



Mathematics Department

Long-term Sequencing Year 8 Stage 2

The curriculum has been designed to ensure that students develop the skills required to be successful in reaching their goals. We want students to be numerate and understand the Mathematics of the world around them, whilst also having an appreciation and love of Mathematical concepts. Problem solving is embedded from year 7 all the way through to year 13, with a 5-year SOW in year 7 to 11, based upon students' current level of knowledge and understanding. Teaching is based around an interleaved curriculum, with links made between multiple topics. Students are first taught to fully understand the knowledge, and then given time to fully master the skill. Students are then given opportunities to apply their understanding and skills to practical applications. Each stage of students 5-year plan builds upon students' prior knowledge and seeks to develop this further. Our curriculum is designed to be fluid, data-led and student-centric, with it being adapted as and when necessary.

<u>HALF TERM 1:</u> STUDENTS MUST KNOW:	<u>HALF TERM 2:</u> STUDENTS MUST KNOW:	<u>HALF TERM 3:</u> STUDENTS MUST KNOW:
<p>Number Properties 1 All operations of integers, place value/ordering decimals and fractions, BIDMAS (simple parts)</p> <p>Geometry & Measures Interior angles of triangles, Properties of equilateral and isosceles triangles</p> <p>Number Properties 2 Prime numbers, Factors, Multiples, HCF & LCM (in simple cases)</p> <p>Algebra 1 Understand algebraic notation Substitution</p> <p>HOW THIS WILL BE ASSESSED: Low stakes knowledge tests as starters End of unit assessments at the end of each half term Half termly assessments covering all previously learnt topics</p>	<p>FDP Fractions of amount & shapes, Converting simple FDP, Percentage of amounts (Non-Calc), Express one quantity as a percentage of another</p> <p>Approximations Rounding to 10, 100, 100, Rounding to dp, Rounding to 1s.f</p> <p>Algebra 2 Collecting like terms, Expanding single brackets, Solving 1 step equations</p> <p>Collecting & Interpreting Data Averages from a list, Construct pictogram & bar charts, Measuring angles, Angles around a point</p> <p>HOW THIS WILL BE ASSESSED: Low stakes knowledge tests as starters End of unit assessments at the end of each half term Half termly assessments covering all previously learnt topics</p>	<p>Sequences & Graphs Coordinates, Linear graphs, Sequences, Nth Term of simple sequences,</p> <p>Proportion 1 Simplifying Ratio, Writing Ratios and proportions, Sharing by a ratio,</p> <p>Ratio and Scale Measuring Lines and Angles, Scale drawings, Maps,</p> <p>Shape Properties Properties of polygons up to 8 sides, Properties of triangles & quadrilaterals, Missing angles on a straight line, a triangle, a quadrilateral, and around a point, Lines of symmetry.</p> <p>HOW THIS WILL BE ASSESSED: Low stakes knowledge tests as starters End of unit assessments at the end of each half term Half termly assessments covering all previously learnt topics</p>



HALF TERM 4: STUDENTS MUST KNOW:	HALF TERM 5: STUDENTS MUST KNOW:	HALF TERM 6: STUDENTS MUST KNOW:
<p>Algebra 3 Substitution, Input & Output machines</p> <p>Transformations Rotational and reflectional symmetry. Reflect shapes. Basic congruent shapes</p> <p>Probability Probability of events using words and as fractions, probability scale</p> <p>HOW THIS WILL BE ASSESSED: Low stakes knowledge tests as starters End of unit assessments at the end of each half term Half termly assessments covering all previously learnt topics</p>	<p>Triangles and Congruency Constructions a triangle (SSS)</p> <p>Interpreting Data Plot coordinates, Scatter Graph</p> <p>Circles Identify parts of a circle, construct circles given the radius or diameter</p> <p>HOW THIS WILL BE ASSESSED: Low stakes knowledge tests as starters End of unit assessments at the end of each half term Half termly assessments covering all previously learnt topics</p>	<p>Proportion Simple Direct and inverse proportion,</p> <p>Equations & Inequalities Solving 1 and 2 step equations</p> <p>Plotting and Sketching Graphs Plot coordinates, Horizontal and vertical lines, Linear Graphs (positive gradient)</p> <p>HOW THIS WILL BE ASSESSED: Low stakes knowledge tests as starters End of unit assessments at the end of each half term Half termly assessments covering all previously learnt topics</p>
<p>Home learning set will consist of a combination of: Weekly Sparx tasks (due each Wednesday) and additional worksheets where appropriate.</p>		