Y e a r	Intent	Students are to be able to "work mathematically" throughout the curriculum by embedding the essential skills of fluency, reasoning and problem solve into each subtopic. Students will now develop the knowledge gain, at Key Stage 3, into more complex and new understanding. Through careful interleaving of topics, students will readily make links between each subtopic, hence strengthening their understanding and mastering the course.
0 ( M a t h s	Assessment strategy	Students will be assessed the three key points throughout the year, the start, halfway through and at the end. These major assessment points will form the composite testing for the year group in form of two full mock exams, all three papers, and Year 10 component test of their learned knowledge to date. This will allow students to see their progress, considering the full GCSE spectrum, from the start of Year 10 to the end and provide teachers with the opportunity to support areas for development more effectively.  At the end of each topic students will undertake a component test based solely upon the knowledge they have gained during that topic. This provides both students and teachers with the opportunity to regular evaluate strengths and areas for development on these specific topics.

		Half Term 1	Half Term 2	Half Ter3m 3	Half Term 4	Half Term 5	Half Term 6
Y e a r 1 0 ( M a t h s )	Disci plina ry know ledge	Students should be encouraged throughout to draw sketches or diagrams to help them visualise information. Manipulatives such as a geoboard and pattern blocks could be used to explore enlargements, similarity, and area scale factor.	Students are encouraged to use bar modelling when forming and solving equations.  Tracing paper and other manipulatives are to be used to support with student's understating of rotation and translation.  Using measuring devices to deduce Pythagoras's theorem.	Students should understand trigonometry as an extension of similar triangles. Drawing and labelling right -angled triangles to represent problems is essential. In addition, they should be able to visualise and sketch diagrams from descriptions. They then build on this with concrete and pictorial representations of 3 -D objects.	Bar models are useful to support the forming of equations and help students to make sense of the approach to a solution. Algebra tiles are also very powerful for this and help to make sense of factorising quadratics, alternate representations are very effective in ensuring all students, including higher attaining, make sense of the mathematical structures.	Using compasses in school may be useful way into bearings. Straws for reminding what happens with parallel and intersecting lines. Creating nets of cylinders and cones is a good way of establishing how to find the formulae for their surface area. Double number lines and ratio tables can be helpful tools to show proportionality. Representations of sample spaces can take the form of lists, two-way tables, grids, Venn diagrams and tree diagrams. Tree diagrams should include those where there are 3 possible outcomes in at least one of the trials.	For all students, bar models and/or number lines will provide a "way in" to the problem-solving questions in this block, helping them to decide whether an additive or multiplicative approach is appropriate, and the choice of operation.

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Subst antiv e	<ul> <li>Deduction</li> <li>Rotation and translation</li> <li>Pythagoras' Theorem</li> </ul>	Similarity:  Congruency, similarity, and enlargement Trigonometry	Representing solutions of equations and inequalities     Simultaneous equations	Geometry:  Angles and Bearings  Working with Circles  Proportions and Proportional Change: Ratios and fractions Probability	Collecting and representing data  Using number:  Non-calculator methods Types of numbers and sequences
Justifi catio n  National curriculum Construct congruent triangles Solve prob involving percentag change Set up and solve prob in growth decay, sim and comp interest Financial r	<ul> <li>Apply properties of angles at a point, straight line, vertically opposite and on a parallel line</li> <li>Describe changes and invariance achieved by a combination of transformations</li> </ul>	National curriculum:  Trigonometric rations are to be used to find the missing lengths and angles or right-angled triangles  Know how and when to apply the sine and cosine rule as well as the formulae for the area of a non-right-angle d triangle	National curriculum:  National curriculum:  National curriculum:  National curriculum:  National curriculum:  Solve quadraticulum:  National curriculum:  National curriculum:	National curriculum:  Use and interpret bearings  Use ratio notation  Divide in a given ratio  Compound units such a speed, density and pressure  Calculate the probability of independent and dependent events, including conditional at higher	National curriculum:  Describe, interpret and compare variables through graphical representation Infer properties of populations and distributions Apply statistics to describe population

