Year 10 Maths Curriculum Summary

YEAR GROUP: 10   **SUBJECT: Maths**

When?	Topic	Knowledge	Unit Assessments
HALF TERM 1	**Algebra: Linear Graphs**	- draw a straight-line graph from its equation - find the equation of a linear graph - read information from a conversion graph - use graphs to find formulae and solve simultaneous linear equations - draw linear graphs parallel or perpendicular to other lines.	Draw y=mx + c, find equation of linear graph, conversion graph, solve simultaneous equations graphically, parallel & perpendicular lines
HALF TERM 2	**Geometry & Measure: Right angles triangles**	- use Pythagoras' theorem in right-angled triangles - use Pythagoras' theorem to solve problems - use Pythagoras' theorem in three dimensions - use trigonometric ratios in right-angled triangles - use trigonometry to solve problems.	Pythagoras, Pythagoras in 3D, trig ratios #

When?	Topic	Knowledge	Unit Assessments
HALF TERM 3	**Geometry & Measures: Similarity**	- work out the scale factor for two similar shapes - work out lengths of sides in similar shapes - work out areas and volumes of similar shapes.	Scale factor. Length, area & volume scale factor
	Probability	- work out the probabilities of outcomes of events, using theoretical or experimental models - recognise mutually exclusive, exhaustive and complementary outcomes - predict the likely number of successful outcomes, given the number of trials and the probability of any one outcome - use two-way tables to solve probability problems - use Venn diagrams to solve probability problems.	Theoretical, experimental, mutually exclusive, exhaustive, complementary, two-way tables, Venn diagrams
HALF TERM 4	**Number: Powers & standard form**	- calculate using powers (indices) - write numbers in standard form - calculate with standard form.	Calculate powers, write & calculate in std form

When?	Topic	Knowledge	Unit Assessments
HALF TERM 5 **HALF TERM 6**	**Algebra: Equations & Inequalities** **Number: counting, accuracy, powers & surds**	 - set up and solve linear equations with fractions, brackets and variables on both sides - solve linear simultaneous equations - solve a linear inequality and represent the solution on a number line - find a region on a graph that obeys a linear inequality in two variables - use trial and improvement to solve non-linear equations. - work out a reciprocal - convert fractions to terminating or recurring decimals, and vice versa - estimate powers and roots of positive numbers - work with negative and fractional powers - calculate with surds - work out the error interval for rounded numbers - use limits of accuracy in calculations - use the product rule for counting.	**E** Solve linear equations, simultaneous equations, linear inequalities, shade regions, trial & improvement Reciprocal, terminating & recurring decimals, powers & roots, negative & fractional powers, surds, error intervals, limits of accuracy, product rule for counting

When?	Topic	Knowledge	Unit Assessments
	Algebra: Quadratic equations **Statistics: Sampling & more complex diagrams**	 • draw quadratic graphs • solve quadratic equations by factorisation, the quadratic formula and completing the square • solve problems involving quadratic equations • recognise and find the significant points of a quadratic graph • use graphs to solve a pair of simultaneous equations, one linear and one non-linear • use the method of intersection to solve one quadratic equation, using the graph of another quadratic equation and an appropriate straight line • solve quadratic inequalities. • collect data to obtain an unbiased sample • draw and interpret frequency polygons • draw and interpret cumulative	Draw a quadratic, solve a quadratic by factorising, formula & completing the square, significant points, solve simultaneous equations one linear, one non-linear, and solve quadratic inequalities Sampling, frequency polygons, cumulative frequency diagrams, box plots, histograms

When?	Topic	Knowledge	Unit Assessments
	Probability: Combined events **Geometry & Measures: Properties of circles: (circle theorems)**	frequency graphs • draw and interpret box plots • draw and interpret histograms. • work out the probability of two events • draw and use tree diagrams • use probability for independent events • use conditional probability. • prove and use circle theorems to work out angles • work out angles in cyclic quadrilaterals • use tangents, chords and alternate segment theorem to work out angles in circles.	Probability of 2 events, tree diagrams, independent events, conditional probability Prove and use circle theorems, cyclic quadrilaterals, tangents, chords and alternate segment theorem