Autumn Term	Easter Term	Summer Term

		Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Year 7	Unit	Basline assessments	NP1			NP2			NP3			NP4	
			Place value and the number line			Addition and Subtraction			Multiplication and Division			Powers, Roots and Primes	
	Skills		Writing integers and decimals Ordering positive and negative integers Multiply and divide by positive and negative powers of 10	Rounding to decimal places Rounding to significant figures Metric conversions	Finding the midpoint Finding the median of discrete data Working in different bases (e.g. binary)	Mental and wirtten strategies for + - positive integers and decimals Application to worded problems	Applying + - to problems including perimeter of polygons and angle facts	Finding the mean and range of discrete data Working in binary	Mental and written strategies for multiplication of positive integers and decimals Finding LCM by listing	Mental and written strategies for division of positive integers and decimals Finding factors and HCF by listing	Multiplicative reasoning Applying multiplication to rectilinear area problems Volume of cubes and cuboids Proportion/money problems	Fluent recall of square and cube numbers Understanding index form	Calculating roots (inverse of exponents) Addition and subtraction rules for multiplication and division of powers
Year 7	Unit	NP4	NP5			NP6			NP7				NP8
		Powers, roots and primes	Order of operations			Directed Number			Fractions				Fractions, Decimals, %
	Skills	Fluent recall of prime numbers less than 100 The fundamental Theorem of Arithmetic	Order of operations with the four operations Order of operations including exponents	Breaking the order of operations with brackets	Applying order of operations to problems with integers and decimals	Understand negative numbers in various contexts Addition and subtraction with directed number	Multiplication and division with directed number Powers of negative numbers	Order of operations with directed numbers Apply directed numbers to contextual problems	Understand visual and numerical representations of proper and improper fractions Equivalent fractions Compare the size of fractions	Complement to 1 of a proper fraction Add and subtract fractions	Fractions of amounts Expression one number as a fraction of another Multipy and dividing fractions	Order of operations with fractions Contextual problems with fractions Binary fractions	Equivalence between FDP Recurring and terminating decimal notation
Year 7	Unit	NP8			A1		A2						
		Fractions, Decimals and Percentages			Intro to Algebraic Thinking		Manipulating and Simplifying Expressions 1						
	Skills	Percentages of amounts Using multipliers	Express one number as a percentage of others Applying percetages knowledge to questions	Percentages and pie charts Solve percentage problems	Generalising number to algebra Simplify simple additive linear expressions, with no more than 3 variables	Solve simple 'unknown value' problems Substituting numbers for variables	Conventions of algebraic notation Collect like terms with non unit exponants	Simplifying indices and coefficients when multiplying and dividing Multiplciation rule for indices Create algebraic expressions to represent different contexts					

		Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Year 8	Unit	NP9			GM1			A3			A4		
		Time, Estimation & Use of the Calculator			Drawing, Measuring and Constructing			Manipulating and Simplifying Expressions 2			Linear Equations		
	Skills	Using the calculator effectively and estimating to check the reliability of the answer. Solving time problems, including with timetables, and with conversion of units of time, with and without the time button on the calculator.	Approximating the position of numbers on a number line, the value of powers (including roots), and metric/imperial conversions. Writing error intervals for rounded numbers, as inequalities and on a number line.	Estimating the answer to calculations. Related calculations, using estimation to check the answer. Truncation, including writing the error interval of a truncated number.	Understanding dimensions and objects in 0D and 1D, including points, lines, rays and segments. Knowing labelling conventions for lines and angles. Using a ruler to measure lines, as well as estimating length. Using a protractor to measure angles, as well as estimating angles.	Identifying acute, obtuse, reflex and right angles. Using a compass to draw circles and arcs, and construct an equilateral triangle and a hexagon. Using protractor and compasses to draw and construct triangles given initial conditions in the form SSS, SAS, and ASA.	Constructing a perpendicular bisector, a perpendicular from a point on/to a line, and an angle bisector. Constructing the essential loci of points which are a fixed distance from a point, a fixed distance from a line, equidistant from a two points, and equidistant from two lines.	Using the distributive law to multiply out a single bracket, including simplifying expressions involving multiplication over brackets. Factorising an expression into a single bracket.	Multiplying two simple binomials.	Creating algebraic expressions to represent various contexts, including the use of brackets.	Understanding the use of the equals sign to represent the equivalence of two expressions. Solving equations of the form ax+b=c.	Solving equations containing brackets. Solving equations with the unknown on both sides.	Solving equations of the form a/x=b or a/x+b=c. Forming and solving equations in various contexts.
