angle Reasonings Angle Problems with Algebra Conjectures with angles and shapes Rotation and Translation <br> Rotating Shapes on and around a point Translating Shapes by Vectors Finding the result of a series of Pythagoras' Theorem Calculating missing sides Proof of Pythagoras Using Pythagoras in 3D Shapes | Enlargement and Similarity Enlarging by positive, fractional and negative scale factors Finding missing sides and angles in similar shapes <br> Ratio and Proportion Problems Working with Direct and Inverse Proportion and their graphs Problem solving with best buys, ratio and algebra | Rates <br> SDT with and without calculator Density, mass and volume Rates of Change Compound Units Probability <br> Single event probability relative frequency <br> Expected outcomes and independent events <br> Probability representation through diagrams (tree) <br> Algebraic Representation <br> Draw and Interpret Quadratic Graphs <br> Interpret Reciprocal Graphs Investigate Graphs of Simultaneous Equations <br> Representing Inequalities on Graphs |
| Assessment | Topic Assessments Straight Line Graphs Assessment Forming and Solving Equations Assessment | Topic Assessment Three Dimensional Shapes Assessment <br> Constructions and Congruency Assessment | Topic Assessments Numbers Assessment <br> Using Percentages Assessment Maths and Money Assessment | Topic AssessmentsDeduction AssessmentRotation and Translation Assessment <br> Pythagoras' <br> Theorem Assessment | Topic Assessments Enlargement and Similarity Assessment <br> Ratio and Proportion Problems Assessment <br> Summer Exam <br> Reasoning with Algebra <br> Reasoning with Number Constructing in 2 and 3 dimensions Reasoning with Geometry | $\frac{\text { Topic Assessments }}{\text { Rates Assessment }}$ Probability Assessment Algebraic Representation Assessment |
| Link with year 9 skills and AO | 1. AO1 Use and apply standard techniques <br> 2. A02 Reason, interpret and communicate mathematically <br> 3. AO3 Solve problems within mathematics and in other contexts |  |  |  |  |  |
| Enrichment | 1. UK Mathematical Trust: Mathematical Challenges <br> 2. Scholars Programme <br> 3. After-school intervention <br> 4. Chess club |  |  |  |  |  |

Year 10

| Year 10 | Autumn (1) | Autumn (2) | Spring (1) | Spring (2) | Summer (1) | Summer (2) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Topics | Similarity <br> Congruence, similarity and enlargement <br> Similar shapes. <br> Congruence rules. <br> Enlarement including negative and <br> fractional <br> Length, area and volume scale factors. <br> Trigonometry <br> Finding missing sides and angles using sin, <br> cos and tan. <br> Pythagoras. <br> Developing algebra <br> Representing equations and inequalities <br> Solving linear equations. <br> Factosie and solve quadratics. <br> Represent inequalities. <br> Solve inequalities. <br> Inequality regions. <br> Plot and interpret linear and quadratic graphs | Similarity <br> Trigonometry Area sine rule. <br> Using the sine and cosine rules. <br> Geometry <br> Angles on points and lines Angles in parallel lines Bearings, including with trigonometry and pythagoras. <br> Maps and scale drawings. <br> Developing algebra <br> Simultaneous Equations <br> Solving simultaneous equationsby elimination. <br> Solving simultaneous equations by substitution <br> Solving simultaneous equations graphically. Solving quadratic simultaneous equations. | Geometry <br> Working with circles <br> Parts of a circle. <br> Area and circumference of circles. <br> Area or sectors and arc lengths. <br> Circle theorems not including alternate <br> segment theorem. <br> Proportionality <br> Ratio and fractions <br> Sharing in ratio. <br> Ratio and graphs. <br> Simplifying including $\mathrm{n}: 1$. <br> Best buys. | ```Geometry Vectors Column vectors. Arrow vectors. Vector geometry. Vector proofs. Proportionality Ratio and Fractions Ratio and algebra. Ratio and geometry. Percentages and interest Percentages of amounts. Percentage increase and decrease. Simple interest. Repeated percentage change. Compound interest. Reverse percentages. Probability Probability of exclusive and exhaustive outcomes Two-Way tables. Venns. Frequency trees, dependent and independent. Conditional probability. Theoretical probability.``` | Delving into data <br> Collectiong representing and investigating data <br> Sampling. <br> Bar and pie charts. <br> Frequency polygons. <br> Line graphs. <br> Grouped and ungrouped frequency tables. <br> Stem and leaf. <br> Using Number <br> Non-calculator methods <br> Formal four operations. <br> Fractions. <br> Rational and irrational numbers. <br> Simplifying surds <br> Rationalising surds. <br> Types of number and sequence Factor trees. <br> HCF and LCM. | Using Number <br> Types of number and sequence <br> Types of sequence. <br> Arithmetics and geometric sequences. <br> Nth term. <br> Nth term of quadratic sequences. <br> Indices and roots <br> Power of zero. <br> Power laws. <br> Negative powers. <br> Fractional powers. <br> Expressions <br> Manipulating Expressions <br> Simplifying expressions. <br> Rearranging formulae. <br> Simplifying algebraic fractions including <br> those with quadratics <br> Delving into data <br> Collectiong representing and investigating data <br> Box-plots. <br> Histograms. <br> Cumulative frequency. |
| Assessment | Topic Assessments <br> Congruence and similarity assessment Representing equations and inequalities assessment | Topic Assessment <br> Trigonometry assessment Angles and bearings assessment Simultaneous equations assessment | Topic Assessments <br> Working with circles assessment <br> Spring Exam Week <br> Congruence and similarity <br> Trigonometry <br> Angles and bearings <br> Equations and inequalities <br> Circles <br> Ratio and fractions | Topic Assessments <br> Vectors assessment Probability assessment Ratio and fractions assessment Percentages and interest assessment | Topic Assessments Collecing, representing and interpreting data assessment Non-calculator methods assessment | Summer Exam Week <br> Types of numbers and sequences assessment Indices and roots assessment Manipulating expressions assessment Summer Mock Exams Similarity Algebra Geometry Proportionality Data Number |
| Link with Year 10 skills and AO | 1, AO1 Use and apply standard techniques <br> 2, AO2 Reason, interpret and communicate mathematically <br> 3. AO3 Solve problems within mathematics and in other contexts |  |  |  |  |  |
| Enrichment | 1. UK Mathematical Trust: Mathematical Challenges <br> 2. Wednesday enrichment programme <br> 3. Saturday support intervention <br> 4. After-school intervention |  |  |  |  |  |

