

Subject: **Mathematics – GCSE Foundation Tier**

Year Group: **Year 9 Foundation**

Content Delivered Core knowledge		Content Delivered Core knowledge		Content Delivered Core knowledge	
Autumn 1 September – October	Autumn 2 November – December	Spring 1 January - February	Spring 2 March - April	Summer 1 April - May	Summer 2 June-July
<ul style="list-style-type: none"> Number Algebra 	<ul style="list-style-type: none"> Graphs, tables and charts 	<ul style="list-style-type: none"> Fractions and percentages 	<ul style="list-style-type: none"> Equations, inequalities and sequences 	<ul style="list-style-type: none"> Angles Averages and range 	<ul style="list-style-type: none"> Perimeter, area and volume 1
Key Curriculum Skills:	Key Curriculum Skills:	Key Curriculum Skills:	Key Curriculum Skills:	Key Curriculum Skills:	Key Curriculum Skills:
<ul style="list-style-type: none"> Decimal numbers Place value Factors and Multiples Squares, cubes, root Index notation Prime factors Algebraic Expressions Simplifying expressions Substitution and formulae Expanding brackets(single) Factorising brackets (single) 	<ul style="list-style-type: none"> Frequency tables Two-way tables Representing data Time series Stem and leaf diagrams Pie charts Scatter graphs and line of best fit 	<ul style="list-style-type: none"> Working with fractions Operations with fractions Multiplying fractions Dividing fractions Fractions, decimals and percentages Calculating percentages 	<ul style="list-style-type: none"> Solving equations (linear 1 step and 2 step) Solving equations with brackets Inequalities Using formulae Generating sequences (linear) Using the nth term of a sequence 	<ul style="list-style-type: none"> Properties of shapes Angles in parallel lines Angles in triangles Exterior and interior angles of polygons Mean, mode median and range Estimating the mean Sampling 	<ul style="list-style-type: none"> Rectangles, parallelograms and triangles Trapezium Area of compound shapes Surface area of 3D shapes Volume of prisms
Key Knowledge (Cultural Capital and Content):	Key Knowledge (Cultural Capital and Content):	Key Knowledge (Cultural Capital and Content):	Key Knowledge (Cultural Capital and Content):	Key Knowledge (Cultural Capital and Content):	Key Knowledge (Cultural Capital and Content):
<ul style="list-style-type: none"> Working with everyday numbers, estimation to complex calculations, Understanding short notation in mathematical and scientific fields Using correct algebra notation Using formula <p>Cultural Capital</p>	<ul style="list-style-type: none"> Designing tables, data collection sheets and displaying data. Spotting trends using line of best fit <p>Cultural Capital Politics, economics, climate change, epidemics all make use of graphs to display</p>	<ul style="list-style-type: none"> Fractions of quantities Calculations with fractions Equivalent Calculating percentages (increase and decrease) <p>Cultural Capital Measurements for recipes and building materials</p>	<ul style="list-style-type: none"> Solving equations helps train the mind to think logically and hence use a systematic approach to problem solving Recognising patterns <p>Cultural Capital Use of formulae used and applied in engineering</p>	<ul style="list-style-type: none"> Solving geometric problems How to calculate and interpret averages <p>Cultural Capital Roofers need to know about angles to ensure roof pitch is within legal</p>	<ul style="list-style-type: none"> Understanding measures used to help explain the size and space taken up by objects <p>Cultural Capital Dimension problem solving techniques required for DIY, trades, science and in engineering</p>

<p>Decimals are commonly used in everyday life for money and measurement Tradesman and engineers use estimation to make quick calculations Both engineering and IT and financial disciplines use formulas</p>	<p>complex data so that it is meaningful and to justify decisions made.</p> <p>Investment of capital relies in spotting trends especially on the stock market</p> <p>Sales, purchasing and business forecasts all rely on the visual display of data.</p>	<p>Calculating discounts and price increases.</p> <p>Financial checking affordability of purchased items using credit and therefore interest paid</p>	<p>such as $V=IR$, $F=ma$, Kirchhoffs law, $P=IV$ all useful as we move from an ICE dependency to electrical vehicles.</p> <p>Patterns are widely used in music and in traditional dance and martial arts.</p>	<p>regulations. Ladder pitch (safety regulations)</p> <p>Radar systems both military and civil.</p> <p>Political Averages are used to justify statements such as the “average salary in the Uk is” Being able to identify which average has been applied and why</p> <p>Spotting trends such as the average height of a UK adult male in 1900 was... and now in 2020 it is ... why?</p> <p>Or the average waistline of a UK adult male in 1970 was... and now in 2020 it is ... Why?</p>	
<p>Assessment:</p>	<p>Assessment:</p>	<p>Assessment:</p>	<p>Assessment:</p>	<p>Assessment:</p>	<p>Assessment:</p>
<p>Each unit will be assessed formatively through multiple choice assessments using diagnostic questions to determine areas for development</p>	<p>Each unit will be assessed formatively through multiple choice assessments using diagnostic questions to determine areas for development. An end of term written summative assessment on all content since the start of the year</p>	<p>Each unit will be assessed formatively through multiple choice assessments using diagnostic questions to determine areas for development</p>	<p>Each unit will be assessed formatively through multiple choice assessments using diagnostic questions to determine areas for development. An end of term written summative assessment on all content since the start of the year</p>	<p>Each unit will be assessed formatively through multiple choice assessments using diagnostic questions to determine areas for development</p>	<p>Each unit will be assessed formatively through multiple choice assessments using diagnostic questions to determine areas for development. An end of term written summative assessment on all content since the start of the year</p>
<p>Literacy Curriculum:</p>					

