



Overview	<p>The purpose of the Maths curriculum is to equip students with uniquely powerful ways to describe, analyse and solve problems and to make them more prepared for the real world.</p> <p>We do this by providing a secure understanding of mathematical concepts, from basic principles of mathematics to complex topics that combine several areas of study into a single question.</p> <p>In Year 11 we continue to concentrate on retention of knowledge and depth of learning. In doing this, all our students have the opportunity to master key skills that might be required in their future development.</p>
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	Half Term 1	Half Term 2	Assessment
Autumn Term	<p>Algebra Review 1</p> <ul style="list-style-type: none"> ■ Solve linear equations in one unknown algebraically ■ Solve linear equations with the unknown on both sides of the equation ■ Rearrange formulae to change the subject in a geometrical context ■ Substitute numerical values into formulae and expressions, including scientific formulae ■ Simplify and manipulate algebraic expressions (including those involving surds) by: <ul style="list-style-type: none"> • collecting like terms • multiplying a single term over a bracket • taking out common factors • expanding products of two binomials • factorising quadratic expressions of the form $x^2 + bx + c$, including the difference of two squares • simplifying expressions involving sums, product <p>Algebra Review 2</p> <ul style="list-style-type: none"> ■ Solve two simultaneous equations in two variables (linear/linear) algebraically ■ Find approximate solutions using a graph ■ Derive two simultaneous equations, solve the equation and interpret the solution <p>Right Angled Trigonometry</p> <ul style="list-style-type: none"> ■ Trigonometry in right angled triangles ■ Know the exact values of $\sin\theta$ and $\cos\theta$ for $\theta = 0^\circ, 30^\circ, 45^\circ, 60^\circ$ and 90°. Know the exact value of $\tan\theta$ for $\theta = 0^\circ, 30^\circ, 45^\circ$ and 60° ■ Find angles of elevation and depression 	<p>Similar Shapes</p> <ul style="list-style-type: none"> ■ Understand that similar shapes are enlargements of each other, and angles are preserved – define similar in this unit ■ Identify shapes which are similar, including all circles or all regular polygons with equal number of sides ■ Apply the concepts similarity, including the relationships between lengths in similar figures ■ Understand similarity of triangles and of other plane shapes, use this to make geometric inferences, and solve angle problems using similarity ■ Understand the effect of enlargement on perimeter of shapes ■ Solve problems to find missing lengths in similar shapes <p>Congruence</p> <ul style="list-style-type: none"> ■ Identify congruent shapes by eye ■ Understand that distances and angles are preserved under reflections, so that any figure is congruent under this transformation ■ Congruence criteria for triangles (SSS, SAS, ASA, RHS) ■ Solve angle problems involving congruence 	<p>In Year 11 we do a past paper assessment every fortnight, these are a mix of seen and unseen papers.</p> <p>Half Term 2. At the end of November, we do United Learning Mock GCSE 1 (this consists of 3 papers)</p>

		Half Term 3	Half Term 4	Assessment
Spring Term		<p>Constructions & Loci</p> <ul style="list-style-type: none"> ■ Draw circles and arcs to a given radius or given the diameter ■ Measure and draw lines, to nearest mm ■ Measure and draw angles, to nearest degree ■ Use the standard ruler and compass constructions (perpendicular bisector of a line segment, constructing a perpendicular to a given line from/at a given point, bisecting a given angle) ■ Construct angles of 90°, 45° ■ Use constructions to construct given figures and solve loci problems; know that the perpendicular distance from a point to a line is the shortest distance to the line ■ Construct: <ul style="list-style-type: none"> ■ region bounded by a circle and an intersecting line ■ a given distance from a point and a given distance from a line ■ equal distances from two points or two line segments ■ Regions which may be defined by 'nearer to' or 'greater than' <p>Bearings & Scale drawings</p> <ul style="list-style-type: none"> ■ Interpret maps and scale drawings ■ Estimate lengths using a scale diagram ■ Make an accurate scale drawing from a diagram ■ Know and use compass directions ■ Use three-figure bearings to specify direction ■ Mark on a diagram the position of point B given its bearing from point A ■ Give a bearing between the points on a map or scaled plan ■ Given the bearing of a point A from point B, work out the bearing of B from A ■ Use accurate drawing to solve bearings problems ■ Solve locus problems including bearings 	<p>Vectors</p> <ul style="list-style-type: none"> ■ Addition and subtraction of vectors, multiplications by a scalar and diagrammatic and column representations ■ Be able to represent information graphically given column vectors ■ Identify two column vectors which are parallel <p>Plans & Elevations</p> <ul style="list-style-type: none"> ■ Identify properties of the faces, surfaces, edges and vertices of 3D shapes ■ Draw sketches of 3D solids ■ Interpret plans and elevations of 3D shapes <p>Surface Area</p> <ul style="list-style-type: none"> ■ Estimate surface areas by rounding measurements to 1 significant figure ■ Sketch nets of cuboids and prisms <p>From HT4 Teachers Identify areas that they need to revise.</p>	<p>In Year 11 we do a past paper assessment every fortnight, these are a mix of seen and unseen papers.</p> <p>Half Term 4 Just before Easter Break. We do United Learning Mock 2 (this consists of 3 papers).</p>

		Half Term 5	Half Term 6	Assessment
Summer Term		<ul style="list-style-type: none"> ■ From HT4 Teachers Identify areas that they need to revise. 	<ul style="list-style-type: none"> ■ EXAMINATIONS 	<p>In Year 11 we do a past paper assessment every fortnight, these are a mix of seen and unseen papers.</p>

Useful Resources for Supporting Your Child at Home:	Homework:
https://whgs-academy.sparxmaths.uk/ https://padlet.com/andrewharrison6/ks4-student-resources-e799bycdpno4nmmb	Sparx Homework is set automatically weekly, and students have 7 days to achieve 100%