Year 11

| Year 11 | Autumn (1) | Autumn (2) | Spring (1) | Spring (2) | Summer (1) | Summer (2) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Topic | Graphs Gradients \& lines Non-linear graphs Algebra Expanding \& factorising Changing the subject | Graphs <br> Using graphs <br> Algebra <br> Functions <br> Multiplicative reasoning <br> Use scale factors (R) <br> Ratio <br> Proportion <br> Pressure and density <br> Geometric reasoning <br> Angles <br> Proving geometric facts <br> Vectors <br> Circle theorem | Algebraic reasoning Simplifying expressions Linear sequence Quadratic sequences Simultaneous equations Proof Inequalities Revision <br> Number <br> Algebra <br> Ratio and proportion Rates of change Geometry and measures Probability Statistics | Revision Number Algebra Ratio and proportion Rates of change Geometry and measures Probability Statistics | Revision Number Algebra Ratio and proportion Rates of change Geometry and measures Probability Statistics | $\frac{\text { Revision }}{\text { Number }}$ Algebra Ratio and proportion Rates of change Geometry and measures Probability Statistics |
| Assessment | Topic assessment <br> Gradients \& lines Equation of a straight-line g Point(s) is on a line Linear simultaneous equations Equations of perpendicular lines | Autumn Mock Exam <br> Number <br> Algebra <br> Ratio and proportion <br> Rates of change <br> Geometry and measures Probability Statistics | In class assessement <br> Number <br> Algebra <br> Ratio and proportion <br> Rates of change Geometry and measures Probability Statistics | Spring Mock Exam <br> Number <br> Algebra <br> Ratio and proportion Rates of change Geometry and measures Probability Statistics | GCSE Exam <br> Number <br> Algebra <br> Ratio and proportion Rates of change Geometry and measures Probability Statistics | GCSE Exam <br> Number <br> Algebra <br> Ratio and proportion Rates of change Geometry and measures Probability Statistics |
| Link with GCSE skills and AO | 1, AO1 Use and apply standard techniques <br> 2, AO2 Reason, interpret and communicate mathematically <br> 3. AO3 Solve problems within mathematics and in other contexts |  |  |  |  |  |
| Enrichment | 1. UK Mathematical Trust: Mathematical Challenges 2. Wednesday and Saturday enrichment programme 3. Reading list |  |  |  |  |  |

