Stuart Bathurst Catholic High School

Mathematics Department

Long-term sequencing Year 10 Stage 6

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 will build on knowledge from Key Stage 3 to further develop their mathematical skills and apply these not only in their Maths lessons but also wherever relevant in other subjects and in day to day contexts. 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** Using all parts of BIDMAS, Working with surds and pi **Geometry & Measures** All angles combined (parallel lines, polygons etc), Using Units of area and volume conversions in context **Number Properties 2** Calculate using laws of indices (including fractional), Calculate in standard form, Simplify irrational numbers (surds) **Algebra 1** Substitution of any value into formulae, Using compound measures for combined problems **HOW THIS WILL BE ASSESSED:** **Low stakes knowledge tests as starters** **End of unit assessments at the end of each half term** **Edited GCSE past papers**	**STUDENTS MUST KNOW:** **FDP** Compound interest and depreciation, Original value problems, Multiple stage percentage problems **Approximations** Write error intervals, Calculate using upper and lower bounds **Algebra 2** Expanding brackets involving surds, Factorising harder quadratics, Algebraic fractions **Collecting & Interpreting Data** Using set notation to work with Venn diagrams, Time series graphs **Sequences & Graphs** Using Nth term of quadratic sequences, Using subscript notation, iteration **HOW THIS WILL BE ASSESSED:** **Low stakes knowledge tests as starters** **End of unit assessments at the end of each half term** **Edited GCSE past papers**	**STUDENTS MUST KNOW:** **Proportion 1** Sharing by a ratio, Inverse and direct proportion problems, Construct proof with recurring decimals **Ratio and Scale** Using similar shapes in 2D and 3D, trigonometric functions, Scale factors for area and volume **Shape Properties** Using similar shapes, Proof using Pyhtagoras' Theorem **Algebra 3** Changing the subject involving algebraic fractions, Composite and inverse functions **HOW THIS WILL BE ASSESSED:** **Low stakes knowledge tests as starters** **End of unit assessments at the end of each half term** **Edited GCSE past papers**

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HALF TERM 4:	HALF TERM 5:	HALF TERM 6:
STUDENTS MUST KNOW: **Transformations** Combined transformations, Column vectors **Probability** Tree diagrams for independent events and dependent events, three-way Venn Diagrams **Triangles and Congruency** Bearings combined with trigonometry, Pythagoras and trigonometry in 3D **HOW THIS WILL BE ASSESSED:** **Low stakes knowledge tests as starters** **End of unit assessments at the end of each half term** **Edited GCSE past papers**	**STUDENTS MUST KNOW:** **Interpreting Data** Using cumulative frequency & box plots, Drawing histograms **Circles** Arc lengths and sector areas, Circle theorems (all) **Proportion** Direct & inverse proportion algebraically and graphically, Iterative process **HOW THIS WILL BE ASSESSED:** **Low stakes knowledge tests as starters** **End of unit assessments at the end of each half term** **Edited GCSE past papers**	**STUDENTS MUST KNOW:** **Equations & Inequalities** Solving quadratics using all methods **Plotting and Sketching Graphs** Sketching quadratic graphs, Equation of parallel and perpendicular lines, Interpreting real life graphs (including gradients and area underneath) **HOW THIS WILL BE ASSESSED:** **Low stakes knowledge tests as starters** **End of unit assessments at the end of each half term** **Edited GCSE past papers**
Home learning set will consist of a combination of: Weekly Sparx tasks (due each Wednesday) and additional worksheets where appropriate		