

## Mathematics

Tiers and Grades: Higher tier 9-4, Foundation tier 5-1 (note: these numerical grades will replace the current A\* to G grades for some GCSEs started in 2015. 9 will be the highest grade.)

### Course Description

Students will follow the new Mathematics GCSE course. The course contains 20% more subject matter than the previous course and some of the content is at a higher level than previously. Throughout the course students will develop their problem solving skills as well as their fluency in mathematical techniques. There will also be a new emphasis on constructing mathematical proofs. They will be encouraged to think deeply and to aim for a deep understanding of the core concepts as well as learning a variety of algorithms, which can be used to solve particular mathematical problems. Students will work individually, in pairs and in groups. They will use practical equipment, play games, work on computers and undertake significant amounts of written work and practice using traditional formal symbolism. All three papers may contain content from any part of the course.

### Assessment

<b>Maths</b>	<b>AQA</b>	Paper 1	90 mins	Non-Calculator	Written Exam	33.33%
		Paper 2	90 mins	Calculator	Written Exam	33.33%
		Paper 3	90 mins	Calculator	Written Exam	33.33%

## Year 10

<b>Subject:</b>  Mathematics	<b>Exam board:</b>  AQA	
		<b>Key stage / year group: 10</b>
		<b>Course length: 1/2year</b>
		<b>Number of lessons per week: 4</b>
		<b>HOD: Cath Costello</b>  ccostello@brit.croydon.sch.uk
<b>Term 1 Topic and Content:</b>	<b>Term 2 Topic and Content:</b>	<b>Term 3 Topic and Content:</b>

<p>Operations, Estimating and Rounding</p> <p>Factors, Multiples and Primes</p> <p>Indices and their laws</p> <p>Surds</p> <p>Standard Form</p> <p>Fractions</p> <p>Percentages</p> <p>Decimals</p> <p>Ratio and Proportion</p> <p>Compound Measures</p> <p>Algebraic Manipulation</p> <p>Equations and Inequalities</p> <p>Rearranging Formulae</p> <p>Trial and Improvement</p>	<p>Plotting Linear and Quadratic Graphs</p> <p>Quadratics and Cubics</p> <p>Collecting and displaying data</p> <p>Surveys and Sampling</p> <p>Averages and Frequency Polygons</p> <p>Medians, Cumulative Frequency and Interquartile ranges</p> <p>Stem and Leaf</p> <p>Scatter Graphs and Correlation</p> <p>Probability</p> <p>Histograms</p>	<p>Estimates, reading scales and conversions</p> <p>Area and Perimeter and Volume</p> <p>Surface Area</p> <p>Angles</p> <p>Transformations</p> <p>Constructions and Loci</p> <p>Similar Shapes</p> <p>Circle theorems</p> <p>Pythagoras' Theorem</p> <p>Trigonometry</p> <p>Simultaneous Equations and inequalities</p> <p>Pythagoras and Trigonometry in 3-D</p> <p>Trigonometry in non-right-angled triangles</p>
<p><b>Links to other subjects:</b></p> <p>Perimeter, Ratio and Proportion and Angles – D&amp;T</p> <p>Real life graphs, substitution, compound measures – Science</p> <p>Real life graphs and Data Handling– Geography</p>	<p><b>Assessments and grading:</b></p> <p>1 assessment every half term in the form of GCSE past exam papers.</p>	
<p><b>Homework topics:</b></p>	<p><b>Recommended reading / websites;</b></p>	<p><b>Clubs, extra-curricular, revision sessions available:</b></p>

<p>All homework topics are based on what students are being taught and also what students need to revise.</p>	<p>MyMaths.co.uk</p> <p>MathsWatch.vle.co.uk</p> <p>Edexcel Revision Guide £2</p> <p>Practice Booklet £3</p>	<p>Weekly revision sessions</p>
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## Year 11

<p><b>Subject:</b></p> <p>Mathematics</p>	<p><b>Exam board:</b></p> <p>AQA</p>	
		<p><b>Key stage / year group: 11</b></p>
		<p><b>Course length: 2/2 year</b></p>
		<p><b>Number of lessons per week: 4</b></p>
<p><b>HOD: Cath Costello</b></p> <p>ccostello@brit.croydon.sch.uk</p>		
<p><b>Term 1 Topic and Content:</b></p> <p>Factors, Multiples and Primes</p> <p>Rounding and Estimations</p> <p>Indices and their laws</p> <p>Expanding and Factorising Expressions</p> <p>Plotting Graphs</p> <p>Calculating Averages</p> <p>Probability</p> <p>Cumulative Frequency and IQR</p>	<p><b>Term 2 Topic and Content:</b></p> <p>Displaying Data</p> <p>Conversions</p> <p>Recurring Decimals</p> <p>Compound Interest</p> <p>Operations and Place Values</p> <p>Exchange Rates</p> <p>Standard Form</p> <p>Angles and Bearings</p> <p>Circle Theorem</p> <p>Area, Perimeter and Volume</p>	<p><b>Term 3 Topic and Content:</b></p> <p>Cones, Pyramids and Spheres</p> <p>Surds</p> <p>Vectors</p> <p>Transforming Graphs</p> <p>Tailored revision of all topics</p>

<p>Fractions</p> <p>Fractions and percentages of amounts</p> <p>Best Buy</p> <p>Solving Equations</p> <p>Changing Subject of Formulae</p> <p>Inequalities</p> <p>Transformations</p> <p>Polygons</p> <p>Compound Measures</p>	<p>Surface Area</p> <p>Simultaneous Equations</p> <p>Quadratics</p> <p>Pythagoras' Theorem</p> <p>Trigonometry</p> <p>Trial and Improvement</p> <p>Congruence and Similar Shapes</p> <p>Plans and Elevations</p> <p>Loci and Constructions</p>	
<p><b>Links to other subjects:</b></p> <p>Perimeter, Ratio and Proportion and Angles – D&amp;T</p> <p>Real life graphs, substitution, compound measures – Science</p> <p>Real life graphs and Data Handling– Geography</p>	<p><b>Assessments and grading:</b></p> <p>1 assessment every half term in the form of GCSE past exam papers.</p>	
<p><b>Homework topics:</b></p> <p>All homework topics are based on what students are being taught and also what students need to revise.</p>	<p><b>Recommended reading / websites;</b></p> <p>MyMaths.co.uk</p> <p>MathsWatch.vle.co.uk</p> <p>Edexcel Revision Guide £2</p> <p>Practice Booklet £3</p>	<p><b>Clubs, extra-curricular, revision sessions available:</b></p> <p>Weekly revision sessions</p> <p>Saturday School</p> <p>Master classes on algebra, shape, data handling and number topics.</p>

