

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
YEAR 7 -	<p>Knowledge: Number 1</p> <p>Skills</p> <ul style="list-style-type: none"> Place value Written methods for addition and subtraction Written methods for multiplication and division Negative numbers Rounding Powers and roots Factors, multiples and primes HCF, LCM Order of operations Problem-solving 	<p>Knowledge: Geometry 1</p> <p>Skills</p> <ul style="list-style-type: none"> Draw, measure and label angles Recall and use basic angle rules Angles of parallel lines Angles in polygons Properties of triangles and quadrilaterals Perimeter and area of 2D shapes Perimeter and area of composite shapes 	<p>Knowledge: Number 2</p> <p>Skills</p> <ul style="list-style-type: none"> Understand and use fractions 4 operations of fractions Mixed numbers to improper fractions Finding the original amount Calculating basic percentages of a quantity Percentage increase and decrease Find the whole, given the part and the percentage 	<p>Knowledge: Algebra 1</p> <p>Skills</p> <ul style="list-style-type: none"> Simplifying expressions Expanding brackets Substituting values into expressions Rules of Indices Sequences Function machines Solving equations Forming and solving equations Coordinates Drawing graphs of $x=$ and $y=$ Drawing graphs of $y=mx+c$ 	<p>Knowledge: Statistics and Probability 1</p> <p>Skills</p> <ul style="list-style-type: none"> Calculate the mean, median, mode and range Construct and interpret appropriate tables, charts and diagrams Calculate, draw, read and interpret pie charts Introduction to Probability Sample space diagrams 	<p>Knowledge: Ratio and Proportion 1</p> <p>Skills</p> <ul style="list-style-type: none"> Convert between fractions, decimals and percentages Percentages multipliers Reverse Percentages Compound and simple interest Ratio - understand, simplify, writing as fractions, sharing Calculating an amount when only one value is given Direct Proportion
YEAR 8 -	<p>Knowledge: Number 3</p> <p>Skills</p> <ul style="list-style-type: none"> Rounding Estimation Fractions Convert between fractions, decimals, percentages and ratio Rules of Indices Standard form 	<p>Knowledge: Algebra 2</p> <p>Skills</p> <ul style="list-style-type: none"> Algebraic manipulation – simplifying, expanding brackets Factorising linear expressions Solving equations including brackets, fractions and unknowns on both sides Forming and solving equations Rearranging basic formulae Inequalities 	<p>Knowledge: Geometry 2</p> <p>Skills</p> <ul style="list-style-type: none"> Perimeter and area of 2D shapes including circles Converting between metric units Recognise 3D shapes and their nets Surface area of 3D shapes Volume of basic prisms Plans and Elevations Constructions Loci 	<p>Knowledge: Geometry 3</p> <p>Skills</p> <ul style="list-style-type: none"> Recap angle rules Angles in Parallel lines Interior and exterior angles in polygons Transformations -Rotations -Reflections -Translations Enlargement 	<p>Knowledge: Statistics and Probability 2</p> <p>Skills</p> <ul style="list-style-type: none"> Identify and compare statistical representations using averages and range Calculating averages from discrete and continuous data Construct and interpret appropriate tables, charts and diagrams Probability Probability trees 	<p>Knowledge: Ratio and Proportion 2</p> <p>Skills</p> <ul style="list-style-type: none"> Compound measures SDT graphs Real life graphs Conversion graphs Ratio Direct Proportion

