



<b>Overview</b>	<p>The purpose of the Maths curriculum is to equip students with uniquely powerful ways to describe, analyse and solve problems and to make them more prepared for the real world.</p> <p>We do this by providing a secure understanding of mathematical concepts, from basic principles of mathematics to complex topics that combine several areas of study into a single question.</p> <p>In Year 8 we continue to concentrate on retention of knowledge and depth of learning. In doing this, all our students have the opportunity to master key skills.</p>
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<b>Autumn Term</b>	<p><b>Half Term 1</b></p> <p><b>Powers and Roots</b></p> <ul style="list-style-type: none"> <li>Use integer powers and associated real roots (square, cube and higher), recognise powers of 2, 3, 4, 5 and distinguish between exact representations of roots and their decimal approximations</li> </ul> <p><b>Prime Factorisation</b></p> <ul style="list-style-type: none"> <li>Use the concepts and vocabulary of prime numbers, factors (or divisors), common factors, prime factorisation, including using product notation and the unique factorisation property (HCF and LCM with large numbers taught in 9.04)</li> </ul> <p><b>Rounding</b></p> <ul style="list-style-type: none"> <li>Round numbers and measures to an appropriate degree of accuracy [for example, to a number of decimal places or significant figures]</li> </ul> <p><b>Fractions</b></p> <ul style="list-style-type: none"> <li>Multiply and divide fractions and mixed numbers</li> </ul> <p><b>Negative Number Review</b></p> <ul style="list-style-type: none"> <li>Negative Number Manipulation</li> </ul>	<p><b>Half Term 2</b></p> <p><b>Linear Equations</b></p> <ul style="list-style-type: none"> <li>Use algebraic methods to solve linear equations in one variable (including all forms that require rearrangement)</li> <li>Model situations or procedures by translating them into algebraic expressions or formulae and by using graphs</li> </ul> <p><b>Coordinates and Basic Graphs</b></p> <ul style="list-style-type: none"> <li>Coordinates and developing algebraic relationships</li> </ul>	<b>Assessment</b>
	<p>The assessments in Year 8 mainly test the content covered in that half term but also test cumulative learning.</p> <p>Half Term 1. Immediately after Oct Half Term Break.</p> <p>Half Term 2. Just before Christmas Break</p>		

<b>Spring Term</b>	<p><b>Half Term 3</b></p> <p><b>Units of measurement</b></p> <ul style="list-style-type: none"> <li>Use standard units of mass, length, time, money and other measures, including with decimal quantities</li> </ul> <p><b>Angles</b></p> <ul style="list-style-type: none"> <li>Understand and use the relationship between parallel lines and alternate and corresponding angles</li> </ul>	<p><b>Half Term 4</b></p> <p><b>Proportional reasoning</b></p> <ul style="list-style-type: none"> <li>Understand that a multiplicative relationship between two quantities can be expressed as a ratio or a fraction</li> </ul> <p><b>Fractions, decimals and percentages</b></p> <ul style="list-style-type: none"> <li>Converting between fractions, decimals and percentages. Solve problems involving percentage change, including percentage increase, decrease, original</li> </ul>	<b>Assessment</b>
	<p>The assessments in Year 8 mainly test the content covered in that half term but also test cumulative learning.</p> <p>Half Term 3. Last week of Half Term 3</p>		

<b>Circumference</b>	<ul style="list-style-type: none"> <li>■ Calculate interior and exterior angles of (regular) polygons</li> <li>■ Calculate and solve problems involving perimeters of 2-D shapes (including circles) and composite shapes</li> </ul>	<p>value problems and simple interest in financial mathematics. Using multipliers</p> <p><b>Ratio</b></p> <ul style="list-style-type: none"> <li>■ 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.</li> </ul>	<p>Half Term 4 Last week of HT 4.</p>
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<b>Summer Term</b>	<b>Half Term 5</b>	<b>Half Term 6</b>	<b>Assessment</b>
	<p><b>Area of circles and trapezia</b></p> <ul style="list-style-type: none"> <li>■ Derive and apply formulae to calculate and solve problems involving area of trapezia and circles (including part circles)</li> </ul> <p><b>Presenting and interpreting data</b></p> <ul style="list-style-type: none"> <li>■ Construct and interpret appropriate tables, charts, and diagrams, including frequency tables, bar charts, pie charts and vertical line (or bar) charts for ungrouped and grouped numerical data</li> </ul> <p><b>Averages</b></p> <ul style="list-style-type: none"> <li>■ Describe, interpret and compare observed distributions of a single variable through appropriate measures of central tendency (mean, mode, median) and spread (range, consideration of outliers)</li> </ul>	<p><b>3-D visualisation</b></p> <ul style="list-style-type: none"> <li>■ Use the properties of faces, surfaces, edges and vertices of cubes, cuboids, prisms, cylinders, pyramids, cones and spheres to solve problems in 3-D</li> </ul> <p><b>Volume</b></p> <ul style="list-style-type: none"> <li>■ Derive and apply formulae to calculate and solve problems involving volume of cuboids (including cubes) and other prisms (including cylinders)</li> </ul>	<p>The assessments in Year 8 mainly test the content covered in that half term but also test cumulative learning.</p> <p>Half Term 5. Last Week of HT5</p> <p>Summer Exam these exams cover all the topics learnt in year 7 in equal measures.</p>

<b>Useful Resources for Supporting Your Child at Home:</b>	<b>Homework:</b>
<ul style="list-style-type: none"> <li>■ <a href="http://whgs-academy.sparxmaths.uk">whgs-academy.sparxmaths.uk</a></li> <li>■ <a href="http://curriculum.unitedlearning.org.uk">curriculum.unitedlearning.org.uk</a></li> <li>■ <a href="http://trockstars.com">trockstars.com</a></li> <li>■ <a href="http://www.bbc.co.uk/bitesize/subjects/zqhs34j">www.bbc.co.uk/bitesize/subjects/zqhs34j</a></li> <li>■ <a href="http://mmerevise.co.uk">mmerevise.co.uk</a></li> </ul>	<p>Sparx Homework is set automatically weekly, and students have 7 days to achieve 100%</p>