Stuart Bathurst Catholic High School

Mathematics Department

Long-term Sequencing Year 10 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 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** Converting decimals, fractions & integers, Ordering decimals, fractions, integers & directed numbers, All operations of integers & decimals, place value/ordering, simple parts of BIDMAS **Geometry & Measures** Angle properties - interior angle sum of a triangle, Properties of 2d shapes – equilateral and isosceles triangles. **Number Properties 2** Identify and recognise prime numbers less than 100, Prime Factors of 2 digit numbers, simple HCF & LCM of numbers, Divisibility tests, Recognise triangular numbers, squares and square roots. **Algebra 1** Use algebraic notation including fractions coefficients and brackets, Substitution into formulae and expressions, Writing and forming expressions, identify term, expression and equation **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** Converting FDP, Percentage (Non-Calc), Shading fraction/percentage of a shape, express one quantity as a percentage of another. **Approximations** Rounding to nearest integer, 10, 100, 1000, Round to a given number of decimals places, Rounding to a given number of significant figures **Algebra 2** Simplifying expressions by collecting like terms, expanding single brackets, solving simple linear equations **Collecting & Interpreting Data** Pictograms, bar charts, vertical line diagrams, types of data, Mean, mode & median from a list of numbers **Sequences & Graphs** Sequences, special sequences (triangular, square and cube), Sequences from diagrams, Using and finding Nth Term rules, Plot co-ordinates in all 4 quadrants of a graph, plot simple linear 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**	**STUDENTS MUST KNOW:** **Proportion 1** Write and simplify ratios, differences between ratio and proportion, divide quantities into a given ratio. **Ratio and Scale** Interpret scales of metric units for length, weight and capacity Measure and draw with a ruler and protractor, Scale drawings, interpret map/model scales as a ratio, Scale factors of enlargement **Shape Properties** Identify polygons (numbers of sides angles) up to 8 sides, Properties of triangles and quadrilaterals, Missing angles on a straight line, triangles, quadrilaterals and around a point, Classify and name 2D and 3D shapes, Lines of symmetry **Algebra 3** Input and output machines including with 2 stage operations Substitute values into basic formulae. **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** Identify all the symmetries (rotation and reflection) of 2D shapes, Reflect shapes in a given line, Simple facts of congruency. **Probability** Describing probabilities using words and on a probability scale, Writing probabilities as fractions **Triangles and Congruency** Use a ruler and compass to construct SSS (side, side side) triangles. **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** Plotting co-ordinates, drawing and interpreting scatter graphs, describing correlations and relationships between variables in context, drawing and using a line of best fit **Circles** Identify parts of a circle, construct circles given the radius/diameter. **Proportion** Direct and inverse proportion, Compound interest **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** Solve one and two step equations **Plotting and Sketching Graphs** Plot co-ordinates in all 4 quadrants, draw horizontal (y =) and vertical lines (x =) Plot straight line graphs with positive gradients **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		