HUNTINGTON SCHOOL
MATHEMATICS DEPARTMENT

Mathematics: Mid Term Plan for Year 10 – Higher

Term 3 Assessment: Between 21/6 – 2/7. This will be a set of mock papers and could include anything they have done previously.

Homework: Weekly homework will be set on a Wednesday, due the following Wednesday via Sparx Maths.

Able and interested: Extension work, and problem-solving task will be provided in lessons where needed.

Support and Extension: Some topics in the table below may not be taught at this current point. This will depend on the attainment of the individuals, and these topics will then be taught at a later date when more appropriate.

Building on: These topics will have been seen before and are needed to progress to the core topics

Core: These topics will be on the assessments

Extension: These topics show where the core topics lead. They may be covered in class if the core topics are secure.

Why this? Why Now? The national curriculum sets out the key maths skills and knowledge that all children in England should learn, and at Huntington School we make sure your child experiences this fully throughout their time with us. Our maths curriculum is planned in a sensible, step-by-step order so that each new topic builds on what pupils already know, helping them grow in confidence and understanding. The table below shows how the learning is sequenced and explains why topics are taught in this order, making it easier for you to see how your child's maths knowledge develops over time.

The Year 10 scheme of learning starts out the same for all students. At this point, Half term 5 and 6, the scheme of learning separates into Higher and foundation. The table below shows the higher strand.

Half Term	5	6
Knowledge and skills which will be covered during this half term.	**Algebra** Term-to-term rules, Substituting into position-to-term rules, Position-to-term rules for arithmetic sequences, Position-to-term rules for sequences of patterns, Expanding double brackets Factorising quadratic expressions of the form x^2+bx+c Factorising the difference of two squares Factorising to solve quadratic equations of the form x^2+bx+c=0. Position-to-term rules for quadratic sequences, Position-to-term rules for geometric sequences, Special sequences, Expanding triple brackets Completing the square Factorising quadratic expressions of the form ax^2+bx+c Factorising to solve quadratic equations of the form ax^2+bx+c=0. Solving quadratic equations by completing the square Solving quadratic equations graphically. **Statistics** Sampling and bias, Capture-recapture.	**Statistics** Interpreting frequency tables with grouped data, Calculating the median, Finding the mode. Drawing cumulative frequency graphs, Interpreting cumulative frequency graphs, Drawing box plots, Interpreting box plots, Comparing populations using box plots and cumulative frequency graphs.

	Ratio & Proportion Solving direct proportion word problems, Solving inverse proportion word problems, Currency conversion, Constructing and solving equations, Graphs of reciprocal functions. Constructing direct proportion equations, Constructing inverse proportion equations, Graphs of direct and inverse proportion. **Geometry** Translation, Reflection, Rotation. Enlargement by a positive or negative scale factor, Combining transformations. **Number** Finding error intervals, Finding error intervals for truncated numbers, Calculating with roots and powers, Index rules with positive indices, Index rules with negative indices, Using a written method to divide with decimals, Solving equations with two or more steps. Finding bounds for calculations, Estimating roots and powers, Indices of the form 1/a, Indices of the form a/b, Converting fractions to recurring decimals, Converting recurring decimals to fractions. Multiplying and dividing surds, Simplifying surds, Adding and subtracting surds, Expanding brackets with surds.	**Number** Calculating with roots and powers, Simplifying expressions by collecting like terms, Expanding single brackets, Expanding double brackets, Multiplying and dividing surds, Simplifying surds, Adding and subtracting surds, Expanding brackets with surds, Simplifying algebraic fractions by cancelling common factors. Multiplying and dividing surds, Simplifying surds, Adding and subtracting surds, Expanding brackets with surds, Rationalising denominators containing a single term, Rationalising denominators containing two terms.
Key vocabulary	**Algebra –** Sequence, position, nth term, substitute, geometric, common ratio, ascending, descending, Fibonacci, squared, cubed, triangular, expressions, like terms, highest common factor, expand, factorise, coefficient, index, variable, quadratic, triple, difference of two squares, completing the square, turning points **Statistics –** Sampling, population, sample, bias, discrete, continuous, qualitative, quantitative, random, representative, reliability, proportion, questionnaire, capture, recapture, unit fraction **Ratio & Proportion –** Proportionality, direct, inverse, coefficient, constant, equation, substitute, integer, relationship, context, reciprocal **Geometry -** Reflection, Translation, Rotation, Enlargement, centre, column vector, co-ordinate, origin, clockwise, anticlockwise, scale factor, resultant, vertices, invariant, combine, transformation **Number –** Error interval, decimal, significant figure, upper bound, lower bound, accuracy, round, integer, truncate, powers, index, indices, exponent, positive, square root, cube root, estimate, approximate, trial and improvement, negative, simplify, evaluate, expression, coefficient, recurring, terminating, dot notation	**Statistics –** Frequency, grouped, inequalities, cumulative frequency, ogive, mode, modal, mean, median, averages, compare, upper, lower, quartiles, interquartile range, box plot, maximum, minimum, estimate, consistency **Number –** Square root, surd, simplify, expand, rationalise, denominator