

## Maths Scheme of Work - Overview KS 3 Year 7 and 8

<u>Unit 1 - Probability</u>	6 +1
<u>Unit 2 - Decimals, Rounding &amp; Accuracy</u>	3
<u>Unit 3 - Factors, Multiples, Primes, Powers and Roots</u>	3 +1
<u>Unit 4 - Expressions, Formulae and Compound Measures (Include perimeter)</u>	6 +1
<u>Unit 5 - Decimals, Percentages and Fractions</u>	6 +1
<u>Unit 6 - Ratio - Map Scales</u>	4
<b>End of Term Test 1</b>	
<u>Unit 7 - Expanding Brackets and Factorising</u>	4
<u>Unit 8 - Angles</u>	6 + 1
<u>Unit 9 - Equations and Inequalities</u>	4
<u>Unit 10 - Transformations</u>	4
<u>Unit 11 - Straight Line Graphs and Sequences -end of term 2</u>	6+1
<b>School Exams</b>	
<u>Unit 12 - Displaying and Interpreting Data</u>	6+1
<u>Unit 13 -Area, Surface Area, Circles (revising perimeter)</u>	
<u>Unit 14 - Averages and Spread</u>	
<u>Unit 15 - Triangles, Constructions, Similarity, Loci and Vectors</u>	
<u>Unit 16 - Proportion - recipes, currency, best value</u>	
<u>Unit 18 - Volume</u>	
<u>Unit 19 - Trigonometry and Pythagoras - Discretion of teacher</u>	
<b>End of Year Test</b>	

<h2>Become avid readers</h2>	<ul style="list-style-type: none"> <li>• Key vocabulary displayed on learning objectives, classroom displays, scaffolds, key words on boards and multisensory vocabulary learning.</li> <li>• Making sure students explain what key words mean within lessons.</li> <li>• Progressive vocabulary is shown in the SoW so that teachers know what vocabulary to use that week/lesson.</li> <li>• Rich vocabulary is seen in lesson observations.</li> <li>• Consistent approach in using the correct terminology in the department/key stages.</li> <li>• Making links with other subjects e.g. the meaning of suffix and prefix.</li> <li>• Our students talking like a mathematician.</li> </ul>
<h2>Knowledge acquisition</h2>	<ul style="list-style-type: none"> <li>• Making connections between other areas of learning within maths.</li> <li>• Use of Mathsbox starters to consolidate and ensure student's learning is interleaved and used to assess prior knowledge.</li> <li>• Skills tests for all classes every two weeks which are broken down by grade.</li> <li>• Use of singing, acronyms, mnemonics to learn key mathematical facts/formula</li> <li>• MathsWatch to encourage independent learning</li> <li>• Utilisation of concrete, pictorial and abstract approaches to learning.</li> <li>• Recognising and encouraging different thought processes for all students.</li> <li>• Raising aspirations for all through clear modelling.</li> <li>• Making learning explicit for students so that they aspire to become confident and fluent mathematicians.</li> </ul>
<h2>Philosophical enquiry</h2>	<ul style="list-style-type: none"> <li>• Multiple answers and multiple methods to solve mathematical problems</li> <li>• P4C lessons based on the manipulation of statistics, infinity and other philosophical mathematical concepts</li> <li>• Daily situations where you can apply maths</li> <li>• Use of videos to inspire minds and encourage deep thinking</li> </ul>
<h2>Lifelong learning</h2>	<ul style="list-style-type: none"> <li>• All students will access the same learning challenged through variation of activities and next steps to deepen knowledge and understanding.</li> <li>• The application to real life problems so that Maths is relevant to the students.</li> <li>• Projects such as Y5/6 G+T maths challenge where local primaries are invited to compete leading to raised aspirations for Maths.</li> <li>• Giving students the correct tools to go out in the wider community.</li> <li>• Changing the perception of Maths; improving the image of Mathematics.</li> <li>• A good grade in maths is essential to study maths at A Level which is an option for our most able students</li> <li>• A good grade is also required to study many other courses and a prerequisite for many jobs</li> <li>• Become mathematically proficient in the outside world and raise aspirations so that students can deal with everyday life.</li> <li>• Promoting the importance of Mathematics to real life and exciting jobs that students can aspire to.</li> </ul>

<p><b>Caring</b></p>	<ul style="list-style-type: none"> <li>• Recognising effort and rewarding excellence.</li> <li>• Considering the impact of your actions.</li> <li>• Students discuss responses and work in pairs choosing language sensitively</li> </ul>
<p><b>Critical</b></p>	<ul style="list-style-type: none"> <li>• Encourage all students to have a can-do attitude in all lessons.</li> <li>• Building resilience for all learners.</li> <li>• Solving problems using a variety of techniques and being open to exploring alternatives.</li> <li>• Assess and explain the techniques used.</li> </ul>
<p><b>Creative</b></p>	<ul style="list-style-type: none"> <li>• Suggest possible ways to solve problems, compare with other methods and consider applications to different problems</li> <li>• Being creative when students are required to write their own questions.</li> <li>• ILTs for Christmas activities</li> </ul>
<p><b>Collaborative</b></p>	<ul style="list-style-type: none"> <li>• Group work being appropriately used to promote thoughtful discussion.</li> <li>• Collaborative work, motivating all students to achieve to the best of their ability.</li> <li>• Share ideas and knowledge and build on these to create a fuller solution.</li> </ul>