## Maths Curriculum Map

Intent: The mathematics curriculum aims to offer our students the opportunity to develop a solid foundation in the key mathematical components: number skills, algebra, geometry, ration and proportion and probability and statistics. This is achieved through teaching these mathematical concepts from a first principle basis to develop a deeper understanding and becoming fluent in the fundamentals of mathematics by developing their problem solving skills. We encourage a deep understanding and memory through revisiting and building upon prior knowledge.

Through our curriculum we aim for our students to link and master the different components to contextual real world problems, allowing students to appreciate the importance and power of mathematics in their everyday lives.

Term	Autumn 1		Autumn 2		Spring 1	Spring 2		Summer 1	Summer 2
Year 7	Number: Operations with integers Operations with decimals Money questions Negatives in real life Four rules of negatives BIDMAS Inverse operations Factors, Multiples and Primes Highest common factor Lowest common multiple Rounding Estimating answers	Assessment 1	Number: Squares, Cubes and Roots Indices Product of Primes Standard Form Fractions; Equivalent, Simplifying, Comparing Operations with fractions Finding a fraction of an amount Fractions, decimals, percentages Percentages of amounts	Assessment 2	Algebra: Introduction to Algebraic conversions Function machines Algebraic manipulation - Addition, Subtraction, Multiplication and Division Forming Expressions Substitution into formulae <b>Geometry:</b> Coordinates Measuring and drawing angles Angles round a point and on a line Problem solving with angles in triangles and quadrilaterals	Data: Tally charts Bar charts Pictograms Vertical Line Charts Frequency tables and diagrams Averages Probability: Calculating probabilities Experimental probability	Assessment 3	Geometry: Area and perimeter of 2D shapes 3D shapes Nets Ratio: Simplify ratios Split into ratios Introduction to proportion Exchanging money	Teachers explore all the topics exposed in previous terms through methods of application to empower students. This should be done through a mixture of activities and revision.

Nun	mber:		Number:		Ratio:	Algebra:		Geometry:	Teachers
Year 8 Nun Ope inte Fou neg BIDN Estin Ope frac Frac Frac Proc High fact Low mult	<b>mber:</b> erations with egers in rules of gatives MAS mating answers erations with cimals ndard form erations with ctions ctions of ounts ctors, Multiples duct of primes hest common tor vest common ltiple ices	Assessment 1	Number: Fractions, Decimals and Percentages Calculate Percentage of an Amount (without a calculator) Value for Money <b>Geometry:</b> Area and Perimeter; Parallelogram, Trapezium and Circle Volume of 3D shapes	Assessment 2	Ratio: Sharing amounts using ratio Using ratio for recipe Questions Exchanging money Introduction to proportion Data: Discrete and continuous data Two-way tables Frequency trees Averages and the Range Line graphs Scatter graphs Stem and leaf	Algebra: Algebraic manipulation Simplifying and factorising expressions Substitution Solving equations Sequences Generate Special Sequences Introduction to graphs Find gradient of a line	Assessment 3	Geometry: Reflections Rotations Translations Angles at a point Angles between parallel lines Angles in a Triangle Properties of special triangles Probability: Listing outcomes Calculating probabilities Mutually exclusive probabilities Experimental probabilities Possibility spaces	Teachers explore all the topics exposed in previous terms through methods of application to empower students. This should be done through a mixture of activities and revision.

	Number:	Number:	Algebra:	Metric conversions	Data:	Teachers
	Operations with	Indices	Generating a		Discrete and	explore all
	integers	Rounding	sequence	Probability:	Continuous,	the topics
	Estimating answers	Introduction to	Nth term	Listing outcomes	Two-way	exposed in
	BIDMAS	bounds	Special sequences	Calculating	Tables,	previous
	Standard form			probabilities	Frequency	terms
	Operations with	Algebra; Simplifying	Geometry:	Mutually exclusive	Trees	through
	fractions	expressions	Perimeter and area	events	Pie Charts	methods of
	Fraction of an	Expanding	of 2D shapes	Experimental	Scatter Graphs	application
	Amount	brackets	Surface area of a	probability	Averages and	to empower
	Fractions, decimals	Forming and	prism	Venn diagrams	the Range	students. This
	and percentages	solving	Volume of 3D	Tree diagrams		should be
	Percentage	formulae/equations	shapes		Geometry:	done
Yoar	increase/decrease,	Substitution	Angles		Transformations;	through a
9	Change to a	Straight line graphs	Angles in a triangle		Reflections	mixture of
•	percentage,	Gradient of a line	Angles in parallel		Translations	activities
	Reverse	Drawing graphs	lines		Rotations	and revision.
	percentages		Angles of Polygons;		Enlargements	
	Simple Interest		Angles in polygons		Pythagoras'	
	Introduction to		Bearings		Theorem	
	Bounds					
					Ratio:	
					Sharing	
					amounts using	
					Ratio	
					Using ratio in	
					Recipe style	
					questions	
					Proportion	

