Stuart Bathurst Catholic High School

Edited GCSE past papers

STUART BATHURST

Mathematics Department

Long-term sequencing Year 10 Stage 4

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.

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HALF TERM 1:	HALF TERM 2:	HALF TERM 3:
STUDENTS MUST KNOW:	STUDENTS MUST KNOW:	STUDENTS MUST KNOW:
Number Properties 1 All operations of integers/decimals/fractions, place value/ordering with directed numbers, fractions, and decimals, all parts of BIDMAS Geometry & Measures All angles facts (including parallel lines), nets, surface area & volume of 3D shapes, conversion of units (length, mass and capacity) Number Properties 2 Prime Factors, HCF & LCM, Standard Form Algebra 1 Substitution (including negative numbers), use of formulae involving shapes	FDP Converting FDP, Percentage (Calc & Non-Calc), % Increase/decrease, multipliers, calculate percentage change, compound interest & depreciation Approximations Rounding (significant figures), Estimation, Use of a calculator Algebra 2 Simplifying (sums, products & powers), Expanding and Factorising (single and double brackets), Solving Equations (with unknowns on both sides) Collecting & Interpreting Data Construct frequency tables, Averages from a table, Two Way Tables (construct and interpret), Venn Diagrams (construct and interpret),	Proportion 1 Simplifying Ratio, Writing Ratios, Using Ratio (maps), Sharing by a ratio, Unitary method for proportion Ratio and Scale Construct scale drawings, Maps, Bearings, Interpret Scales Shape Properties Angles in parallel lines, Properties of regular polygons, Constructing Triangles Algebra 3 Changing the subject (including powers & roots), Identities and Equations
HOW THIS WILL BE ASSESSED: Low stakes knowledge tests as starters End of unit assessments at the end of each half term	Time Series Graphs (construct and interpret) Sequences & Graphs Recognise types of sequences, coordinates, Linear graphs, Sequences, Nth Term (linear only) HOW THIS WILL BE ASSESSED: Low stakes knowledge tests as starters End of unit assessments at the end of each half term	HOW THIS WILL BE ASSESSED: Low stakes knowledge tests as starters End of unit assessments at the end of each half term

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HALF TERM 4:

STUDENTS MUST KNOW:

Transformations

Rotation, Reflection, Enlargement (positive scale factors only), Translations (including mixed)

Probability

Probability of events from a list, Calculate missing probabilities, Carry out experiments and record results, construct & interpret probability trees (independent events only)

Triangles and Congruency

Constructions and Loci, Pythagoras' Theorem (for all sides)

HOW THIS WILL BE ASSESSED:

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HALF TERM 5:

STUDENTS MUST KNOW:

Interpreting Data

Stem & Leaf (draw & interpret), Collect & record grouped data, Calculate averages (from a list, frequency table & grouped data), Draw a bar chart, draw a pie chart

Circles

Label parts of a circle, Area & Circumference, Compound shapes (area & perimeter)

Proportion 2

Direct and inverse proportion (including using the formula), Compound interest & decay

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

HALF TERM 6:

STUDENTS MUST KNOW:

Equations & Inequalities

Forming and solving equations (up to & including unknowns on both sides), Solve linear inequalities (one variable), Represent inequalities on a number lines, Solve a quadratic equation graphically

Plotting and Sketching Graphs

Plot linear Graphs, Use conversion graphs, Equation of a line (two points, one point & gradient), Plot quadratic graphs

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