Year 8	Unit	NP10				GM2				SP1			
		Proportional Reasoning				Polygons and Angles				Discrete Data			
	Skills	Knowing the difference between direct and inverse proportion. Solving problems involving applications of direct and inverse proportion: exchange rates, value for money,	Solving problems involving applications of direct and inverse proportion: scaling recipes, scaling shapes, and more.	Finding a percentage increase or decreasing using a decimal multiplier as a scale factor.	Finding out by what percentage something has increased or decreased.	Knowing facts about angles on a straight line, angles around a point, and vertically opposite angles. Recognising the types and features of triangles, including the sum of interior angles.	Recognising the types and features of quadrilaterals, including the sum of interior angles. Recognising the types and features of other polygons, including knowing that the sum of their interior angles increases by 180 as the number of sides increases by 1.	Recognising alternate and corresponding angles in parallel lines.	Knowing that three-figure bearings are angles measured clockwise from North. Measuring and drawing simple bearings.	Understanding the data handling cycle, the use data to address a hypothesis and how to ask good questions. Representing categorical, qualitative data with frequency tables, bar charts, pictograms and pie charts.	Representing numerical, quantitative data with ungrouped and grouped frequency tables and various charts, including vertical line charts, bar charts, pie charts, pictograms, and stem and leaf diagrams.	Finding measures of central tendency of ungrouped data: mean, mode and median from lists and from a frequency table, including solving simple problems such as finding a data point.	Finding measures of spread of ungrouped data: range. Comparing data sets through graphs, central tendency and spread. Selecting the best graph for the job. Know how graphs can mislead.
Year 8	Unit	NP11			A5		SP2		A6				
		Ratio			Formulae		Bivariate Data and Time Series		The Cartesian Grid				
	Skills	Reading and writing ratio notation, including recognising this as a way of showing a directly proportional relationship. Finding equivalent ratios, including 'simplest form' and those containing fractional parts.	Finding and working with unit ratios, including their applications to scale drawings and maps. Writing fractional relationships from ratios, including part/whole, part/part relationships, and writing equivalent ratios as a statement of equality of equivalent fractions.	Finding the value of unknown parts of a ratio given other parts or the whole.	Knowing that a formula is an expression or equation, made up of as many variable as necessary, designed to work something out. Evaluating expressions and formulae by substitution.	Writing formulae in words and letters. Rearranging linear formulae that do not require factorisation. Rearranging non-linear formulae involving powers and roots.	Drawing a scatter graph. Interpreting relationships and correlations from a scatter graph, recognising correlation does not imply causation, identifying outliers.	Drawing a line of best fit by sight, interpolating and extrapolating trends and knowing the dangers of extrapolation. Interpreting and construct tables and line graphs for time series data.	Drawing an accurate Cartesian grid and plotting 2D coordinates in four quadrants. Finding the midpoint of a line segment.	Understanding any equation of the form y=mx+c to be representing the constant linear relationship between pairs of variables (x, y), and that this relationship can be pictured as a straight line graph on a Cartesian grid. Plotting these graphs.	Drawing and recognising graphs of y=n and x=n. Understanding any equation of the form y=ax^2+bx+c to be representing the constant quadratic relationship between pairs of variables (x, y), and that this relationship can be pictured as a parabola on a Cartesian grid.	Reading values of variables from many types of graph, including quadratic, piecewise linear, exponential and reciprocal graphs. Understanding the gradient as the vertical change for every one unit of horizontal change.	Using the gradient and y-intercept of a line to write its equation in the form y = mx+c. Using the equation of a line to decide whether or not a point lies on the line. Identifying parallel lines from their equations.

		Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Year 9	Unit	GM3			A7			A8			NP12		
		Area			Introduction to Sequences			Linear Inequalities			Standard Form		
	Skills	Defining area as a measure of two dimensional space. Finding the area of triangles and quadrilaterals.	Finding the area of compound shapes and solving problems involving area.	Finding the area of a circle, giving rounded answers.	Continuing sequences and find missing terms in sequences. Generating terms of a sequence from term-to-term and position to term rules.	Finding and using the nth term of an arithmetic (linear) sequence. Working with pictorial representations of arithmetic sequences.	Recognising common non-linear sequences, including the triangular numbers, square numbers, cube numbers, quadratic, geometric and Fibonacci-style sequences.	Representing single (e.g. x>3) and double (e.g. 3<x<5) linear inequalities on a number line. Solving single linear inequalities in one variable, representing the solution on a number line and algebraically.	Solving double linear inequalities in one variable, representing the solution on a number line and algebraically. Solving systems of multiple linear inequalities in a single variable using number lines.	Setting up and solving inequalities from contexts. Representing inequalities involving only x or only y by shading on a graph.	Writing numbers greater than 1 in standard form. Writing numbers between 0 and 1 in standard form. Converting from 'almost standard' form (where a>=10, or 0<a<1) to standard form.	Using standard form to compare numbers. Adding and subtracting in standard form, by converting to normal form and by using distributivity.	Multiplying and dividing in standard form, using commutativity. Applying standard form to contextual problems. Understanding the SI prefixes and engineering form.
Year 9	Unit	A9			SP3				GM4				
		Contextual Graphs			Introduction to Probability				Congruence and Similarity				
	Skills	Reading and interpreting contextual graphs, interpreting y-intercepts as a fixed value/charge, etc, and gradient as a rate of change in context. Drawing, reading and extrapolating from conversion graphs.	Calculating with speed, distance, time.	Drawing, reading and interpreting distance-time graphs, including finding the average speed, and the speed of a section as the gradient of the line. Drawing, reading and interpreting velocity-time graphs, including finding the acceleration as the gradient and displacement as the area under the graph.	Listing systematically. Recording, describing and analysing the frequency of outcomes of simple probability experiments.	Formalising the language and notation of probability and working with theoretical probability. Knowing that the sum of probabilities of all mutually exclusive events is 1.	Generating theoretical sample spaces, including systematic listing of combinations and outcomes, and using these to calculate probabilities.	Recording outcomes and possibilities using frequency trees, two-way tables and simple Venn diagrams. Using these diagrams to calculate probabilities. Using the product rule for counting	Understanding the concept of congruence. Reading and writing two-dimensional vectors. Drawing and identifying translations of shapes, using vectors.	Drawing and identifying reflections of shapes. Drawing and identifying rotations of shapes. Drawing and identifying combinations of isometric transformations.	Understanding the concept of similarity. Identifying scale factors and finding the dimensions of similar shapes.	Drawing and identifying enlargements of shapes with positive and fractional scale factors.	**Drawing and identifying enlargements of shapes with negative scale factors.** **Identifying congruent triangles from the conditions SSS, SAS, ASA, RHS.**
Year 9	Unit	GM5				GM6			NP13				
		Right-Angled Triangles				Circles			Advanced Proportion and Rates of Change				
	Skills	Using Pythagoras' Theorem in 2D to find missing sides. Proving a triangle is right-angled with Pythagoras' Theorem. Using Pythagoras' Theorem to find the distance between two points.	Using trigonometric ratios to find missing sides in right-angled triangles. Using trigonometric ratios to find missing angles in right-angled triangles.	Fluent recall of the exact values of sinq, cosq and tanq for q = 0, 30, 45, 60, 90.	Solving problems involving Pythagoras and trigonometry.	Knowing the parts and properties of a circle. Finding the circumference of a circle and the perimeter of semicircles and quadrants, in terms of pi and rounded.	Finding the area of a circle and the perimeter of semicircles and quadrants, in terms of pi and rounded. Problems with circumference and area of a circle.	Finding the length of an arc and the area of a sector. **Identifying and using the circle theorems.**	Finding the original value after a percentage change or given a percentage of it. Finding the original value after a percentage change or given a percentage of it.	Working with direct (linear) proportion - numerically, then graphically, **then algebraically**	Working with inverse proportion (excluding squares, cubes, roots) - numerically, **then graphically, then algebraically**	Calculating with the compound units of density, pressure, and speed, including conversions between compound units. Solving complex ratio problems - combining ratios, finding parts, differences and wholes; mixing ratios with fractions (part/part and part/whole).	

		Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Year 10	Unit	M1		M2			M3		M4	M5			M6
		Percentages		Surface Area and Volume			Simultaneous Equations		Formulae	Trigonometry			Constructions
	Skills	Compound interest calculations(U332) Growth and decay(U988)		Finding the surface area of pyramids(U871) Finding the surface area of cones(U523) Finding the surface area of spheres(U893) Finding the surface area of frustums*(U334) Finding the surface area of composite shapes*(U561) *Topic is included again in Year 11 Foundation so, if preferable, it can be taught later for classes that are likely to follow the Foundation scheme.		Finding the volume of pyramids(U484) Finding the volume of cones(U116) Finding the volume of spheres(U617) Finding the volume of frustums*(U350) Finding the volume of composite shapes*(U543) *Topic is included again in Year 11 Foundation so, if preferable, it can be taught later for classes that are likely to follow the Foundation scheme.	Solving simultaneous equations using elimination(U760) Solving simultaneous equations using substitution(U757) Solving simultaneous equations graphically(U836) Constructing and solving simultaneous equations(U137)		Changing the subjects of formulae with two or more steps(U181) Changing the subject when the subject appears more than once(U191)	Understanding sin, cos and tan(U605) Finding unknown sides in right-angled triangles(U283) Finding unknown angles in right-angled triangles(U545) Using the exact values of trigonometric ratios(U627) Angles of elevation and depression*(U967) Calculating with trigonometry and bearings*(U164) *Topic is included again in Year 11 Foundation so, if preferable, it can be taught later for classes that are likely to follow the Foundation scheme.		Constructing loci(U820)
Year 10	Unit	M7		M8		M9	M10		M11	M12		M13	
		Linear Graphs		Real life Graphs		Set Notation	Tree Diagrams		Compound Measures	Ratio		Graphs	
	Skills	Equations of parallel lines(U377) Finding the equation of a straight line from its gradient and a point(U477) Finding the equation of a straight line from two points on the line(U848) Equations of parallel and perpendicular lines*(U898) *Topic is 'Higher only' so does not need to be taught to classes that are likely to follow the Foundation scheme.		Plotting linear real-life graphs(U652) Using and finding equations of linear real-life graphs(U862) Sketch graphs of water flows(U896)		Venn diagrams with set notation(U748) Using set notation(U296)	Tree diagrams for independent events(U558) Tree diagrams for dependent events(U729)		Calculating with density(U910) Calculating with pressure(U527)	Combining ratios(U921) Calculating with ratios and algebra(U676) Changing ratios(U865)		Calculating acceleration from velocity-time graphs(U562) Plotting velocity-time graphs(U937)	Graphs of cubic functions(U980) Graphs of reciprocal functions(U593) Graphs of exponential functions*(U229) *Topic is 'Higher only' so does not need to be taught to classes that are likely to follow the Foundation scheme.
