

Maths Year 9 – Curriculum Intent All students to improve mathematical knowledge by developing their understanding of mathematical concepts, key words, command verbs, mathematical notation, interpreting mathematical information and use effective methods to solve mathematical problems.

	<u>Unit Intent</u>	<u>Content Coverage</u>	<u>Methods of Assessment</u>
<u>Term 1: Number and Probability</u>	<p>Consolidate learning from Year 8, Term 1 of knowledge of basic number skills to consolidate and prepare for future units, learn new skills needed to enable students to have a good understanding of mathematical methods to move forward into problem solving. Develop calculation skills to aid with problem solving with a wider range of numbers.</p> <p>Consolidate learning from Year 8 Term 1 and develop probability skills to develop application of knowledge to a variety of contexts. Students then to develop a knowledge of applying these skills in problem solving and a strong understanding of the key terms in probability eg mutually exclusive outcomes, so that they can</p>	<ul style="list-style-type: none"> • Number: Four Operations and Place value. Feeds forward to Year 10 Term 1. • Number: Fractions, decimals and percentages Feeds forward to Year 10 Term 1 • Handling Data and Probability. Feeds forward to Year 10 Term 1. 	<ul style="list-style-type: none"> • <u>Feed forward mini assessment</u> • <u>Hegarty Maths Homework or Times Table Rockstars</u> • <u>Formula, times tables and key word assessment</u> • <u>End of term summative assessment</u>

	understand the literacy of higher level questions.		
<u>Term 2: Algebra, Transformations and Substitution</u>	<p>To use and apply the knowledge of representing unknown values with letters to solve a variety of questions from all areas of mathematics.</p> <p>To consolidate learning from Year 8 Term 2 and develop knowledge of symmetry and skills in transforming shapes. Develop a strong understanding of congruence and similarity and to be able to discuss the differences.</p> <p>To consolidate learning from all algebra units from Year 8 and ensure students are efficient at substitution and substitution into formulae. Develop their ability to substitute into more complicated formulae across a range of subjects such as Science and Geography.</p>	<ul style="list-style-type: none"> Algebra, simplifying involving the four operations. Feeds forward to Term 3 and Year 10 Term 1. Shape, Space and Measures – Transformations. Feeds forward to Term 2 Year 10. Algebra:- Substitution and using formulae. Feeds forward to Term 4 and Term 2 Year 10. 	<ul style="list-style-type: none"> <u>Feed forward mini assessment</u> <u>Hegarty Maths Homework or Times Table Rockstars</u> <u>Formula, times tables and key word assessment</u> <u>End of term summative assessment</u>

<p><u>Term 3: Shape, space and measure and Algebra, solving equations.</u></p>	<p>To consolidate learning from Year 8 Term 3 and build upon this knowledge to solve a variety of real life problems. Learn more formulae needed to solve problems with shapes. Extend knowledge of volume and understand how to calculate the surface area of prisms. Develop a solid understanding of Pythagoras and more able students to know develop skills needed to solve trigonometry problems.</p> <p>Consolidate and build upon prior knowledge from Term 3 Year 8 in solving more complicated equations and apply these skills in solving problems across a variety of topics in maths. Develop a good understanding of how to rearrange formula using skills learnt in Year 8 Term 3 and develop knowledge in solving inequalities. Introduction to solving simultaneous equations.</p>	<ul style="list-style-type: none"> • Shape, space and measure:- Area and Volume. Feeds forward to Year 10 Spring 1 and Term 4 Year 10. • Algebra:- Solving equations Feeds forward to Term 3 Year 10. 	<ul style="list-style-type: none"> • <u>Feed forward mini assessment</u> • <u>Hegarty Maths Homework or Times Table Rockstars</u> • <u>Formula, times tables and key word assessment</u> • <u>End of term summative assessment from topics covered in terms 1, 2 and 3</u>
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<p><u>Term 4: Shape, space and measure and Number.</u></p>	<p>Consolidate learning from Year 8 Term 4 to ensure students have a strong understanding of number skills and build upon their knowledge of previously learn skills to ensure they have a solid understanding of factors, HCF and LCM and use this knowledge to solve a variety of problems.</p> <p>Students to recognise and use sequences of triangular, square and cube numbers.</p> <p>Students will consolidate learning from Year 8 Term 4 to deepen their knowledge of angles, constructions and loci. Students to be able to draw diagrams from written descriptions and use this skill when solving problems.</p>	<ul style="list-style-type: none"> • Number and number properties. Feeds forward to Term 1 year 10 • Shape, Space and Measures ; - Angles, constructions and loci. Feeds into Term 4 Year 10. 	<ul style="list-style-type: none"> • <u>Feed forward mini assessment</u> • <u>Hegarty Maths Homework or Times Table Rockstars</u> • <u>Formula, time stables and key word assessment</u> • <u>End of term summative assessment in topics covered in terms 1,2,3 and 4.</u>
<p><u>Term 5: Number, ratio and proportionality, Shape, space and measure</u></p>	<p>To consolidate knowledge of scale drawings and maps from Year 8 Term 5. Develop skills so students can apply ratio into real life contexts.</p> <p>Ensure students deepen their</p>	<ul style="list-style-type: none"> • Number: Ratio. Feeds forward into Year 10 Term 5. 	<ul style="list-style-type: none"> • <u>Feed forward mini assessment</u> • <u>Hegarty Maths Homework or Times Table Rockstars</u> • <u>Formula, times tables and key word assessment</u> • <u>End of term summative</u>

	<p>understanding of direct and indirect proportion and can use this knowledge to interpret graphs showing proportion.</p> <p>Consolidate learning from Year 8 Term 5 on graphs and compound measure and introduce vector .</p>	<ul style="list-style-type: none"> • Shape, Space and Measure:- compound measures and vectors. Feeds forward into Year 10 Term 5. 	<p><u>assessment, all topics in terms 1-5</u></p>
<p><u>Term 6: Data Handling</u></p>	<p>To consolidate learning from Year 8 Term 2 and develop their ability to know when to use a range of graphs and how to interpret them and discuss key findings.</p> <p>Develop a good understanding of drawing and interpreting time series graphs.</p> <p>Consolidate learning from term 6 Year 8 and develop knowledge of a variety of algebraic graphs. Students to develop knowledge of sequences such as geometric sequences, fibonnaci type sequences and extend into quadratic sequences.</p>	<ul style="list-style-type: none"> • Handling Data: graphs. Feeds into Term 6 Year 10 • Algebra:- Sequences and Graphs. Feeds into Term1 Year 6 Year 10 	<ul style="list-style-type: none"> • <u>Feed forward mini assessment</u> • <u>Hegarty Maths Homework or Times Table Rockstars</u> • <u>Formula, time stables and key word assessment</u> • <u>End of year summative assessment</u>

