

**KS4 Curriculum Overview: Maths**

**Rationale: In year 10 we continue with the GCSE course and aim to finish at the end of year 10. Throughout the year students will look deeper into the key areas of maths; Algebra, Number, Ratio and proportion, Shape and space and Probability and statistics.**

Term / Length of Unit	Outline	Assessment	Home Learning	Resources	Knowledge/Skills End Points	Reading
Yr10 HIGHER Autumn 1	Multiplicative Reasoning Similarity and congruence	Multiplicative reasoning unit test Similarity and congruence unit test	Set every week by individual teachers	Full SOW in shared area	Growth and decay Compound measures Ratio and proportion Congruence and geometric proof Similarity	<p><b>Reading strategy:</b> Go through key words and annotate worded problems.</p> <p><b>Key words:</b> Percentage, compound, depreciation, depreciates, congruent, isosceles.</p> <p>Words with the same meaning: Increase &amp; appreciates Decrease &amp; depreciates Equal &amp; same Multiply &amp; Product Divide &amp; Quotient</p> <p>Etymology: compound, depreciation</p>
Yr10 HIGHER Autumn 2	Trigonometry Statistics	Trigonometry unit test Statistics unit test	Set every week by individual teachers	Full SOW in shared area	Accuracy Graphs of trig functions Calculating area Sine rule Solving 3D problems Transforming trig functions Sampling Cumulative frequency Box Plots Histograms	<p><b>Reading strategy:</b> Go through key words and annotate worded problems.</p> <p><b>Key words:</b> Sine, cosine, tangent, trapezium, hypotenuse, opposite, adjacent, stratified, bias, cumulative, median, quartiles, frequency, perpendicular</p> <p>Words with the same meaning: Bias &amp; unfair</p> <p>Etymology: density, cumulative, transforming</p> <p><b>Books:</b> Statistical: Ten Easy Ways to Avoid Being Misled By Numbers Paperback by <a href="#">Anthony Reuben</a></p>

Yr10 HIGHER Spring 1	Equations and Graphs	Equations and graphs unit test	Set every week by individual teachers	Full SOW in shared area	Solving simultaneous equations graphically Representing inequalities graphically Solving quadratics graphically Graphs of cubic functions	<b>Reading strategy:</b> Go through key words and annotate worded problems.  <b>Key words:</b> Simultaneous, intersection, inequalities, graphically, quadratic, substitution  Etymology: intersection, substitution
Yr10 HIGHER Spring 2	Circle theorems Algebra	Circle theorems unit test Algebra unit test	Set every week by individual teachers	Full SOW in shared area	Radii and chords Tangents Angles in a circle Rearranging formulae Algebraic fractions Surds Functions Proof	<b>Reading strategy:</b> Go through key words and annotate worded problems.  <b>Key words:</b> Chord, radius, cyclic quadrilateral, rearrange, formulae, algebraic, rationalise, denominator, composite, diameter, inverse  Words with the same meaning: Divide and quotient Multiply and product Add and sum Subtract and difference Etymology: inverse  <b>Books:</b> The Cartoon Guide to Algebra (Cartoon Guide Series) Paperback – Illustrated by <a href="#">Larry Gonick</a>
Yr10 HIGHER Summer 1	Vectors and geometric proof	Vectors and geometric proof unit test	Set every week by individual teachers	Full SOW in shared area	Vector notation Vector arithmetic Parallel and collinear vectors	<b>Reading strategy:</b> Go through key words and annotate worded problems.  <b>Key words:</b> Collinear, parallel, magnitude, pythagoras  Words with the same meaning Magnitude and size  Etymology: collinear

<p>Yr10 HIGHER Summer 2</p>	<p>Proportion and graphs</p>	<p>Proportion and graphs unit test</p>	<p>Set every week by individual teachers</p>	<p>Full SOW in shared area</p>	<p>Direct proportion Inverse proportion Exponential functions Non linear graphs</p>	<p><b>Reading strategy:</b> Go through key words and annotate worded problems.</p> <p><b>Key words:</b> Proportion, inverse, exponential, reciprocal, proportionality</p> <p>Words with the same meaning: Multiply &amp; Product Divide &amp; Quotient</p> <p>Etymology: inverse, exponential</p>
-------------------------------------	----------------------------------	--	--	------------------------------------	---	---