Year 10 Maths Curriculum Overview 2015-16

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Subject Content	**Number:** **Number Properties:** • Number Skills and properties • Fractions and percentages • Ratio and proportion **Geometry:** **Length and Volume:** • Circumference and area of a circle • Area of a trapezium • Sectors • Volume of a prism • Cylinders	**Algebra:** **Expressions and Equations:** • Basic algebra • Factorisation • Solving Linear Equations • Setting up equations **Geometry:** **Pythagoras theorem:** • Pythagoras theorem • Finding a shorter side • Applying Pythagoras' theorem in real-life situations • Pythagoras' theorem in three dimensions **Angles and Construction:** • Special triangles and quadrilaterals • Angles in polygons • Constructing triangles • Bisectors • Loci problems **Transformation geometry:**	**Statistics:** **Statistical Representation:** • Line Graphs • Stem-and-leaf plots • Scatter diagrams **Probability of events:** • Experimental probability • Mutually exclusive and exhaustive events • Addition rule for events • Combined events **Algebra:** **Number and sequences:** • Finding the *n*th term of a linear sequence • Special sequences **Graphs and their equations:** • Drawing linear graphs • Finding an equation of a line • Quadratic graphs • Significant points of a quadratic graph	**Algebra:** **Inequalities and regions:** • Solving linear inequalities • Graphical inequalities **Number:** **Using a Calculator:** • Basic calculations and using brackets • Adding and subtracting fractions with a calculator • Multiplying and dividing fractions with a calculator **Geometry:** **Volume:** • Volume of a pyramid • Cones • Spheres **Trigonometry 1:** • Trigonometric ratios • Using the sine, cosine and tangent functions • Solving problems with trigonometry	**Geometry:** **Properties of circles:** • Circle theorems • Cyclic quadrilaterals • Tangents and chords • Alternate segment theorem **Number:** • Powers (indices) • Standard form • Rational numbers and reciprocals • Surds **Algebra:** **Quadratic equations:** • Expanding brackets • Quadratic factorisation	**Algebra:** **Quadratic equations:** • Solving quadratic equations by - Factorisation - Quadratic Formula - Completing the square • Problems involving quadratic equations **Shape:** **Scale and Similarity:** • Similar triangles • Areas and volumes of similar shapes **Geometry:** **Trigonometry 2:** • 2D and 3D problems • Trigonometric ratios of angles between 90^0 and 360^0 • Using sine rule and cosine rule • Trigonometric ratios in surd form • Using the sine rule to find area of a triangle **Statistics:**

		• Congruent triangles • Translations, rotations, reflections and enlargements • Combined transformations **Statistics:** **Data Handling:** • Averages • Frequency tables and diagrams • Grouped data **Algebra:** **Real life Graphs:** • Straight line distance time graphs • Other graphs				**Statistics coursework**
Assessment	• End of Chapter tests	• End of Chapter tests • **End of Term Test**	• End of Chapter tests	• End of Chapter tests • **End of Term Test**	• End of Chapter tests	• End of Chapter tests • **End of Term Test**
Cross Curricular Opportunities	Science and Design and Technology	Science, Art and PE	Business studies	Design and Technology		Art and Media
Social, Moral, Spiritual, Cultural	There is always a focus on group work to facilitate learning in maths. Lessons are designed to give students the opportunity to express their ideas and communicate with others.					
Homework	Homework will be set twice a week. This may be related to work students have covered and also work they have yet to start in class.					