



Grade 10 Mathematics – We will be learning...

Term 1	Term 2	Term 3	Working towards
<p>We will be following the Cambridge IGCSE Core and Extended curriculum.</p> <p>Within these units we will learn:</p> <p>Reviewing number concept. Problem solving Fractions, ratios and percentages Operations implying fractions, ratios and percentages Standard form Estimation Revision of multiples, factors and primes Composite numbers Powers and roots Working with directed numbers Rounding numbers and Order of operations</p> <p>ALGEBRA Making sense of algebra. Using letters to represent unknown values Substitution Simplifying expressions Working with brackets</p> <p>Equations and transforming formulae. Further expansion of brackets Solving linear equations Factorising algebraic expressions Transformation of a formula Rearrange a formula</p>	<p>Within these units we will learn:</p> <p>Sequences and sets. Sequences Rational and irrational numbers Sets Quadratic sequences Arithmetic and geometric sequences</p> <p>Ratio, rate and proportion. Rates of change Ratio and scale Kinematic graphs Direct and inverse proportion in algebraic terms Increasing and decreasing amounts by a given ratio Use of graphs to represent proportionality</p> <p>Understanding measurement. Change of units Upper and lower bounds Conversion graphs Using Maths and Science altogether</p> <p>Managing money. Borrowing and investing money Buying and selling Compound interest using formula</p> <p>GEOMETRY Lines, angles and shapes. Lines and angles Triangles Quadrilaterals, Polygons, Circles, Construction</p>	<p>Within these units we will learn:</p> <p>Symmetry and LOCI. Symmetry in two dimensions Symmetry in three dimensions Symmetry properties of circles Angle relationship in circles Loci</p> <p>Pythagoras theorem and similar shapes. Pythagoras' theorem Understanding similar triangles Understanding similar shapes Understanding congruence</p> <p>Scale drawings, bearings and trigonometry. Scale drawings Bearing Understand the tangent, cosine and sine ratios Solving problems using trigonometry Angles between 90 and 180 degrees The sine and cosine rule Area of a triangle Trigonometry in three dimensions <i>COMPARING PYTHAGORAS WITH TRIGONOMETRY</i></p> <p>Students will complete activities such as: Worksheets related to the topic and structured by levels of understanding</p>	<p>Full practice exams for core and extend using iGCSE past papers. These will occur at the end of term 1 and term 2 to show the progress made prior to the examined Mathematics iGCSE.</p> <p>Introduction of Mathematical language and meaning of symbols.</p>



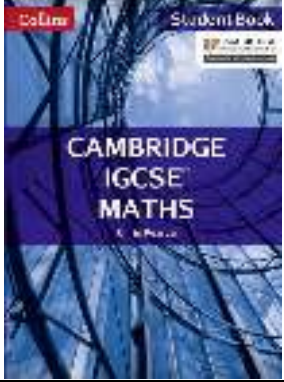
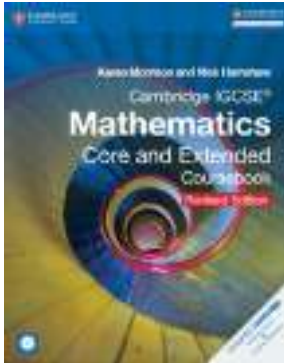
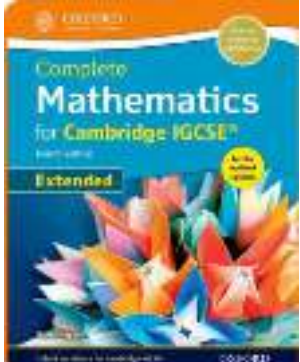
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<p>Prove USE OF MATHEMATICAL LANGUAGE & SYMBOLS</p> <p>Students will complete activities such as: Worksheets related to the topic and structured by levels of understanding Problem solving activities to deepen into their mathematical vocabulary as well as the application of Maths to different kinds of problems. At least one activity, text or problem related to real world skills. At least once a week starter related to previous topics to reinforce the memory.</p> <p>Teachers will use tasks to assess core module learning objectives and monitor progress. At the end of the unit students will complete an “Exit Point”, it means, a short assessment to help teachers evaluate student’s progress throughout the unit.</p>	<p>Problem solving implying geometry Perimeter, area and volume. Perimeter and area in 2 dimensions Three-dimensional objects Surface areas and volume of solids</p> <p>Students will complete activities such as: Worksheets related to the topic and structured by levels of understanding Problem solving activities to deepen into their mathematical vocabulary as well as the application of Maths to different kinds of problems. At least one activity, text or problem related to real world skills. At least once a week starter related to previous topics to reinforce the memory.</p> <p>Teachers will use tasks to assess core module learning objectives and monitor progress. At the end of the unit students will complete an “Exit Point”, it means, a short assessment to help teachers evaluate student’s progress throughout the unit.</p>	<p>Problem solving activities to deepen into their mathematical vocabulary as well as the application of Maths to different kinds of problems. At least one activity, text or problem related to real world skills. At least once a week starter related to previous topics to reinforce the memory.</p> <p>Teachers will use tasks to assess core module learning objectives and monitor progress. At the end of the unit students will complete an “Exit Point”, it means, a short assessment to help teachers evaluate student’s progress throughout the unit.</p>	
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Books you may find useful:



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	<p>Collins Cambridge IGCSE - Cambridge IGCSE</p> <ul style="list-style-type: none">• ISBN: 978-0-00-815037-2
	<p>Cambridge IGCSE Mathematics Core and Extended</p> <p>ISBN:9781316605639</p>
	<p>Complete Mathematics for Cambridge IGCSE® Revision Guide</p> <ul style="list-style-type: none">• ISBN-10: 0199154872• ISBN-13: 978-0199154876