

# Mathematics

## Year 10H Curriculum Map

Unit One	Unit Two	Unit Three
<p><b>Topic: Advanced Number Work</b></p> <p><b>Key Learning:</b> Estimating, working with index laws, primes and surds</p> <p><b>Assessment:</b> Topic-test and mid-year exam</p>	<p><b>Topic: Manipulating Algebraic Expressions and Equations</b></p> <p><b>Key Learning:</b> Solving complex linear equations, changing the subject of formulae and factorising and solving quadratics</p> <p><b>Assessment:</b> Topic-test and mid-year exam</p>	<p><b>Topic: Sequences</b></p> <p><b>Key Learning:</b> Generalising for linear sequences, including those involving surds and generalising quadratic sequences.</p> <p><b>Assessment:</b> Topic-test and mid-year exam</p>
Unit Four	Unit Five	Unit Six
<p><b>Topic: Delving into Data 1</b></p> <p><b>Key Learning:</b> Working with different types of graphs, including scatter graphs and pie charts and using them to solve problems. Constructing and interpreting two-way tables and frequency polygons.</p> <p><b>Assessment:</b> Topic-test and mid-year exam</p>	<p><b>Topic: Ratios, Fractions and Percentages</b></p> <p><b>Key Learning:</b> Using skills of fractions, ratio and percentages to solve problems including compound interest and reverse percentages, combined ratio problems and basic algebraic fraction work.</p> <p><b>Assessment:</b> Topic-test and mid-year exam</p>	<p><b>Topic: Trigonometry</b></p> <p><b>Key Learning:</b> Using trigonometric ratios to find missing sides and angles in right-angled triangles and non-right-angled triangles.</p> <p><b>Assessment:</b> Topic-test and mid-year exam</p>

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Unit Seven	Unit Eight	Unit Nine
<p><b>Topic: Gradients and Lines</b></p> <p><b>Key Learning:</b> Finding and interpreting gradients and intercept from partial information and finding equations of parallel and perpendicular lines.</p> <p><b>Assessment:</b> Topic-test and end-of-year exam</p>	<p><b>Topic: Non-Linear Graphs</b></p> <p><b>Key Learning:</b> Plotting, understanding and interpreting key points of non-linear graphs including circles and their tangents</p> <p><b>Assessment:</b> Topic-test and end-of-year exam</p>	<p><b>Topic: Listing and Describing</b></p> <p><b>Key Learning:</b> Constructing and completing venn diagrams using set notation and using the product rule.</p> <p><b>Assessment:</b> Topic-test and end-of-year exam</p>
Unit Ten	Unit Eleven	Unit Twelve
<p><b>Topic: Multiplicative Reasoning</b></p> <p><b>Key Learning:</b> Forming and solving direct and indirect proportion problems</p> <p><b>Assessment:</b> Topic-test and end-of-year exam</p>	<p><b>Topic: 2D and 3D Shapes</b></p> <p><b>Key Learning:</b> Using the area and perimeter of 2D shapes and finding the surface area and volumes of 3D shapes</p> <p><b>Assessment:</b> Topic-test and end-of-year exam</p>	<p><b>Topic: Congruence, Similarity and Enlargement</b></p> <p><b>Key Learning:</b> Using similarity to enlarge shapes and using the rules of congruence for proofs.</p> <p><b>Assessment:</b> Topic-test and end-of-year exam</p>

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### Unit Thirteen

**Topic: Delving into Data 2**

**Key Learning:**

Constructing and interpreting histograms, cumulative frequency diagrams and box-plots

**Assessment:**

Topic-test and end-of-year exam

### Unit Fourteen

**Topic: Working with Circles and Angles**

**Key Learning:**

Calculating parts of circles, e.g. arc and sectors, and working with and proving circle theorems.

**Assessment:**

Topic-test and end-of-year exam

### Unit Fifteen

**Topic: Transforming and Constructing**

**Key Learning:**

Performing and describing transformations and using constructions to solve loci problems.

**Assessment:**

Topic-test and end-of-year exam