YEAR 9 -	<p>Knowledge: Number 4</p> <p>Skills</p> <ul style="list-style-type: none"> • Number recap • Percentages • Using a calculator • Indices • Standard form • Surds • Bounds 	<p>Knowledge: Geometry 4</p> <p>Skills</p> <ul style="list-style-type: none"> • Properties of shape • Perimeter and area of 2D Shapes • Arcs and sectors • Surface area • Volume • Pythagoras • Trigonometry 	<p>Knowledge: Algebra 3</p> <p>Skills</p> <ul style="list-style-type: none"> • Algebra recap • Expanding double and triple brackets • Factorising linear and quadratics expressions • Algebraic Fractions • Forming and solving equations • Rearranging formulae 	<p>Knowledge: Algebra 4</p> <p>Skills</p> <ul style="list-style-type: none"> • Sequences – linear and quadratic (generating only for quadratic sequences) • Drawing Linear graphs • Finding the equation of a line • Parallel and perpendicular lines • Quadratic/cubic/reciprocal graphs • Approximate solutions using a graph • Graphing inequalities 	<p>Knowledge: Statistics and Probability 3</p> <p>Skills</p> <ul style="list-style-type: none"> • Statistics recap • Scatter Diagrams • Frequency Trees • Cumulative Frequency and Box Plots • Venn Diagrams • Set notation 	<p>Re-teach</p> <p>Based on mock exam analysis re-teach topics where there are gaps in knowledge</p> <p>Extension topics in bold, also include;</p> <p>Simultaneous Equations</p> <p>Histograms</p> <p>Conditional probability</p>
YEAR 10 Foundation	<p>Knowledge: Number</p> <p>Skills</p> <ul style="list-style-type: none"> • Recap of key numeracy skills • Types of numbers • HCF, LCM and prime factors • Understanding fractions • Calculating with fractions 	<p>Knowledge: Ratio and Proportion</p> <p>Skills</p> <ul style="list-style-type: none"> • Percentages (non calculator methods) • FDP conversions • Ratio • Proportion • Indices • Standard Form <p>Knowledge: Geometry</p> <p>Skills</p> <ul style="list-style-type: none"> • Basic angle rules • Angles in parallel lines • Angles in Polygons • Bearings 	<p>Knowledge: Algebra</p> <p>Skills</p> <ul style="list-style-type: none"> • Simplifying expressions • Expanding brackets • Factorising • Substitution • Solving equations • Rearranging formulae • Inequalities • Coordinates • Straight line graphs • Graphing inequalities <p>Knowledge: Geometry</p> <p>Skills</p> <ul style="list-style-type: none"> • Transformations 	<p>Knowledge: Geometry</p> <p>Skills</p> <ul style="list-style-type: none"> • Using and converting units • Perimeter • Area • Surface area • Volume 	<p>Knowledge: Statistics and Probability</p> <p>Skills</p> <ul style="list-style-type: none"> • Collecting data • Presenting data in tables, charts and graphs • Interpreting data • Probability • Venn Diagrams • Set notation <p>Knowledge: Geometry</p> <p>Skills</p> <ul style="list-style-type: none"> • Pythagoras • Trigonometry 	<p>Knowledge: Ratio and Proportion</p> <p>Skills</p> <ul style="list-style-type: none"> • Percentages (calculator method) • Compound units (SDT, DMV) <p>Knowledge: Geometry</p> <p>Skills</p> <ul style="list-style-type: none"> • Vectors • Constructions • Loci
Year 10 Higher	<p>Knowledge: Number</p> <p>Skills</p> <ul style="list-style-type: none"> • Calculating with Fractions • Calculating with Decimals • Recurring decimals • HCF, LCM and prime factors <p>Knowledge: Algebra</p> <p>Skills</p> <ul style="list-style-type: none"> • Simplifying expressions • Expanding brackets • Factorising • Substitution • Solving equations • Rearranging formulae 	<p>Knowledge: Ratio and Proportion</p> <p>Skills</p> <ul style="list-style-type: none"> • Ratio • Proportion • Direct and inverse proportion algebraically <p>Knowledge: Geometry</p> <p>Skills</p> <ul style="list-style-type: none"> • Angles • Circle theorems • Bearings • Constructions • Loci 	<p>Knowledge: Geometry</p> <p>Skills</p> <ul style="list-style-type: none"> • Pythagoras • Trigonometry <p>Knowledge: Number</p> <p>Skills</p> <ul style="list-style-type: none"> • Bounds • Indices <p>Knowledge: Algebra</p> <p>Skills</p> <ul style="list-style-type: none"> • Straight line graphs • Quadratic equations • Quadratic graphs 	<p>Knowledge: Algebra</p> <p>Skills</p> <ul style="list-style-type: none"> • Simultaneous equations • Simultaneous equations (one non linear) • Sequences (linear and quadratic) • Inequalities • Graphing inequalities 	<p>Knowledge: Algebra</p> <p>Skills</p> <ul style="list-style-type: none"> • Algebraic fractions • Iteration <p>Knowledge: Statistics and probability</p> <p>Skills</p> <ul style="list-style-type: none"> • Collecting data • Presentingl data in tables, charts and graphs • Interpreting data • Probability • Venn Diagrams • Set notation 	<p>Knowledge: Geometry</p> <p>Skills</p> <ul style="list-style-type: none"> • Similar shapes (lengths, areas and volumes) • Congruency • Advanced trigonometry • Graphs (cubic, reciprocal, exponential, trig graphs)

Knowledge: Properties of Numbers**Skills**

- Read and write numbers up to 1,000
- Order and compare numbers up to 1,000
- Recognise place value in three-digit numbers
- Round numbers less than 1,000 to the nearest 10
- Round numbers less than 1,000 to the nearest 100
- Find 10 or 100 more or less than a given number
- Recognise and use multiples of 2, 3, 4, 5, 8, 10, 50 and 100

Knowledge: The four operations**Skills**

- Add and subtract using three-digit numbers
- Multiply a two-digit whole number by a single digit whole number
- Divide a two-digit whole number by a single digit whole number
- Use and interpret +, -, \times , \div and = in real-life situations for solving problems
- Use inverse operations to find missing numbers
- Estimate the answer to a calculation
- Recall and use multiplication facts for the 3, 4 and 8 multiplication tables