<ul style="list-style-type: none"> • Key mathematical terminology shared and discussed with students • Frayer model used for explicit teaching of some key vocabulary in each unit • Root words – including prefixes – and etymology will be explored for certain terminology to develop understanding of, and links within, subject content 					
Home Learning	Home Learning	Home Learning	Home Learning	Home Learning	Home Learning
<ul style="list-style-type: none"> • Straight line graphs 	<ul style="list-style-type: none"> • Number • Algebraic expressions 	<ul style="list-style-type: none"> • Graphs, tables and charts 	<ul style="list-style-type: none"> • Fractions, decimals and percentages 	<ul style="list-style-type: none"> • Equations, inequalities and sequences 	<ul style="list-style-type: none"> • angles • Averages and range

Subject: **Mathematics – GCSE Foundation Tier**
Year Group: **Year 10 Foundation**

Content Delivered Core knowledge		Content Delivered Core knowledge		Content Delivered Core knowledge	
Autumn 1 September – October	Autumn 2 November – December	Spring 1 January - February	Spring 2 March - April	Summer 1 April - May	Summer 2 June-July
<ul style="list-style-type: none"> • Graphs • Transformations 	<ul style="list-style-type: none"> • Ratio and Proportion 	<ul style="list-style-type: none"> • Right-angled triangles • Probability 	<ul style="list-style-type: none"> • Multiplicative Reasoning 	<ul style="list-style-type: none"> • Constructions, loci and bearings • Quadratic equations and graphs 	<ul style="list-style-type: none"> • Perimeter, area and volume 2
Key Curriculum Skills:	Key Curriculum Skills:	Key Curriculum Skills:	Key Curriculum Skills:	Key Curriculum Skills:	Key Curriculum Skills:
<ul style="list-style-type: none"> • Linear graphs • Gradient/Intercept • Real-life graphs • Distance/time graphs • Translation • Reflection/Rotation • Enlargement • Combinations of transformations 	<ul style="list-style-type: none"> • Writing and using ratios to solve problems • Divide a quantity into a given ratio • Ratio and graphs • Direct and inverse proportion 	<ul style="list-style-type: none"> • Pythagoras' theorem • Using trig ratios to find lengths of sides • Using trig ratios to find angles • Mutually exclusive events • Sample spaces/two-way tables • Tree diagrams • Venn diagrams 	<ul style="list-style-type: none"> • Profit and Loss • Reverse percentages • Repeated percentage change • Compound measures 	<ul style="list-style-type: none"> • 2-D representations of 3-D shapes • Construct triangles, bisectors and scale drawings • Loci • 3-figure bearings • Expand double brackets • Quadratic graphs • Factorise and solve quadratic equations 	<ul style="list-style-type: none"> • Circumference and area of a circle • Arc length and sector area • Volumes and surface area of cylinders and composite shapes • Volume and surface area of pyramids, cones and spheres
Key Knowledge (Cultural Capital and Content):	Key Knowledge (Cultural Capital and Content):	Key Knowledge (Cultural Capital and Content):	Key Knowledge (Cultural Capital and Content):	Key Knowledge (Cultural Capital and Content):	Key Knowledge (Cultural Capital and Content):
<ul style="list-style-type: none"> • Understanding how to interpret gradient and graphs describing motion 	<ul style="list-style-type: none"> • Understanding proportion, scales and maps. • Understanding shopping offers, comparing two 	<ul style="list-style-type: none"> • Understanding the history of geometry and Pythagoras • Understanding probability as a way of 	<ul style="list-style-type: none"> • Understanding sales prices, bills, personal finance, simple and compound interest, VAT 	<ul style="list-style-type: none"> • Understanding construction of geometry that underpins technology 	<ul style="list-style-type: none"> • Understanding pi and infinity • Understanding the history of systems of measurement, from