	Number:		Algebra:		Algebra:	Geometry:		Data:	Teachers
	Decimals		Factorising		Simultaneous	Pythagoras'		Averages	explore all
	Indices		Expanding		equations	Theorem		Sampling	the topics
	Bounds		brackets			Trigonometric		Pie Charts	exposed in
	Error Intervals		Forming and		Geometry:	Ratios		Scatter graphs	previous
	Estimating answers		solving linear		Perimeter and area	Exact Triana a succession		Populations Streetificated	terms
	Mathematical		equations		Tangents, Arcs,			Stratified	through
	Regioning		number line		Sectors und	values		Time Series	application
			Solving linear		Surface Area and			Graphs	to empower
	Standara form		inequalities		Volume: Spheres	Probability:			students This
	Percentages;		Sequences		Pyramids, Cones	Experimental		Geometry:	should be
	Percentage	-	Fibonacci	7	and Frustums	probability	e	Similar shapes	done
Voar	change	ş	Geometric	şnt	Angles in parallel	Listing outcomes	<b>pt</b>	Transformations	through a
10	Reverse	me	Progressions	Ĕ	lines	Venn Diagrams	Ĕ	Scale drawings	mixture of
(F)	percentages	ess	Straight Line	ess	Angles in polygons	Tree Diagrams	ess	Vectors	activities
(')	Simple Interest	Ass	Graphs	ASS	Bearings		<b>N</b> SS	Construction	and revision.
	Compound Interest	4	Gradient of a line	4			4	Loci	
	Depreciation		Midpoint of a line		Ratio:				
	problems		Equation of a		Infroduction to				
	Growth and Decay		Straight Line		proportion Sharing into a ratio				
	Metric conversions		Eactorising and						
	Compound units		solving augdratics						
			The difference of						
			two squares						
			Roots and turning						
			points of						
			quadratics						

Year 10 (H)	Number: Decimals Indices Bounds Percentage change Reverse percentages Simple Interest Compound Interest Depreciation Growth and Decay	Assessment 1	Algebra: Factorising linear and quadratic expressions Expanding brackets Forming and solving equations Sequences Quadratic sequences Straight Line Graphs Gradient of a line Equation of a Straight Line Parallel and perpendicular lines Drawing Graphs Solving quadratic equations with	Assessment 2	Algebra: Simultaneous equations including quadratic equations Geometry: Tangents, Arcs, Sectors and Segments Surface Area and Volume; Spheres, Pyramids, Cones and Frustums Angles in parallel lines Angles in parallel lines Angles in polygons Circle theorems Ratio: Sharing into a ratio	Geometry: Pythagoras' Theorem Trigonometric Ratios Exact Trigonometric Values Area of a triangle Trig and bearings Probability: Experimental probability Listing outcomes Venn Diagrams Tree Diagrams Conditional probability	Assessment 3	Data: Averages Sampling Pie Charts Scatter graphs Histogram Populations Stratified Sampling and Time Series Graphs Geometry: Similar shapes Transformations Scale drawings Vectors Construction Loci	Teachers explore all the topics exposed in previous terms through methods of application to empower students. This should be done through a mixture of activities and revision.
(H)		Asses	Straight Line Parallel and perpendicular lines Drawing Graphs Solving quadratic equations with formula and completing the square. Roots and turning points of quadratics	Asses	lines Angles in polygons Circle theorems <b>Ratio:</b> Sharing into a ratio Direct and inverse proportion	Venn Diagrams Tree Diagrams Conditional probability <b>Data:</b> Cumulative frequency Box plot	Assessi	Scale drawings Vectors Construction Loci	activities and revision.

