Curriculum Map

Subject: Mathematics   **Year group: 8**

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Content *Declarative Knowledge – 'Know What'*	**Proportional Reasoning** Ratio and scale Multiplicative change	**Proportional Reasoning** Multiplying and dividing fractions **Representations** Working in the Cartesian plane **Representations** Collecting and representing data tables **Reasoning with Number** Sets and probability (from yr 7	**Algebraic techniques** Brackets, equations and inequalities Sequences Indices	**Developing Number** Fractions and percentages Standard index form	**Developing Number** Number sense **Developing Geometry** Angles in parallel lines and polygons	**Developing Geometry** Angles in parallel lines and polygons Area of Trapezia and Circles Line Symmetry and refelection

Skills
 	
Procedural Knowledge – 'Know How'
	• Understanding ratio and its link to multiplication
	• Circumference of a circle
	• Use of ratio notation
	• Reduce ratios to simplest form
	• Solve ratio problems
	• Use scale factors, lining to ratio, to solve simple direct proportion problems
	• Scale diagrams and maps
	• Multiplying and dividing fractions by an integer
	• Multiplying and dividing fractions by a fraction
	• Understanding and using set notations
	• Venn diagrams
	• Probability of single events
		• Plotting and interpreting straight line graphs
		• Equations of lines parallel to the axes
		• Model situations by translating them into expressions, formulae and graphs
		  • Understanding and using set notations
		  • Venn diagrams
		  • Probability of single events
		  • Scatter graphs and correlation
		  • Designing and using one and two way tables
		  • Listing outcomes
		  • Using sample space diagrams
		  • Using tables.
			• Multiplying out single brackets
			• Forming and using expressions, formulae and identities
			• Forming and solving equations and inequalities with and without brackets
			• .Using more complex rules e.g. with brackets and squared terms, in sequences
			  • Writing expressions with powers
				• Revisit fractions, decimals and percentages equivalence
				
				• One number as percentage of another
				• Conversion between numbers in ordinary and standard form
				• Comparing numbers in standard form.
				• Developing mental strategies
				• Measure and units
				• Estimation, including rounding to a given number of decimal places
				• Revisit order of operations.
					• Rounding numbers to significant figures and decimal places
					• Convert with measures of length, weight and capacity
					• Review yr. 7 angles rules
					• Parallel lines and angles
					• Revisit geometric notation
					• Angles in special quadrilaterals
					• Angles in a polygon
					• Review area of shapes covered in year 7
					• Using significant figures
					• Lines of symmetry in polygons and other shapes
					• Reflections of shapes in horizontal, vertical and diagonal lines
						• Calculate the area and perimeter of shapes including compound shapes
						• Calculate the area of circles and parts of circles
						• Lines of symmetry in polygons and other shapes
						• Reflections of shapes in horizontal, vertical and diagonal lines

Curriculum Map

Key Questions	Can you explain the scale of a map in terms of ratio? Can you use Venn diagrams to answer probability questions?	Can you create expressions and equations from given situations and plot on graphs?	Do you know the difference between expressions, equations and formulae and factorising and expanding? Can you generate a sequence given an algebraic rule?	Can you explain why standard form uses a power of ten?Can you generate a sequence given an algebraic rule?	Can you explain fully the rules for angles in parallel lines?	Can you calculate the area of a trapezium?
Assessment	Baseline assessment Mini unit test	Mini unit test	Mini unit test	Mini unit test	Mini unit test	Mini unit test
Literacy/Numeracy/ SMSC/Character						