

<h1>Year 8</h1> <h2>Maths</h2>			
1 Fractions	<ul style="list-style-type: none"> Able to use fractions as multipliers in a range of contexts. 	<ul style="list-style-type: none"> Fluent in using fractions and multipliers as divisors in a range of contexts. Understand and articulate the effect of multiplying by fractions. 	<ul style="list-style-type: none"> Fluent in a variety of methods using fractions as multipliers and divisors in a range of contexts. Able to apply efficient fraction methods to solve problems. Understand and articulate the effect of multiplying by fractions.
2 Percentages	<ul style="list-style-type: none"> Understand and articulate what is meant by a percentage, and calculate and interpret this as a proportion of an amount. 	<ul style="list-style-type: none"> Understand and articulate what is meant by a percentage, and interpret this as a proportion and as an operator. Convert fluently between fractions, decimals and percentages. Use percentages to compare proportions. 	<ul style="list-style-type: none"> Understand and articulate what is meant by a percentage, and interpret this as a proportion and as an operator. Convert fluently between fractions, decimals and percentages, choosing the most useful representation for a particular context. Use percentages to compare proportions and solve problems.
3 Algebra	<ul style="list-style-type: none"> Fluent in the manipulation of algebraic expressions, including substitution, simplifying and factorising. Confident with the terminology and notation used in algebra. Able to solve equations and inequalities in one variable using the balancing method. Understand and use the vocabulary of inequalities. 	<ul style="list-style-type: none"> Fluent in the manipulation of algebraic expressions, including substitution, simplifying and factorising. Able to translate algebra into a context and vice versa. Confident with the terminology and notation used in algebra. Able to solve equations and inequalities in one variable using the balancing method, including where algebraic rearrangement is required. Understand and use the vocabulary of inequalities and recognise scenarios that could be modelled by either equations or inequalities. 	<ul style="list-style-type: none"> Fluent in the manipulation of algebraic expressions, including substitution, simplifying and factorising. Able to translate algebra into a context and vice versa in order to solve worded problems using algebra. Confident with the terminology and notation used in algebra. Able to solve equations and inequalities in one variable using the balancing method, including where algebraic rearrangement is required. Understand and use the vocabulary of inequalities and solve a variety of problems by forming and solving suitable equations or inequalities.
4 Geometry	<ul style="list-style-type: none"> Able to calculate the area and perimeter of a number of mathematical shapes and confident in use of correct units. 	<ul style="list-style-type: none"> Fluent in calculating area and perimeter of different mathematical shapes including composites, and able to solve problems of area and perimeter in different contexts. Confident in use of correct units. 	<ul style="list-style-type: none"> Fluent in calculating area and perimeter of different mathematical shapes including composites, in a variety of different methods and to use those to derive and explain the area formulae. Able to solve problems of area and perimeter in different contexts. Confident in use of correct units.
5 Ratio, Proportion and Rates of Change	<ul style="list-style-type: none"> Understand and use ratio notation and conventions. Divide quantities into a given ratio and use given information about ratio to find missing values. Knowledge of the appropriate units for different measures and able to work confidently with different standard measures. Understand the compound units for speed and unit pricing and use them in problem solving. Understand the concepts of direct and inverse proportion. Recognise and explain different representations of proportion and use the ideas of proportionality to solve a range of problems. 	<ul style="list-style-type: none"> Understand and use ratio notation and conventions. Divide quantities into a given ratio and use given information about ratio to solve problems in context. Understand the difference between ratio and fractions and fluently convert between them. Knowledge of the appropriate units for different measures and able to work confidently with different standard measures, including converting between them. Understand compound units including speed, unit pricing and density, and use them in problem solving. Understand the concepts of direct and inverse proportion and be able to identify when quantities are in proportion. Recognise and interpret different representations of proportion and use the ideas of proportionality to solve a range of problems. 	<ul style="list-style-type: none"> Understand and use ratio notation and conventions. Divide quantities into a given ratio and use given information about ratio to solve problems in context. Understand the multiplicative relationship between quantities and be able to convert between them fluently in problem solving. Knowledge of the appropriate units for different measures and able to work confidently with different standard measures, including converting between them. Understand a range of compound units, including the formulae they are derived from, and use them in problem solving. Understand the concepts of direct and inverse proportion and be able to identify when quantities are in proportion. Produce and explain different representations of proportion and use the ideas of proportionality to solve a range of problems.