Knowledge: Ratio**Skills**

- Identify or show unit fractions up to one tenth of a quantity up to 100
- Work out unit fractions to one tenth of a number up to 100
- Identify or show any number of thirds, quarters, fifths or tenths of a quantity
- Work out any number of thirds, quarters, fifths or tenths of an amount
- Recognise and identify equivalent fractions
- Add and subtract fractions with the same denominator within one whole
- Work out amounts 5, 8 or 10 times the size of a given amount

Knowledge: Money**Skills**

- Appreciate the purchasing power of amounts of money (notes)
- Exchange notes for an equivalent value in coins
- Use decimal notation for money
- Interpret a calculator display
- Solve real life problems involving what to buy and how to pay
- Add amounts of money and give change
- Carry out investigations involving money

Knowledge: The calendar and time**Skills**

- Solve problems involving time
- Know that there are 365 days in a year, 366 days in a leap year, 12 months in a year and 52 full weeks in a year
- Use a calendar and write the date correctly (day/month/year)
- Tell and write the time from an analogue clock
- Understand and use the 12-hour and 24-hour clock systems and convert from one system to the other
- Convert between hours, minutes and seconds
- Add up to three lengths of time given in minutes and hours
- Using Roman numerals from I to XII

Knowledge: Measures**Skills**

- Add lengths, capacities and weights and compare the total to another total or a requirement
- Convert standard units of length, capacity and weight
- Compare and order lengths, capacities and weights in different standard units
- Measure the perimeter of a simple shape
- Choose an appropriate measuring instrument
- Read values from an appropriate scale
- Read and compare temperature including temperature with negative values

Knowledge: Geometry**Skills**

- Recognise and name prisms, cylinders and cones
- Draw lines of symmetry on shapes or pictures: Including real life items such as road signs
- Recognise and draw nets of cubes and cuboids
- Identify whether an angle is less or more than a right angle
- Identify horizontal, vertical and parallel lines
- Denote the position of a point on a grid by its coordinates or identify a point or item given its coordinates
- Use North (N), East (E), South (S) and West (W) to give directions or position from a map

Knowledge: Statistics**Skills**

- Construct and interpret bar charts with the vertical axis scaled in ones or twos
- Convert standard units of length, capacity and weight
- Extract numerical information from lists, tables, diagrams and charts

Knowledge: Algebra, probability and data**Skills**

- Simplifying algebraic terms
- Expanding and factorising single/ double brackets
- Solving linear equations
- Probability
- Percentages (including FDP)
- Complete a frequency table given the original list of results
- Complete a tally chart and the resulting frequency table
- Compare two or more diagrams
- Solve one-step and two-step problems based on statistical information

YEAR 11 Foundation	<p>Knowledge: Number</p> <p>Skills</p> <ul style="list-style-type: none"> • Numeracy recap • Using a calculator <p>Knowledge: Algebra</p> <p>Skills</p> <ul style="list-style-type: none"> • Algebra recap • Simultaneous equations algebraically • Simultaneous equations graphically 	<p>Knowledge: Algebra</p> <p>Skills</p> <ul style="list-style-type: none"> • Graphs; quadratic, cubic etc • Conversion graphs • SDT graphs • sequences 	<p>Knowledge: Geometry</p> <p>Skills</p> <ul style="list-style-type: none"> • Similar and congruent shapes • Plans and elevations • Pythagoras' Theorem • Trigonometry <p>Knowledge: Ratio and proportion</p> <p>Skills</p> <ul style="list-style-type: none"> • Ratio and proportion <p>Knowledge: Statistics</p> <p>Skills</p> <p>Review of</p> <ul style="list-style-type: none"> • Collecting data • Presenting data in tables, charts and graphs • Interpreting data 	<p>Following analysis of the mock, a termly plan will be created to re-teach topics specific to each class.</p>		
Year 11 Higher	<p>Knowledge: Algebra</p> <p>Skills</p> <ul style="list-style-type: none"> • Algebra recap • Algebraic proof • Functions <p>Knowledge: Ratio and Proportion</p> <p>Skills</p> <ul style="list-style-type: none"> • Compound units • Velocity time graphs <p>Knowledge: Number</p> <p>Skills</p> <ul style="list-style-type: none"> • Surds 	<p>Knowledge: Geometry</p> <p>Skills</p> <ul style="list-style-type: none"> • Trigonometry • Advance trigonometry • Trig graphs • Transformations of graphs <p>Knowledge: Algebra</p> <p>Skills</p> <ul style="list-style-type: none"> • Straight line graphs • Equation of a circle 	<p>Knowledge: Number</p> <ul style="list-style-type: none"> • Product rule for counting • Capture re-capture • Indices • Standard form <p>Knowledge: Geometry</p> <ul style="list-style-type: none"> • Surface Area and Volume • Vectors • Transformations 	<p>Following analysis of the mock, a termly plan will be created to re-teach topics specific to each class.</p>		