



BBG Academy Curriculum 2025-2026 – Mathematics

This document contains details of how the subject is sequenced over the years of delivery. Included are assessment points and the prior learning that will be included in these assessments. It also includes where topics are revisited to maximise student retrieval and retention. Along with curriculum content, opportunities to develop links with careers are also identified in order to bring the relevance of the curriculum into the wider life context.

Curriculum Intent Statement

Year 11 Higher SOW is based on the Sparx SOW below however staff are able to use mocks and in class assessments to determine the order of topics so the SOW is bespoke for each class

Year 11

Year 11 assessment dates

Assessment week 1 – October Mocks

Assessment week 2 – January Mocks

Term	Content	Sequencing	Assessment	Careers links & Experiences
Autumn 1	<p>Surds</p> <p>Multiplying and dividing surds U633</p> <p>Simplifying surds U338</p> <p>Adding and subtracting surds U872</p> <p>Expanding brackets with surds U499</p> <p>Rationalising denominators containing a single term U707</p> <p>Rationalising denominators containing two terms U281</p> <p>Algebraic Fractions</p> <p>Simplifying algebraic fractions by factorising into one bracket U437</p> <p>Simplifying algebraic fractions by factorising into two brackets U294</p> <p>Adding and subtracting algebraic fractions U685</p> <p>Multiplying algebraic fractions U457</p> <p>Dividing algebraic fractions U824</p> <p>Quadratic Equations</p> <p>Factorising to solve quadratic equations of the form $ax^2+bx+c=0$ U960</p>	<p>Calculating with roots and powers U851</p> <p>Simplifying expressions by collecting like terms U105</p> <p>Expanding single brackets U179</p> <p>Expanding double brackets U768</p> <p>Multiplying and dividing surds U633</p> <p>Simplifying surds U338</p> <p>Adding and subtracting surds U872</p> <p>Expanding brackets with surds U499</p> <p>Simplifying algebraic fractions by cancelling common factors U103</p> <p>Calculations with fractions U736, U475, U554</p> <p>Simplifying algebraic fractions by cancelling common factors U103</p> <p>Factorising into one bracket U365</p> <p>Factorising quadratic expressions of the form x^2+bx+c U178</p>	<p>Oct Mocks</p> <p>In class assessments on going</p>	<p>WHY MATHS - When will I ever need this? Resource - AMSP</p> <p>What Is Mathematical Modelling? - Maths Careers</p> <p>Engineering Cycling Gold - Maths Careers</p>

