



Long Term Plan

Maths

KS4 (Year 10 and Year 11)

Shahid Patel
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Subject intent/vision:

In maths we provide a knowledge rich and an ambitious curriculum that allows our students to thrive academically.

We provide our students with reasoning, critical thinking and problem-solving opportunities that help them to flourish personally in and beyond the classroom.

To enable all students to achieve, our subject curriculum is underpinned by the following principles:



Ambitious – all students will study a three year KS3 curriculum that interlinks with our KS4 maths curriculum. This will enable all students to sit the GCSE exam in maths at the end of year 11 - some students will do the further maths exams in year 10. Top set students will sit the Statistics exam in year 11.



Sequenced / Spiral – all of our lessons begin with a Do Now activity that recaps prior learning and supports retrieval so that students know and remember more. Some topics are retaught throughout the five years so that knowledge can be built and sequenced over time. All of the units have work that is interleaved allowing students to apply their procedural knowledge and recap key facts. We have a centralised homework system which is bespoke to individual learners. The purpose of our homework is for our students to recall and retrieve prior learning. We do this by ensuring our homework lags with the class learning.



Literacy – In all Maths lessons we explicitly teach tier 2/3 vocabulary with our students, and we carry out a choral practice. Teachers also define the word and illustrate examples, non-examples and characteristics to ensure our students understand and can relate to abstract ideas.



Cultural Capital – our students have the opportunity to learn about profit and loss, repayments, growth, turning points (stability), perimeter, area, volume, sequences and much more. Students have the opportunity to take part in maths challenges and apply their learning in real life situations.

Long term plan:

From September 2026: KS4 Maths Programme of Study (Year 10 Higher)

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
- Repeated percentage change - Surds - Solving quadratic equations - Surface area of 3D Objects - Volume of 3D Objects - Linear simultaneous equations	- Rearranging formulae - Right-angled trigonometry - Calculating with algebraic fractions - Constructions and loci	- Equations of linear graphs - Plotting and interpreting real-life graphs - Circle theorems - Venn diagrams and set notation - Independent and dependent events	- Density and pressure - Working with ratios and algebra - Velocity-time graphs - Cubic, reciprocal and exponential graphs	- Quadratic and geometric sequences - Sampling - Direct and inverse proportion - Transforming shapes - Bounds - Index laws	- Fractions and recurring decimals - Expanding and factorising brackets - Cumulative frequency graphs - Box plots - Histograms - Using iterative formulae - Area and volume of similar shapes
	Assessment: 1 Summative Assessment				Assessment: 3 Summative Assessment

From September 2026: KS4 Maths Programme of Study (Year 10 Foundation)

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
- Number sense - Adding and subtracting - Multiplying - Dividing - Percentage change - Surface area of 3D Objects - Volume of 3D Objects - Rearranging formulae	- Linear simultaneous equations - Finding unknown angles - Pythagoras' theorem and trigonometry - Constructions and loci - Fractions and mixed numbers - HCF and LCM	- Calculating with negative numbers - Order of operations - Equations of linear graphs - Venn diagrams and set notation - Independent and dependent events - Density and pressure	- Time - Measures - Working with ratios - Distance-time graphs - Quadratic Graphs	- Drawing and interpreting statistical diagrams - Arithmetic and geometric sequences - Direct and inverse proportion - Transforming shapes - Error intervals	Index laws Expanding and factorising brackets Calculating with standard form Grouped data Drawing and interpreting statistical diagrams
	Assessment: 1 Summative Assessment				Assessment: 3 Summative Assessment

From September 2026: KS4 Maths Programme of Study (Year 11 Higher)

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
• Conditional probability • Linear and quadratic inequalities • Substituting into functions • Finding composite and inverse functions • Transforming graphs • Using iterative formulae	• Writing algebraic proofs • Area and volume of similar shapes • Vector proofs • Writing geometric proofs • Non-linear graphs	• Calculating with surds • Rationalising denominators • Calculating with algebraic fractions • Solving quadratic equations • Simultaneous equations	• Trigonometric ratios and graphs • Non right-angled trigonometry • 3D Pythagoras' theorem and trigonometry • Circle theorems • Histograms	Revision	Revision
Assessment: 1 Summative Assessment	Assessment: 3 Summative Assessment		Assessment: 3 Summative Assessment		

From September 2026: KS4 Maths Programme of Study (Year 11 Foundation)

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
• HCF and LCM • Fractions and mixed numbers • Simplifying expressions • Solving equations • Simultaneous equations • Finding unknown angles	• Pythagoras' theorem and trigonometry • Surface area of 3D Objects • Volume of 3D Objects • Drawing and interpreting statistical diagrams	• Theoretical and experimental probability • Linear inequalities • Vector problems • Percentage change • Calculating with compound measures	• Working with ratios and algebra • Proportion word problems • Calculating with standard form • Arithmetic and geometric sequences • Equations of linear graphs	Revision	Revision
Assessment: 1 Summative Assessment	Assessment: 3 Summative Assessment		Assessment: 3 Summative Assessment		

GCSE Exam:

The Pearson Edexcel Level 1/Level 2 GCSE (9 to 1) in Mathematics is a tiered qualification. There are two tiers:

- Foundation tier - grades 1 to 5 available
- Higher tier grades - 4 to 9 available (grade 3 allowed)

The assessment for each tier of entry consists of three externally examined papers, all three must be from the same tier of entry. Students must complete all three papers in the same assessment series.

Learning Resources:

Sparx Maths - <https://maths.sparx-learning.com/student/independentlearning>

Maths genie - <https://www.mathsgenie.co.uk/gcse.html>

CorbettMaths - <https://corbettmaths.com/contents/>

Maths4everyone - <https://www.maths4everyone.com/pages/worksheets.php>

MyMathsCloud - <https://www.mymathscloud.com/modules/gcse-igcse-o-level/practice-papers>