



Maths Department

Yr 10 Curriculum and Assessment Map

	Half Term 1	Half-Term 2	Half Term 3	Half Term 4	Half Term 5	Half Term 6
Year 10	Expressions and Indices	Statistics	Quadratic equations and graphs	Geometry	Direct and inverse proportion	FDP review and probability
Fundamental Knowledge	- Use positive integers and associated real roots to evaluate and estimate. - Define and explain the concept of surds including their notation. - Use the laws of indices to manipulate expressions. - Identify linear and quadratic expressions. - Manipulate quadratic expressions by factorising and expanding, including using the difference of two squares and by completing the square. - Manipulate expressions using surds.	- infer properties of populations or distributions from a sample, while knowing the limitations of sampling - interpret and construct tables and line graphs for time series data {construct and interpret diagrams for grouped discrete data and continuous data, i.e. histograms with equal and unequal class intervals and cumulative frequency graphs, and know their appropriate use} - interpret, analyse and compare the distributions of data sets from univariate empirical distributions through: appropriate graphical representation involving discrete, continuous and grouped data, {including box plots} appropriate measures of central tendency (including modal class) and spread {including quartiles and inter-quartile range} - use and interpret scatter graphs of bivariate data; recognise correlation and know that it does not indicate causation; draw estimated lines of best fit; make predictions; interpolate and extrapolate apparent trends whilst knowing the dangers of so doing	- understand and use the concepts and vocabulary of expressions, equations, formulae, identities, inequalities, terms, and factors - know the difference between a linear and a quadratic equation and be able to solve quadratic equations - identify and interpret roots, intercepts, turning points of quadratic functions graphically. - solve two simultaneous equations in two variables (linear/quadratic). (Algebraically is higher only but both tiers solve graphically)	- Use the standard ruler and compass constructions. To construct given figures and solve local problems. - Use the basic congruence criteria for triangles. Identify, describe, and construct congruent and similar shapes. - Apply improve standard circle theorems concerning angles, radiate tangents and chords and use them to prove related results. - Apply the properties of angles on parallel sides and in polygons. To solve problems and derive further angle facts.	- Solve problems involving direct and inverse proportion, including numerical, graphical and algebraic representations and those involving compound units - Interpret the gradient of a graph as a rate of change	- To work fluently with fractions, decimals and percentages. Moving between these as required. - To apply the rules of fractions to algebraic problems. - Understand the concept of likelihood and chance, calculating theoretical and experimental probability - Representing probability in a variety of ways to visualise problems and solve problems with dependant and independent events - Understanding and using Venn diagrams with set notation
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	TA1 Trust Assessment		N/A		TA2 Trust Assessment	

Interleaved Knowledge	<i>Progression from Y7</i>	<i>Progression from Y7</i>	<i>Progression from Y7</i>
	Squares cubes and powers of 10, laws of arithmetic, expressions, square roots, expanding brackets, factorising expressions, equivalent fractions	Order of operations, equality, square rooting, factors, area and perimeter,	Prime factor decomposition, converting fractions to decimals, calculating with fractions, probability
	From year 8	From year 8	From year 8
	Data handling cycle, fraction/percentage of a quantity, Equivalent ratio, percentages, ratio, drawing and interpreting charts, bar charts, averages, range, representing data	Linear equations, checking solutions, Solving equations, substitution,	Ratio, ratio as proportion, fractions/percentages of a quantity, percentage increase/decrease, solve linear equations
	From year 9	From year 9	From year 9
	Pythagoras, standard form, linear and non-linear sequences and graphs expanding binomials, distance time graphs	Rounding and significant figures, area and perimeter, straight line graphs, points of intersection,	Straight line graphs, finding gradient, gradient as a rate of change,
		From year 10	From year 10
		Factorising quadratics	Non linear graphs