<ul style="list-style-type: none"> Understanding tessellations and naturally occurring patterns are created 	or more pieces of information	making predictions based on known information or experimentation	<ul style="list-style-type: none"> Understanding how to measure speed, distance and time and interpreting their graphs, calculating heart rates and speed 	<ul style="list-style-type: none"> Understanding the mechanics of force and motion 	Greek to imperial to metric
Assessment:	Assessment:	Assessment:	Assessment:	Assessment:	Assessment:
Two end of unit multiple choice assessments using diagnostic questions	<ul style="list-style-type: none"> One end of unit multiple choice assessment using diagnostic questions An end of term written, summative assessment on all content since start of year 	Two end of unit multiple choice assessments using diagnostic questions	<ul style="list-style-type: none"> One end of unit multiple choice assessment using diagnostic questions An end of term written, summative assessment on all content since start of year 	Two end of unit multiple choice assessments using diagnostic questions	<ul style="list-style-type: none"> One end of unit multiple choice assessment using diagnostic questions An end of year written, summative assessment on all content since start of year
Literacy Curriculum:					
<ul style="list-style-type: none"> Key mathematical terminology shared and discussed with students Frayer model used for explicit teaching of some key vocabulary in each unit Root words – including prefixes – and etymology will be explored for certain terminology to develop understanding of, and links within, subject content 					
Home Learning	Home Learning	Home Learning	Home Learning	Home Learning	Home Learning
<ul style="list-style-type: none"> Perimeter, Area and Volume 1 	<ul style="list-style-type: none"> Analysing and Displaying Data Number Skills 	<ul style="list-style-type: none"> Ratio and Proportion 	<ul style="list-style-type: none"> Right-angled triangles Probability 	<ul style="list-style-type: none"> Multiplicative Reasoning 	<ul style="list-style-type: none"> Constructions, loci and bearings Quadratic equations and graphs Pinpoint booklet

Subject: **Mathematics**
Year Group: **Year 11 Foundation**

Content Delivered Core knowledge		Content Delivered Core knowledge		Content Delivered Core knowledge	
Autumn 1 September – October	Autumn 2 November – December	Spring 1 January - February	Spring 2 March - April	Summer 1 April - May	Summer 2 June-July
<ul style="list-style-type: none"> Fractions, indices and standard form Congruence, similarity and vectors 	<ul style="list-style-type: none"> Further Algebra 	<ul style="list-style-type: none"> Key content revision cards Exam question practice Problem solving skills Pinpoint whole-class intervention lessons Pinpoint individual intervention booklets 			<ul style="list-style-type: none">

Key Curriculum Skills:	Key Curriculum Skills:	Key Curriculum Skills:	Key Curriculum Skills:	Key Curriculum Skills:	Key Curriculum Skills:
<ul style="list-style-type: none"> • Multiplying and dividing fractions • Laws of Indices • Standard Form • Similarity and Enlargement • Congruence • Vectors 	<ul style="list-style-type: none"> • Graphs of cubic and Reciprocal functions • Non-linear graphs • Simultaneous equations • Rearranging formula • Proof 				<ul style="list-style-type: none"> •
Key Knowledge (Cultural Capital and Content):	Key Knowledge (Cultural Capital and Content):	Key Knowledge (Cultural Capital and Content):	Key Knowledge (Cultural Capital and Content):	Key Knowledge (Cultural Capital and Content):	Key Knowledge (Cultural Capital and Content):
<ul style="list-style-type: none"> • Understand how we use standard form in science to measure and describe large and small quantities • Understand how to scale up and down measures in contexts such as art, food, photography and engineering 	<ul style="list-style-type: none"> • Understand how maths can be used to communicate an argument • Understand how to use graphs to explore financial relationships 				<ul style="list-style-type: none"> •
Assessment:	Assessment:	Assessment:	Assessment:	Assessment:	Assessment:
Practice paper formative assessments, analysed using pinpoint to create personalised intervention program	<ul style="list-style-type: none"> • Practice paper formative assessments, analysed using pinpoint to create personalised intervention program • MOCK EXAM 1 	<ul style="list-style-type: none"> • Practice paper formative assessments, analysed using pinpoint to create personalised intervention program 	<ul style="list-style-type: none"> • Practice paper formative assessments, analysed using pinpoint to create personalised intervention program • MOCK EXAM 2 	FINAL ASSESSMENTS	<ul style="list-style-type: none"> •
Literacy Curriculum:					
<ul style="list-style-type: none"> • Key mathematical terminology shared and discussed with students • Frayer model used for explicit teaching of some key vocabulary in each unit • Root words – including prefixes – and etymology will be explored for certain terminology to develop understanding of, and links within, subject content 					
Home Learning	Home Learning	Home Learning	Home Learning	Home Learning	Home Learning
<ul style="list-style-type: none"> • Practice papers • Pinpoint booklets • DFM 	<ul style="list-style-type: none"> • Practice papers • Pinpoint booklets • DFM 	<ul style="list-style-type: none"> • Practice papers • Pinpoint booklets • DFM 	<ul style="list-style-type: none"> • Practice papers • Pinpoint booklets • DFM 	<ul style="list-style-type: none"> • 	<ul style="list-style-type: none"> •