



Mathematics Department

Long-term sequencing Year 7 Stage 3

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.

HALF TERM 1: STUDENTS MUST KNOW:	HALF TERM 2: STUDENTS MUST KNOW:	HALF TERM 3: STUDENTS MUST KNOW:
<p>Number Properties 1 All operations of integers/decimals/fractions, place value/ordering, BIDMAS, Powers and Roots, Check by Inverse Operations</p> <p>Interpreting Data Scatter Graph, Bivariate Data, Correlation, Line of Best Fit</p> <p>Collecting and Interpreting Data Averages from a list, averages from a table, Pie Charts, Vertical Line Diagrams</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>Geometry & Measures Angles in triangles, conversion of units.</p> <p>Number Properties 2 Prime Factors, HCF & LCM</p> <p>Algebra 1 Collecting Like Terms, Substitution</p> <p>FDP Fractions of amount & shapes, Converting FDP, Compare using Fractions/Decimals/Percentages</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>Approximations Rounding to significant figures, Check answers by estimation</p> <p>Algebra 2 Simplifying (including with powers), Expanding and Factorising, Solving Equations</p> <p>Sequences & Graphs Coordinates, Linear graphs, Sequences, Nth Term, Non Linear Sequences (Fibonacci, Geometric, Quadratic)</p> <p>Ratio/Proportion Simplifying Ratio, Writing Ratios, Sharing by a ratio</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>Scale Measuring Lines and Angles, Scale drawings, Maps, Identifying Scale Factors from Given Sides</p> <p>Shape Properties Properties of 2D shapes, Understand the terms Parallel/Perpendicular/Right Angle</p> <p>Algebra 3 Changing the subject, Substitution into Formulae, Understand difference between identity and equation</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>Transformations Rotational and reflectional symmetry, Congruency, Enlargements</p> <p>Probability Probability of events from a list, Carry out experiments and record results, sample space</p> <p>Triangles & Constructions Constructions and Loci</p> <p>Circles Area & Circumference, Compound Shapes</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>Solving Equations & Inequalities Forming and solving equations including brackets, negatives, fractions and from worded problems.</p> <p>Plotting & Sketching Graphs Linear Graphs, Quadratic Graphs, Gradient, Equation of a line</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>		