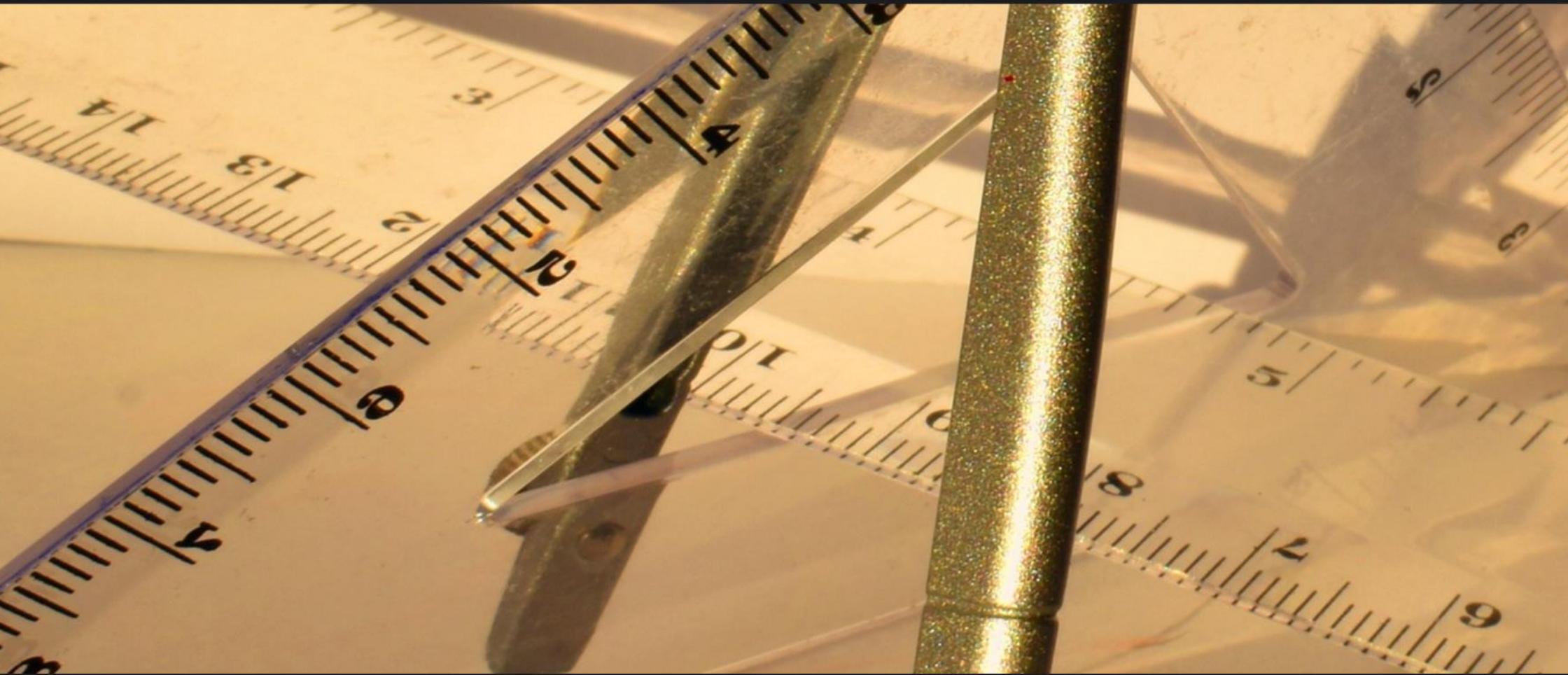


# MATHS



Curriculum Aims, Delivery & Content



# Bottisham Village College

Achievement through Inspiring, Caring, Enriching

<p><b>Curriculum Delivery</b> <b>Key Stage 3</b></p>	<p><b>In all years</b>, students are given the opportunity to explore and master maths by using mini-whiteboards in lessons.</p> <p><b>In year 7</b>, students will undergo a baseline test which is nationally benchmarked, giving us detailed feedback on the students' strengths and areas of need. Thereafter, students will be tested at the end of every term with a synoptic paper, not just testing the most recent topics, but recalling others.</p> <p><b>In all years</b>, students will have termly tests, as above.</p> <p><b>In all years</b>, extended Learning is used to consolidate the learning as well as the use of recall tests, to ensure that fundamental skills are entrenched into students' long-term memory.</p>
<p><b>Curriculum aims</b> <b>Key Stage 3</b></p>	<p>Maths is a fascinating, elegant and precise way of communicating that every student has the right to experience and understand.</p> <p>Maths is not a series of procedures of algorithms to be learnt in isolation. Depth of understanding and making connections are as important, if not more so than procedural automaticity and delivering 'correct' answers. Students should not only know and be able to confidently use a variety of calculation methods but understand when they are most effectively used, why they work and how they have been derived.</p> <p>When students have developed automaticity they will apply their skills to a variety of problems.</p>
<p><b>Curriculum Content</b> <b>Year 7</b></p> <p>Students have 7 core maths lessons per fortnight and 1 problem solving lesson</p>	<p><u>All Students will study units on the Fundamentals of Arithmetic, Multiplicative Relationships, Fractions and Place Value.</u> These units cover previous content from the primary curriculum in greater depth. Be the end of the year all students to have a common way of modelling and talking about the mathematics they are studying and a deep understanding of the connections between different pieces of maths.</p>