	Number:		Algebra:		Algebra:	Geometry:		Exam	Summer
			Factorising		Simultaneous	Angles		preparation on	Examinations
	Fractions		Expanding		equations	Loci		all topics.	take place.
	Indices		brackets			Bisecting angles		Revision packs	
	Bounds		Solving equations		Geometry:	Bearings		included on	
	Error Intervals		Inequalities on a		Area and perimeter	Construction		every major	
	Estimating answers		number line		of 2D shapes	Pythagoras'		topic taught.	
	Mathematical		Solving Linear		Tangents, Arcs,	Theorem		Then the	
	Reasoning		Inequalities		Sectors and	Trigonometric		students are	
	Percentages		Sequences		Segments	Ratios to Find		exposed to	
	Standard torm		Geometric		Surface Area and	Missing Sides and		past and	
	Fractions		progressions		Volume; Spheres,	Angles in Right-		specimen	
	Percentage		Special sequences		Pyramids, Cones	Angled Triangles		exam papers.	
	change	Ξ	Substitution	12	and Frustums	Exact	3		
Vear	Reverse	ШШ	Straight Line	am	Compound Units	Trigonometric	mp		
11	percentages	Ě	Graphs	EX	Distance-Time	Values	EX		
(F)	Simple Interest	×	The Gradient of a	×	Graphs	Similar Shapes	×		
(')	Compound Interest	ğ	Line	100		Congruent	00		
	Depreciation	2	Midpoint of a Line	2	Proportion:	Triangles	2		
	problems		Equation of a		Intro to proportion	Scale Drawings			
	Growth and Decay		Straight Line		Ratio	Vectors			
			Factorising and			Transformations			
			Solving Quadratics						
			The Difference of			Statistics:			
			Two Squares			Pie Charts			
			Roots and Turning			Scatter Graphs			
			Points of			Sampling			
			Quadratics			Populations,			
			Drawing graphs			Stratified Sampling			
						Time Series Graphs			
						Averages			

	Number:		Geometry:		Probability:	Algebra:		Exam	Summer
	Mathematical		Transformations -		Calculating	Perpendicular		preparation on	Examinations
	Reasoning,		Negative Scale		probabilities	lines		all topics.	take place.
	Negative Indices,		Factor		Tree diagrams	Equations of a		Revision packs	
	Error Intervals and		Circle Theorems		Venn diagrams	circle		included on	
	Standard Form		Similarity - Area			Pythagoras on a		every major	
	Recurring Decimals		and Volume and		Statistics:	line		topic taught.	
	to Fractions		Congruency		Pie Charts	Sequences		Then the	
	Upper and Lower		Trigonometry		Scatter graphs	Regions		students are	
	Bounds		The Sine and		Sampling	Inequalities		exposed to	
	Surds		Cosine Rule		Cumulative			past and	
	Direct and Inverse		Pythagoras'		Frequency			specimen	
	Proportion	-	Theorem	3	Boxplots		e	exam papers.	
	Percentages	ε	Trigonometric	Ε	Histograms	Geometry:	Ε		
Year	Fractions	Xa	Ratios in 3D shapes	xa		Distance-Time	ха		
11		Ш		ΥE	Algebra:	Graphs and	Ц		
(H)	Algebra:	U O O		oc	Solving quadratics	Velocity-Time	0C		
	Product of Three	Ž		Ž	Algebraic Fractions	Graphs	ž		
	Binomials				Roots and Turning	Vectors			
	Rearranging				Points of	Trigonometric			
	formulae				Quadratics	Graphs			
	Factorising				Completing the	Transformation of			
	Quadratics with a				Square	Functions			
	coefficient >1				Simultaneous	Surface Area and			
	Iterative Processes				Equations with a	Volume; Spheres,			
	Algebraic Proof				Quadratic Equation	Cones, Pyramids			
					Inverse and	and Frustums			
					Composite				
					Functions				