Maths Curriculum Map

	Competencies apply to all sows	Year 7 Times Table Rock Stars each lesson	Year 8 Times Table Rock Stars each lesson
Autumn 1	**AO1 Use and apply standard techniques** Students should be able to: ● accurately recall facts, terminology and definitions ● use and interpret notation correctly ● accurately carry out routine procedures or set tasks requiring multi-step solutions. **AO2 Reason, interpret and communicate mathematically** Students should be able to: ● make deductions, inferences and draw conclusions from mathematical information ● construct chains of reasoning to achieve a given result ● interpret and communicate information accurately ● present arguments and proofs ● assess the validity of an argument and critically evaluate a given way of presenting information. **AO3 Solve problems within mathematics and in other contexts** Students should be able to: ● translate problems in mathematical or nonmathematical contexts into a process or a series of mathematical processes ● make and use connections between different parts of mathematics ● interpret results in the context of the given problem ● evaluate methods used and results obtained ● evaluate solutions to identify how they may have been affected by assumptions made	First 40 [?Place value (inc. decimals) Multiply and divide by 10, 100, 1000 Add and subtract (inc. decimals) Checking solutions Perimeter Word Problems Multiply and divide (inc. decimals) Area of rectangle and triangle Calculate the mean Factors, HCF, Primes]	Number [Indices Prime factorization HCF, LCM, squares, cubes Order of operations Rounding, sig figs and estimation Multiply and divide fractions and mixed numbers Calculate with positive rational and decimal numbers Using a calculator]
Autumn 2			Algebraic Expressions [Negative numbers and inequality statements Calculate and evaluate expressions with rational numbers Algebraic manipulation Linear equations Expressions and equations from real-world situations]
Spring 1		Geometry [Draw, measure and name acute and obtuse angles Find unknown angles (straight lines, at a point, vertically opposite) Properties of triangles and quadrilaterals Area of parallelograms]	2D and 3D Geometry [Drawing accurate triangles and quadrilaterals Finding unknown angles (including parallel lines) Conversion between length units (and area and volume units) Area and perimeter of composite figures Area of trapeziums and circles Surface area of cuboids Visualise and identify 3D shapes and their nets Circumference of a circle Volume of cuboid, prism, cylinder, composite solids]
Spring 2		Fractions [Equivalent fractions Compare and order fractions and decimals Multiples and LCM Add and subtract fractions Change mixed numbers to improper fractions and vice versa Fraction of a quantity]	Proportional Reasoning [Convert between fractions, decimals and percentages Percentage increase and decrease, finding the whole given the part and the percentage Ratio (equivalent, of a quantity) and rate Speed, distance, time, multiply and divide fractions]
Summer 1		Algebra [Order of operations Substitution Simplifying algebraic expressions Solve word problems with expressions, squences]	Statistics [Collect and organise data Construct and interpret graphs – pictograms, bar charts, pie charts, line graphs Identify and compare statistical representations using averages and range Comparing two data sets stem and leaf, mean from grouped data, scatter diagrams, probability]
Summer 2		Percentages and Pie Charts [Read and interpret pie charts Convert between fractions, decimals and percentages Percentage of a quantity Find the whole, given the part and the percentage]	

	Competencies apply to all sows	Year 9 Foundation	Yr 9 higher	Year 9	Year 10	Year 11
Autumn 1 [20 lessons approx.]	**AO1 Use and apply standard techniques** Students should be able to: ● accurately recall facts, terminology and definitions ● use and interpret notation correctly ● accurately carry out routine procedures or set tasks requiring multi-step solutions. **AO2 Reason, interpret and communicate mathematically** Students should be able to: ● make deductions, inferences and draw conclusions from mathematical information ● construct chains of reasoning to achieve a given result ● interpret and communicate information accurately ● present arguments and proofs ● assess the validity of an argument and critically evaluate a given way of presenting information. **AO3 Solve problems within mathematics and in other contexts** Students should be able to: ● translate problems in mathematical or nonmathematical contexts into a process or a series of mathematical processes ● make and use connections between different parts of mathematics ● interpret results in the context of the given problem ● evaluate methods used and results obtained ● evaluate solutions to identify how they may have been affected by assumptions made	Number [non-calculator arithmetic, negative numbers, BIDMAS, rounding and estimation, using a calculator, percentages, standard form]	Number 1 Number problems and reasoning Place value and estimating HCF and LCM Calculating with powers (indices) Zero, negative and fractional indices Powers of 10 and standard form Surds	Number Algebra	Graphs [F] Transformations Equations and inequalities [H] Probability (H)	Fractions,indices and standard form (F) Congruence similarities and vectors. [F] Vectors and geometric proof (H) Proportion and graphs (H)
Autumn 2		Algebra [substitution, simplifying expressions, expand single and double brackets, factorise single brackets, sequences: linear and quadratic (generating only, not nth term for quadratic sequences), linear graphs, Quadratic/cubic/reciprocal graphs	Algebra Algebraic indices Expanding and factorising Equations Formulae Linear sequences Non-linear sequences More expanding and factorising	Interpreting data, graphs, tables and charts	Probability [F/H] Multiplicative reasoning (H) Ratio and proportion (F)	
Spring 1 & 2		Graphs, tables and charts Fractions and percentages Equations, inequalities and sequences	Interpreting and representing data Fractions, ratio and percentages Angles and trigonometry	Fractions, ratio and percentages Equations, inequalities and sequences	Right-angled triangles (F) Probability (F) Multiplicative Reasoning (F) Similarity and congruence (H) More trigonometry (H) Further Statistics (H)	
Summer 1&2		Angles Averages and range Perimeter, area and volume Maths for Life project	Graphs Area and volume Transformations and constructions Maths for life project	Angles and trigonometry Averages and range Perimeter, area and volume Transformations and construction	Quadratic equations and graphs (H) Constructions ,loci and bearings (F) Perimeter, area and volume (F) Circle theorems (H) More Algebra (H)	