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<p><b>Curriculum Content Year 8</b></p> <p><b>Students have 8 lessons a fortnight in year 8</b></p>	<p><u>Foundation:</u> Operations with decimals, negative numbers, powers &amp; roots, algebra, solving equations, ratio, percentages, standard form, decimals, fractions, FDP, Primes, Area, Angles, Sequences, LCM and HCF</p> <p><u>Higher:</u> Primes, Index Laws, Surds, Nth Term, graphs, estimation, standard form, circles, brackets, Pythagoras, Multiplicative Relationships, Inequalities, Volume.</p>	<p><b>Curriculum Content Year 10</b></p> <p><b>Students have 7 lessons a fortnight in year 10</b></p>	<p><b>Students take AQA GCSE Maths (8300)</b></p> <p><u>Foundation:</u> Number consolidation, Algebra, Equations, Sequences, Fractions, Percentages, Angles, Data, Area, Graphs, Transformations, Ratio, Pythagoras, Trigonometry, Probability.</p> <p><u>Higher:</u> Bounds, Maps and Bearings, Proportion, Quadratic Sequences, Manipulating Quadratics, Graphs, Solving Quadratics, Vectors, Inequalities, Trigonometry, Simultaneous Equations, Constructions, Shape and Congruency, 3D shape.</p>
<p><b>Curriculum Content Year 9</b></p> <p><b>Students have 7 lessons a fortnight in year 9</b></p>	<p><u>Foundation:</u> Standard Form, Estimating, Coordinates, Graphs, Nth Term, ratio, FDP, percentages, brackets, equations, LCM, HCF, PFF, Scale Factors and Bearings, Indices, Formulae and Angles.</p> <p><u>Higher:</u> Compound interest, Scale Factors, Rearrange Formulae, Trigonometry, Geometric Sequences, recurring decimals to fractions, algebraic proofs, error intervals, proper SURDS, Factorise Quadratics, Fractional Indices, Linear Graphs, Simultaneous Equations, Proportionality, Compound Units</p>	<p><b>Curriculum Content Year 11</b></p> <p><b>Students have 7 lessons a fortnight in year 11</b></p>	<p><u>Foundation:</u> Percentages and Rates of Change, Quadratic Equations, Graphs, Constructions and Loci, Volume, Rearranging Formulae, Fractions, Reciprocals, Standard Form, Congruency, Probability, Trigonometry and then consolidation.</p> <p><u>Higher:</u> Circle Theorems, Area and Quadratics, Intro to Calculus, Growth, Decay and Iteration, Real-life Graphs, Functions, Circle Graphs, Transformations, Permutation and Probability, Basic Data handling, Cumulative Frequency and Scatter Graphs</p>