

Curriculum Map Year 8: Mathematics

	Topic	Key Knowledge <i>What will students know by the end of this topic?</i>	Key Skills <i>What skills will students have developed by the end of this topic?</i>	Assessment Opportunities <i>How will student progress be measured? What are the key assessment pieces?</i>
Half Term 1	Division	Students will learn: All aspects of the operation of division, including formal and informal, written and mental methods applied to natural numbers, decimal fractions, vulgar fractions, mixed numbers and negative numbers	Students will be able to: - Use the Associative, Commutative and Distributive Laws, as they apply to Division - Divide natural numbers - Divide decimal fractions - Divide fractions, both vulgar and mixed - Divide all types of number, including negatives	Topic Reviews Sparx maths homework Weekly Sparx maths homework Half Termly Assessment
Half Term 2	Introduction to Algebra Basic Percentages More Algebra	- How to use and interpret algebraic notation: ab, $3y$, a/b, index notation, coefficients written as fractions instead of decimals, brackets - How to define percentage as 'number of parts per 100', express one quantity as a percentage of another, compare two quantities using percentages, and work with percentages greater than 100.	- Generalise the Laws of Arithmetic in algebraic form - Understand and use expressions, equations, formulae, identities and other algebraic conventions and vocabulary - Simplify expressions - Multiply one bracket - Understand and use the order of operations - Substitution into expressions and formulae - Compare percentages, fractions and decimals - Express one number as a percentage of another - Calculate percentage profit and loss - Expand and simplify expressions including double brackets	Topic Reviews Sparx maths homework Weekly Sparx maths homework Half Termly Assessment
Half Term 3	More Percentages Linear Equations	- How to interpret and calculate percentages and percentage changes as a fraction or a decimal; interpret these multiplicatively - Use algebraic methods to solve linear equations in one variable	- Find a percentage of an amount - Calculate percentage increase and decrease - Construct equations, including non-linear. - Solve Linear Equations using algebraic processes, including equations that arise from a context	Topic Reviews Sparx maths homework Weekly Sparx maths homework Half Termly Assessment
Half Terms 4 And 5	Proportional Reasoning and Ratio	- How to use ratio notation, including reduction to simplest form - How to divide a given quantity into two parts in a given part:part or part:whole ratio; express the division of a quantity into two parts as a ratio	- Understand and use the concept of proportional reasoning in real contexts - Find and use scalars to solve proportional reasoning problems - Link ratio to fractions and to scaling - Split an amount in a given ratio - Solve ratio problems	Topic Reviews Sparx maths homework Weekly Sparx maths homework Half Termly Assessment

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		• Use and understand that a multiplicative relationship between two quantities can be expressed as a fraction or a ratio		
Half Term 6	Use of Calculator Rounding Changing the subject of formulae	• How to use a calculator and other technologies to calculate results accurately and then interpret them appropriately. • How to round numbers and measures to an approximate degree of accuracy • Rearranging algebraic formulae	• Introduce the use of a calculator and use in a variety of contexts • Round numbers to the nearest power of ten • Round numbers to a given number of decimal places • Round numbers to a given number of significant figures • Estimate the value of a calculation by rounding numbers to one significant figure • Use a calculator effectively to work with percentages • Repeated percentage change • Changing the subject	Topic Reviews Sparx maths homework Weekly Sparx maths homework Half Termly Assessment