



## Mathematics Department

### Long-term sequencing Year 7 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.

<b>HALF TERM 1:</b> <b>STUDENTS MUST KNOW:</b>	<b>HALF TERM 2:</b> <b>STUDENTS MUST KNOW:</b>	<b>HALF TERM 3:</b> <b>STUDENTS MUST KNOW:</b>
<p><b>Number Properties 1</b> All operations of integers, place value/ordering of integers/decimals/fractions, Simple parts of BIDMAS</p> <p><b>Interpreting Data</b> Stem &amp; Leaf, Grouped Frequency, Bar Chart, Pie Chart</p> <p><b>Collecting and Interpreting Data</b> Bar/Pie/Vertical Line Charts, qualitative and quantitative data, measure angles, angles around point sum to 360°, mean/median/mode from a list</p> <p><b>HOW THIS WILL BE ASSESSED:</b> 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><b>Geometry &amp; Measures</b> Angles and properties of triangles</p> <p><b>Number Properties 2</b> Factors, HCF &amp; LCM, Rules of Divisibility, Triangular/Square/Roots</p> <p><b>Algebra 1</b> Algebraic Notation, Understand Vocabulary (term, expression, equation), Substitution</p> <p><b>FDP</b> Fractions of amount &amp; shapes, Converting FDP, Percentage (Calc &amp; Non-Calc)</p> <p><b>HOW THIS WILL BE ASSESSED:</b> 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><b>Approximations</b> Rounding (including to decimal places/significant figures)</p> <p><b>Algebra 2</b> Collecting Like Terms, Simplifying, Expanding Single Bracket, Solving Equations</p> <p><b>Sequences &amp; Graphs</b> Coordinates, Linear graphs, Sequences, Term/Position to Term Rules</p> <p><b>Ratio/Proportion</b> Simplifying Ratio, Writing Ratios, Dividing into Ratios, Proportion</p> <p><b>HOW THIS WILL BE ASSESSED:</b> 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><b>HALF TERM 4:</b> <b>STUDENTS MUST KNOW:</b></p> <p><b>Scale</b> Measuring Lines and Angles, Scale drawings, Maps, Bearings</p> <p><b>Shape Properties</b> Properties of 2D shapes, Finding Missing Angles, Lines of Symmetry</p> <p><b>Algebra 3</b> Input and Output machines including two stage operations.</p> <p><b>HOW THIS WILL BE ASSESSED:</b> 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><b>HALF TERM 5:</b> <b>STUDENTS MUST KNOW:</b></p> <p><b>Transformations</b> Rotational and reflectional symmetry. Enlargements.</p> <p><b>Probability</b> Probability using Words, Probability Scale, Write Probabilities as Fractions</p> <p><b>Triangles &amp; Constructions</b> Constructing a triangle from three lengths given</p> <p><b>Circles</b> Parts of a Circle, Construct Circles from Radius or Diameter</p> <p><b>HOW THIS WILL BE ASSESSED:</b> 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><b>HALF TERM 6:</b> <b>STUDENTS MUST KNOW:</b></p> <p><b>Solving Equations &amp; Inequalities</b> Be able to solve one step and two step equations</p> <p><b>Plotting &amp; Sketching Graphs</b> Coordinates in All Four Quadrants, Linear Graphs with Positive Gradient</p> <p><b>HOW THIS WILL BE ASSESSED:</b> 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>		