



# YEAR 8 CURRICULUM SUMMARY



**YEAR GROUP: 8 Curriculum Journey**  
**SUBJECT: Maths**

When ?	Chapter	Key Learning Objectives Key Questions	Unit Assessments (End of Chapter tests)
HALF TERM 1	<b>CH 1: Percentages</b>	<ul style="list-style-type: none"><li>• how to calculate simple interest</li><li>• how to use a multiplier to calculate percentage increases and decreases</li><li>• how to calculate the original value after a percentage change</li><li>• how to calculate the result of repeated percentage changes</li></ul>	<b>CH 1: Percentages</b> <ul style="list-style-type: none"><li>• Simple interest</li><li>• Percentage increases and decreases</li><li>• Calculating the original value</li><li>• Repeated percentage changes</li></ul>
	<b>CH 2: Equations and formulae</b>	<ul style="list-style-type: none"><li>• how to expand more complex expressions containing brackets</li><li>• how to factorise algebraic expressions containing powers of variables</li><li>• how to manipulate expressions containing several variables</li><li>• how to solve equations with the variable in the denominator of a fraction</li></ul>	<ul style="list-style-type: none"><li>• Multiplying out brackets</li><li>• Factorising algebraic expressions</li><li>• Expressions with several variables</li><li>• Equations with fractions</li></ul>
HALF TERM 2	<b>CH 3: Polygons</b>	<ul style="list-style-type: none"><li>• how to calculate the interior and exterior angles of polygons</li><li>• how to solve equations</li><li>• how to calculate the interior and exterior angles of regular polygons</li><li>• how regular polygons tessellate</li></ul>	<ul style="list-style-type: none"><li>• Properties of polygons</li><li>• Interior and exterior angles of regular polygons</li><li>• Tessellations and regular polygons</li></ul>



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HALF TERM 3	<b>CH 4: Using data</b>	<ul style="list-style-type: none"><li>• how to interpret correlation from two scatter graphs</li><li>• how to estimate the mean from a grouped frequency table</li><li>• how to construct and interpret two-way tables</li><li>• how to construct and read a cumulative frequency graph</li><li>• how to use the interquartile range to compare two sets of data from statistical diagrams</li><li>• how to plan a statistical investigation</li></ul>	<ul style="list-style-type: none"><li>• Scatter graphs and correlation</li><li>• Two-way tables</li><li>• Estimation of a mean from grouped data</li><li>• Cumulative frequency diagrams</li><li>• Statistical investigations</li></ul>
	<b>CH 5: Application of graphs</b>	<ul style="list-style-type: none"><li>• how to interpret and draw step graphs</li><li>• how to interpret and draw time graphs</li><li>• how to interpret and draw exponential growth graphs</li></ul> <ul style="list-style-type: none"><li>• how to calculate the lengths of sides in right-angled triangles by using Pythagoras' theorem</li><li>• how to use Pythagoras' theorem to solve problems</li><li>• how to use the converse of Pythagoras' theorem</li></ul>	<ul style="list-style-type: none"><li>• Step graphs</li><li>• Time graphs</li><li>• Exponential growth graphs</li></ul> <ul style="list-style-type: none"><li>• Introducing Pythagoras' theorem</li><li>• Using Pythagoras' theorem to solve problems</li><li>• The converse of Pythagoras' theorem</li></ul>
HALF TERM 4	<b>CH 6: Pythagoras' theorem</b>		



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<p>HALF TERM 5</p>	<p><b>CH 7: Fractions</b></p>	<ul style="list-style-type: none"> <li>• different ways to add or subtract fractions or mixed numbers</li> <li>• how to multiply any two fractions or mixed numbers</li> <li>• how to divide any two fractions or mixed numbers</li> <li>• how to manipulate algebraic fractions</li> </ul>	<ul style="list-style-type: none"> <li>• Adding and subtracting fractions</li> <li>• Multiplying fractions and mixed numbers</li> <li>• Dividing fractions and mixed numbers</li> <li>• Algebraic fractions</li> </ul>
	<p><b>CH 8: Algebra</b></p>	<ul style="list-style-type: none"> <li>• how to multiply two brackets together</li> <li>• how to expand an expression with more than two brackets</li> <li>• how to factorise a quadratic expression into two brackets</li> <li>• how to find the difference of two squares</li> </ul>	<ul style="list-style-type: none"> <li>• Expanding the product of two brackets</li> <li>• Expanding expressions with more than two brackets</li> <li>• Factorising quadratic expressions with positive coefficients</li> <li>• Factorising quadratic expressions with negative coefficients</li> <li>• The difference of two squares</li> </ul>
	<p><b>CH 9: Decimal Numbers</b></p>	<ul style="list-style-type: none"> <li>• how to extend your ability to work with standard form</li> <li>• how to recognise possible errors in rounding numbers</li> </ul>	<ul style="list-style-type: none"> <li>• Powers of 10</li> <li>• Standard form</li> <li>• Multiplying with numbers in standard form</li> <li>• Dividing with numbers in standard form</li> <li>• Upper and lower bounds</li> </ul>
	<p><b>CH 10: Surface area and volume of cylinders</b></p>	<ul style="list-style-type: none"> <li>• how to calculate the volume of a cylinder</li> <li>• how to calculate the surface area of a cylinder</li> <li>• how to calculate the volume and surface area of composite 3D shapes</li> </ul>	<ul style="list-style-type: none"> <li>• Volume of a cylinder</li> <li>• Surface area of a cylinder</li> <li>• Composite shapes</li> </ul>



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HALF TERM 6	<b>CH 11: Solving equations graphically</b>	<ul style="list-style-type: none"><li>• how to solve linear equations graphically</li><li>• how to solve quadratic equations graphically</li><li>• how to solve simultaneous equations graphically</li><li>• how to draw reciprocal graphs</li></ul>	<ul style="list-style-type: none"><li>• Graphs from equations in the form <math>ay \pm bx = c</math></li><li>• Solving simultaneous equations by drawing graphs</li><li>• Solving quadratic equations by drawing graphs</li><li>• Solving cubic equations by drawing graphs</li></ul>
	<b>CH 12: Compound units</b>	<ul style="list-style-type: none"><li>• how to solve problems involving speed, distance and time</li><li>• how to solve problems involving density, mass and volume</li><li>• how to solve problems involving compound units</li><li>• how to use unit prices to compare prices</li></ul>	<ul style="list-style-type: none"><li>• Speed</li><li>• More compound units</li><li>• Unit costs</li></ul>
	<b>CH 13: Right-angled triangles</b>	<ul style="list-style-type: none"><li>• what trigonometric ratios are and how to recognise them in right-angled triangles</li><li>• how to use trigonometry to find angles from two sides in a right-angled triangle</li><li>• how to find an unknown length in a right-angled triangle where all angles and one length are known</li></ul>	<ul style="list-style-type: none"><li>• Introduction to trigonometric ratios</li><li>• How to find trigonometric ratios of angles</li><li>• Using trigonometric ratios to find angles</li><li>• Using trigonometric ratios to find lengths</li></ul>



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	<b>CH 14: Revision</b>	<ul style="list-style-type: none"><li>• help you to practise and revise topics covered in your current course</li><li>• get you started on your GCSE course</li></ul>	<ul style="list-style-type: none"><li>• Practice</li><li>• Revision</li><li>• GCSE preparation: solving quadratic equations</li></ul>