	Keyst	-	Variable	Perpendicular	Unit	Frequency	Surd
	one	Congruent	Intersection	Parallel	Gradient	Cumulative	Recurring
	voca	Hypotenuse	Simultaneous	Radius	Depreciation	Average	Sequence
	bular	Inverse	Elimination	Diameter	Compound	Outlier	Linear
	У			Vector	Intersection	Frequency density	Indices
				Ratio	Union	Distribution	Standard form
	Links to prior learni ng	Y8 proportional reasoning, Y9 geometry.	Y7 algebraic thinking, Y8 algebraic techniques, Y9 algebra.	Y7 lines and angles, Y9 geometry.	Y7 applications, Y7 reasoning with number, Y8 proportional reasoning, Y8 developing number, Y9 probability and statistics.	Y8 representing data, Y8 reasoning with data, Y9 statistics.	Y7 algebraic thinking, Y8 algebraic techniques, Y9 algebra.
	Cross -curri cular and caree rs links			Computer Science – Algebraic Formulae	Computer Science – Algebraic Formulae		PE – Tables, Time & Distance Geography – Double Line and Bar Chart
	Links to futur e study	Y11 geometry, Y11 ratio.	Y11 algebra.	Y11 geometry.	Y11 probability and statistics, Y11 multiplicative reasoning.	Y11 statistics.	Y11 algebra.

Asses smen Asses	wock Exam sment	Subtopic component testing on:	Midyear Composite Test	Subtopic composite testing on:	Subtopic component testing on:	End of Year Mock Exam Assessment
t Subto	pic component g on:  Construction and congruency  Numbers  Using percentages  Maths and money	<ul> <li>Deduction</li> <li>Rotation and translation</li> <li>Pythagoras' theorem</li> </ul>	Subtopic component testing on:  Congruency, similarity, and enlargement Trigonometry	<ul> <li>Representing solutions of equations and inequalities</li> <li>Simultaneous equations</li> </ul>	<ul> <li>Angles and bearings</li> <li>Working with circles</li> <li>Ratios and fractions</li> <li>Probability</li> </ul>	Subtopic component testing on:

Hom ewor two weeks will be a recap trom the end of Year 9.  From week three, students will begin to revisit the content taught at the start of Year 10 to allow the opportunity for multiple revisiting of the topics. This will include, but not limited to:  • Constructions • HCF/LCM • Percentage increase, decrease and reverse percentages • Bank statements • Simple and compound interest • Simple and compound interest • Simple and compound interest • Percentages recap recap theorem the nend of Year 10 to allow the opportunity for multiple revisiting of the topics. This will include, but not limited to:  • Constructions • HCF/LCM • Percentage increase, decrease and reverse percentages • Bank statements • Simple and compound interest • Portentages recap theorem theenem angles of triangles congruency trigonometry trigonometry • Triangle using congruency trigonometry • Find missing angles of triangles using equations • Triangle similarity • Find missing angles of triangles using equations • Triangle similarity • Find missing angles of triangles using equations • Triangle similarity • Find missing and singles and and all singles and inequalities • Polotting • Polotting • Polotting • Polotting • Find missing and singles • Averages • Polotting • Polotting • Polotting • Find missing and singles • Averages • Polotting • Polotting • Polotting • Find missing and algebra • Types of triangles using • Solving inequalities • Polotting • Solving inequalities graphs • Solving • Solving • Interpreting • Agles • Averages • Polotting • Polotting • Polotting • Solving • Interpreting • Agles • Averages • Polotting • Polotting • Solving • Interpreting • Agles • Find missing and • Types of triangles using • Polotting • Po				1	·	1	
	ewor	two weeks will be a recap from the end of Year 9.  From week three, students will begin to revisit the content taught at the start of Year 10 to allow the opportunity for multiple revisiting of the topics. This will include, but not limited to:  Constructions HCF/LCM Percentage increase, decrease and reverse percentages Bank statements Simple and compound	recap  Types of angles  Angles around a point/ on a straight line/ parallel lines  Forming and solving equations with angles and algebra Rotation	theorem  Enlargement  Triangle congruency  Triangle similarity  Find missing lengths of triangles using	angles of triangles using trigonometry  Solving equations and inequalities  Plotting straight line graphs  Find solutions to straight line graphs  Solving inequalities	and quadratic simultaneous	data  Types of charts  Averages  Interpreting data  Fractional indices  Rounding  Limits of accuracy