<p>Solving quadratic equations by completing the square U589 Solving quadratic equations using the quadratic formula U665 Constructing and solving quadratic equations U150 Solving quadratic equations graphically U601 Solving simultaneous equations involving quadratics U547 Solving simultaneous equations involving quadratics graphically U875</p> <p>Exact trigonometric values Using the exact values of trigonometric ratios - Higher U319 Using trigonometric graphs U450</p> <p>Non right angle trigonometry The sine rule U952 The cosine rule U591 The area rule U592</p> <p>Pythagoras Using Pythagoras' theorem in 3D U541 Trigonometry in 3D shapes U170</p> <p>Circle theorems Angles subtended at the centre or circumference of a circle U459 Angles in segments and cyclic quadrilaterals U251 Circle theorems for chords and tangents U489 Alternate segment theorem U130</p> <p>Histograms Drawing histograms with equal class widths U185 Drawing histograms with unequal class widths U814 Interpreting histograms U983 Calculating averages from histograms U267</p>	<p>Factorising quadratic expressions of the form ax^2+bx+c U858 Factorising quadratic expressions of the form ax^2+bx+c U858 Factorising to solve quadratic equations of the form $x^2+bx+c=0$ U228 Completing the square U397 Substituting into algebraic formulae U585</p> <p>Solving simultaneous equations using elimination U760 Solving simultaneous equations using substitution U757 Solving simultaneous equations graphically U836</p> <p>Understanding sin, cos and tan U605 Finding unknown sides in right-angled triangles U283 Finding unknown angles in right-angled triangles "U545 "</p> <p>Using the exact values of trigonometric ratios U627 Understanding sin, cos and tan U605 Finding unknown sides in right-angled triangles U283 Finding unknown angles in right-angled triangles U545 Changing the subjects of formulae with two or more steps U181</p> <p>Solving equations U325, U505 Using Pythagoras' theorem in 2D U385 Applying Pythagoras' theorem in 2D U828 Finding unknown sides in right-angled triangles U283 Finding unknown angles in right-angled triangles U545 Combining angle facts U655</p> <p>Interpreting frequency tables with grouped data U312 Finding averages from grouped data U877</p>		
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<p>Spring 1</p>	<p>Probability Conditional probabilities from tables U246 Conditional probabilities from Venn diagrams U699 Using the conditional probability formula U821 Conditional probabilities from tree diagrams U806 Using the product rule for counting U369</p> <p>Inequalities Graphs of linear inequalities U747 Solving quadratic inequalities U133</p> <p>functions Substituting into functions U637 Substituting into composite functions U895 Finding composite functions U448 Finding inverse functions U996</p> <p>Transform graphs Translating graphs U598 Reflecting graphs U487 Transforming graphs U455</p> <p>Iteration Using recurrence relations U171 Substituting into iterative formulae U434 Finding approximate solutions to equations using iteration U168</p> <p>Proof Writing algebraic proofs U582</p> <p>Similar objects Finding the perimeter and area of similar shapes U630 Finding the surface area and volume of similar shapes U110</p> <p>vectors Solving geometric problems using vectors U781</p>	<p>Probabilities of mutually exclusive events U683 Venn diagrams U476 Tree diagrams for independent events U558 Tree diagrams for dependent events U729</p> <p>Solving linear inequalities U759, U738, U145 Factorising to solve quadratic equations of the form $x^2+bx+c=0$ U228 Plotting graphs of quadratic functions U989 Plotting straight line graphs U741 Substituting into algebraic formulae U585</p> <p>Substituting into functions U637 Substituting into composite functions U895 Changing the subjects of formulae with two or more steps U181 Expanding single brackets U179 Expanding double brackets U768 Substituting into functions U637 Translation U196 Reflection U799 Substituting into algebraic formulae U585 Changing the subjects of formulae with two or more steps U181</p> <p>Expanding double brackets U768 Simplifying algebraic fractions by factorising into one bracket U437 Changing the subjects of formulae with two or more steps U181</p> <p>Finding unknown sides in similar shapes U578 Converting units of area U248 Converting units of volume U468 Adding and subtracting column vectors U903 Multiplying column vectors by a scalar U564 Identifying parallel vectors U660</p>	<p>Assessment week 1</p> <p>Jan Mocks</p> <p>In class assessments on going</p> <p>Sparx Maths Curriculum - View the Curriculum</p>	<p>WHY MATHS - I can't do it! Resource - AMSP</p> <p>Algorithms: The Good, the Bad, and the Mutant - Maths Careers</p> <p>Careers in Maths: What is a Digital Processor System Engineer? - Maths Careers</p>
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	<p>Geometric proofs with vectors U560</p> <p>proof</p> <p>Geometric proofs with angle facts U471</p> <p>Geometric proofs with congruence and similarity U887</p> <p>Proving the circle theorems U807</p> <p>graphs</p> <p>Estimating gradients of non-linear graphs using tangents U800</p> <p>Calculating distances from velocity-time graphs U611</p> <p>Estimating areas under non-linear graphs U882</p> <p>Equations of circles and tangents U567</p>	<p>Finding unknown angles U655, U826, U427</p> <p>Similarity and congruence U578, U866</p> <p>Circle theorems U808</p> <p>Equations of parallel and perpendicular lines U898</p> <p>Interpreting graphs of quadratic functions U667</p> <p>Graphs of cubic functions U980</p> <p>Graphs of reciprocal functions U593</p> <p>Graphs of exponential functions U229</p> <p>Finding the area of trapeziums U265</p>		
<p>Summer 1</p>	<p>Revision for exams</p>		<p>Sparx Maths Curriculum - View the Curriculum</p>	<p>Resource - AMSP</p> <p>WHY MATHS - Why go further!</p> <p>Search Algorithms - Helping Tesco's online customers find what they're looking for - Maths Careers</p> <p>Four different careers that use maths - Maths Careers</p>



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