



Subject Curriculum – Year 11 Most Able

Big Ideas & Purpose

The aims of teaching and learning mathematics are to encourage and enable students to: recognise that mathematics permeates the world around us; appreciate the usefulness, power and beauty of mathematics and enjoy mathematics and develop patience and persistence when solving problems.

Programme of Study

HT1	HT2	HT3	HT4	HT5	HT6
Circle theorems Radii and chords Tangents Angles in circles Applying circle theorems More algebra Rearranging formulae Algebraic fractions Simplifying algebraic fractions 6 Week Plan- Mock Preparation Revision of key material in preparation for the Mock examination	More algebraic fractions Surds Solving algebraic fraction equations Functions Proof Vectors and geometric proof Vectors and vector notation Vector arithmetic More vector arithmetic Parallel vectors and collinear points Solving geometric problems	Proportion and graphs Direct proportion More direct proportion Inverse proportion Exponential functions Non-linear graphs Translating graphs of functions Reflecting and stretching graphs of functions	Revision and revisiting topics. Exam preparation.	Revision and revisiting topics. Exam preparation.	

Key Assessments

- Year 11 will sit a full GCSE Mock examination in November
- Year 11 will sit a full GCSE Mock 2 examination in February.
- Year 11 will sit their GCSE Examinations in May – June.

Key Skills

- To provide opportunities for learner to demonstrate their knowledge of mathematics across a whole range of topic areas.
- To allow learners to develop their problem-solving strategies and provide the confidence and skills required to tackle unfamiliar challenges.
- To build on work carried out in Key Stage 3 to prepare the learner to function mathematically.

Links to Careers

- GCSE maths is a requirement for all degree courses. It teaches accuracy and precision in work. The analytical and problem-solving skills you learn are valuable in many different careers, for example Accountancy, Teaching, Business, Medicine, Architecture and Computer Studies.



Subject Curriculum – Year 11 Middle Ability

Big Ideas & Purpose The aims of teaching and learning mathematics are to encourage and enable students to: recognise that mathematics permeates the world around us; appreciate the usefulness, power and beauty of mathematics and enjoy mathematics and develop patience and persistence when solving problems.

Programme of Study	HT1	HT2	HT3	HT4	HT5	HT6
Transformations		Accurate drawings	Averages and range	Revision and revisiting	Revision and revisiting	
Translation		Scale drawings	Mean and range	topics.	topics.	
Reflection		Constructions	Mode, median and range	Exam preparation.	Exam preparation.	
Rotation		Loci and regions	Types of average			
Enlargement		Bearings	Estimating the mean			
Describing enlargements		Graphs, tables and charts	Sampling			
Combining transformations		Frequency tables	Probability			
Constructions, loci and bearings		Two-way tables	Calculating probability			
3D solids		Representing data	Two events			
Plans and elevations		Time series	Experimental probability			
6 Week Plan- Mock Preparation		Stem and leaf diagrams	Venn diagrams			
Revision of key material in preparation for the Mock examination		Pie charts	Tree diagrams			
		Scatter graphs	More tree diagrams			
		Line of best fit				

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| Key Assessments | <ul style="list-style-type: none"> Assessments take place after every unit. Usually 2 per half term. | <ul style="list-style-type: none"> Assessments take place after every unit. Usually 2 per half term. | <ul style="list-style-type: none"> Year 8 will also take an end of year examination in the summer term. |
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- Key Skills**
- To provide opportunities for learner to demonstrate their knowledge of mathematics across a whole range of topic areas.
 - To allow learners to develop their problem-solving strategies and provide the confidence and skills required to tackle unfamiliar challenges.
 - To build on work carried out in Key Stage 3 to prepare the learner to function mathematically.

- Links to Careers**
- Mathematics teaches accuracy and precision in work. The analytical and problem-solving skills you learn are valuable in many different careers, for example Accountancy, Teaching, Business, Medicine, Architecture and Computer Studies.



Subject Curriculum – Year 11 Lower Ability

Big Ideas & Purpose The aims of teaching and learning mathematics are to encourage and enable students to: recognise that mathematics permeates the world around us; appreciate the usefulness, power and beauty of mathematics and enjoy mathematics and develop patience and persistence when solving problems.

Programme of Study	HT1	HT2	HT3	HT4	HT5	HT6
	<p>Quadratic equations and graphs Expanding double brackets Plotting quadratic graphs Using quadratic graphs Factorising quadratic expressions Solving quadratic equations algebraically</p> <p>6 Week Plan- Mock Preparation Revision of key material in preparation for the Mock examination</p>	<p>Perimeter, area and volume Circumference of a circle Area of a circle Semicircles and sectors Composite 2D shapes and cylinders Pyramids and cones Spheres and composite solids</p> <p>Fractions, indices and standard form Multiplying and dividing fractions The laws of indices Writing large numbers in standard form</p>	<p>Writing small numbers in standard form Calculating with standard form</p> <p>Congruence, similarity and vectors Similarity and enlargement More similarity Congruence Vectors</p> <p>More algebra Graphs of cubic and reciprocal functions Non-linear graphs Solving simultaneous equations graphically Solving simultaneous equations algebraically Rearranging formulae Proof</p>	<p>Revision and revisiting topics. Exam preparation.</p>	<p>Revision and revisiting topics. Exam preparation.</p>	

Key Assessments

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- Year 11 will sit a full GCSE Mock 2 examination in February.
- Year 11 will sit their GCSE Examinations in May – June.

Key Skills

- To provide opportunities for learner to demonstrate their knowledge of mathematics across a whole range of topic areas.
- To allow learners to develop their problem-solving strategies and provide the confidence and skills required to tackle unfamiliar challenges.
- To build on work carried out in Key Stage 3 to prepare the learner to function mathematically.

Links to Careers

- GCSE maths is a requirement for all degree courses. It teaches accuracy and precision in work. The analytical and problem-solving skills you learn are valuable in many different careers, for example Accountancy, Teaching, Business, Medicine, Architecture and Computer Studies.