Stuart Bathurst Catholic High School

Mathematics Department

Long-term sequencing Year 8 Stage 5

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:	**HALF TERM 2:**	**HALF TERM 3:**
STUDENTS MUST KNOW: **Number Properties 1** All operations of integers/decimals/fractions in worded problems, Using reciprocals **Geometry & Measures** Angles in polygons, conversion of units of area and volume **Number Properties 2** Use laws of indices, Calculate in standard form **Algebra 1** Substitution of fractional and decimal values, Using compound measures **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**	**STUDENTS MUST KNOW:** **FDP** Converting FDP, Using multipliers, compound interest, reverse % **Approximations** Estimation in worded problems, Write upper & lower Bounds, Write error intervals **Algebra 2** Expanding harder brackets, Factorising quadratics, Solving complex linear equations **Collecting & Interpreting Data** Averages from a grouped frequency table, Using Venn Diagrams, Sampling methods **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**	**STUDENTS MUST KNOW:** **Sequences & Graphs** Using linear nth term, Nth term of quadratic sequences, Scatter graphs **Proportion 1** Using Ratio (maps), Sharing by a ratio, Recurring decimals **Ratio and Scale** Bearings, Similar Shapes **Shape Properties** Angles in Parallel lines, Constructing Triangles, Congruency **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**

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HALF TERM 4: **STUDENTS MUST KNOW:**	**HALF TERM 5:** **STUDENTS MUST KNOW:**	**HALF TERM 6:** **STUDENTS MUST KNOW:**
Algebra 3 Changing the subject of harder formulae, Proof, Substitute into functions **Transformations** All transformations (including fractional scale factors) **Probability** Show outcomes using appropriate methods, Sample space diagrams, Tree diagrams for independent events	**Triangles and Congruency** Trigonometry introduction, Plans & elevations, Congruent Triangles **Interpreting Data** Cumulative Frequency, Box Plots, Scatter Graph **Circles** Volume & surface area of cones & spheres, Circle theorems intro	**Proportion** Real life graphs, Reverse percentages, Direct & inverse proportion **Equations & Inequalities** Linear simultaneous equations, Solving quadratics by factorisation **Plotting and Sketching Graphs** Quadratic & cubic graphs, Equation of a line, Equation of parallel lines
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Home learning set will consist of a combination of: Weekly Sparx tasks (due each Wednesday) and additional worksheets where appropriate		