Maths Department
Curriculum and Assessment Map 2021-2022

	Half Term 1	Half-Term 2	Half Term 3	Half Term 4	Half Term 5	Half Term 6
Year 10	**Similarity**	Developing Algebra	**Geometry**	**Proportions and Proportional change**	**Delving into Data**	**Using Number**
Fundamental Knowledge	**Congruence, similarity and enlargement.** • Understand the difference between congruence and similarity • Enlarge a shape about a given point; understand and use similarity • Find missing sides in similar shapes including pairs of similar triangles • Understand and use the conditions for a pair of congruent triangles **Trigonometry** • Understand trigonometric ratios • Work out missing lengths and angles in right-angled triangles • Know and use the exact values of key angles	**Representing solutions of equations and inequalities** • Form and solve equations and inequalities in a variety of contexts, including with unknowns on both sides • Represent solutions to inequalities on a number line • Represent solutions to equations graphically **Simultaneous equations** • Understand the meaning of solution, appreciating that some equations have multiple solutions • Form and solve a pair of linear simultaneous equations graphically • Form and solve a pair of linear simultaneous equations algebraically	**Angles and bearings** • Review KS3 angles rules • Understand and use bearings **Working with circles** • Review area and circumference • Name parts of a circle and perform related calculations • Find areas and volumes related to circles – cylinder, cone, sphere etc. **Vectors** • Understand vector notation • Vector arithmetic – addition, subtraction and multiplication by a scalar • Vectors and translations	**Ratio and fractions** • Use ratios, including with mixed units • Fractions in ratios • Fractions from ratios • Combining ratios • Unit pricing ('best buys') • Currency conversions **Percentages and interest** • Convert fractions, decimals and percentages • Find percentages and percentage changes • Find one number as a percentage of another • Calculate simple and compound interest • Evaluate exponential change e.g. depreciation • Find original values	**Collecting, representing and interpreting data** • Understand sampling, including the possible limitations • Construct and interpret tables and line graphs for time series data • Understand and represent with grouped data • Understand and identify correlation • Use lines of best fit, understanding the dangers of extrapolation • Construct and interpret frequency polygons • Evaluate measures of location and dispersion • Use statistical diagrams and measures to compare distributions	**Non-calculator methods** • Use four operations with integers (positive and negative), decimals and fractions with and without context (include all areas of previous study) • Work with exact answers e.g. area and volume • Evaluate calculations involving percentages **Types of number and sequences** • Use factors, multiples, primes and prime factorisation • Recognise arithmetic and geometric sequences • Recognise and use other sequences **Indices and roots** • Work out powers and roots • Use the rules of indices • Calculate with numbers in standard index form
Learning Checkpoint Tasks	Learning checks will take place after each unit.	Learning checks will take place after each unit.	Learning checks will take place after each unit.	Learning checks will take place after each unit.	Learning checks will take place after each unit.	Learning checks will take place after each unit.
Common Assessment Task	CA1 Trust Assessment		N/A		CA2 Trust Assessment	
Interleaved Knowledge	**Notes/Links/Interleaving** • Revisit angle rules, including angles in parallel lines • Revisit equations, especially variants of $ax = b$ • Revisit Pythagoras' theorem **Notes/Links/Interleaving** • Context for equations to include probability, area, angles, ratio problems etc.		**Notes/Links/Interleaving** • Revisit trigonometry • Revisit area and volumes of other shapes, and compound shapes • Estimation, rounding and significant figures **Notes/Links/Interleaving** • Revisit formal methods of calculation (also Summer 2) • Revisit fraction arithmetic		**Notes/Links/Interleaving** • Use equations e.g. solving problems about the mean • Use non-calculator methods when appropriate **Notes/Links/Interleaving** • Convert FDP • Revisit exact trigonometrical values • Revisit area and volume formulae (without a calculator) • Find exact answers in terms of π • Solve problems involving financial mathematics	