Year 10)	Unit	M14	M15	M16	M17	M18	M19	M20	M21		M22		
		Sequences	Handling Data	Proportion	Transformations	Rounding	Indices	Recurring decimals	Brackets		Handling Data and Statistical diagrams		
		Position-to-term rules for arithmetic sequences(U498) Position-to-term rules for sequences of patterns(U978) Position-to-term rules for geometric sequences(U958)Position-to-term rules for quadratic sequences(U206) Position-to-term rules for geometric sequences(U958) Special sequences(U680)	Sampling and bias(U162) Capture- recapture(U328)	Interpreting direct proportion equations(U640) Interpreting inverse proportion equations(U364) Graphs of direct and inverse proportion(U238)Constructing direct proportion equations(U407) Constructing inverse proportion equations(U138) Graphs of direct and inverse proportion(U238)	Enlargement by a positive or negative scale factor(U134) Combining transformations(U766)	Finding error intervals(U657) Finding error intervals for truncated numbers(U301) Finding bounds for calculations(U587)	Index rules with positive indices(U235) Index rules with negative indices(U694) Simplifying expressions using index laws(U662). Estimating roots and powers(U299) Indices of the form 1/a(U985) Indices of the form a/b(U772)	Converting fractions to recurring decimals(U550) Converting recurring decimals to fractions(U689)	Expanding double brackets(U768) Factorising quadratic expressions of the form x 2 +bx+c(U178) Factorising the difference of two squares(U963) Factorising to solve quadratic equations of the form x2 +bx+c=0(U228)Expanding triple brackets(U606) Completing the square(U397) Factorising quadratic expressions of the form ax2 +bx+c(U858) Finding the turning point of a quadratic graph by completing the square(U769)	Interpreting frequency tables with grouped data(U312) Finding averages from grouped data(U877). Drawing cumulative frequency graphs(U182) Interpreting cumulative frequency graphs(U642)	Drawing stem-and-leaf diagrams(U200) Interpreting stem-and-leaf diagrams(U909) Drawing line graphs(U590) Interpreting line graphs(U193) Drawing and interpreting frequency polygons(U840). Drawing box plots(U879) Interpreting box plots(U837) Comparing populations using box plots and cumulative frequency graphs(U507)

		Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Year 11	Unit	M1	M2	M3		M4		M5		M6		M7	
		Graphs	Number Skills Review	Algebraic fractions		Equations		Angles		Pythagoras and Trigononmetry		Surface Area and Volume	
	Skills	Estimating gradients of non-linear graphs using tangents(U800) Calculating distances from velocity-time graphs(U611) Estimating areas under non-linear graphs(U882) Equations of circles and tangents(U567) ***In line with science for all year 11 students***	Finding the lowest common multiple(U751) Finding the highest common factor(U529) Prime factor decomposition(U739) Finding the HCF and LCM using prime factor decomposition(U250) Ordering fractions and mixed numbers(U439) Adding and subtracting mixed numbers(U793) Multiplying with mixed numbers(U224) Dividing with mixed numbers(U538)	Simplifying expressions using index laws(U662) Simplifying algebraic fractions by cancelling common factors(U103) Simplifying algebraic fractions by factorising into one bracket(U437) Simplifying algebraic fractions by factorising into two brackets(U294) Adding and subtracting algebraic fractions(U685) Multiplying algebraic fractions(U457) Dividing algebraic fractions(U824)		Com	Solving simultaneous equations using elimination(U760) Solving simultaneous equations using substitution(U757) Solving simultaneous equations graphically(U836) Constructing and solving simultaneous equations(U137)	Combining angle facts(U655) Angles on parallel lines(U826) Using quadrilateral properties to find angles(U329) Angles in polygons(U427)	Angles subtended at the centre or circumference of a circle(U459) Angles in segments and cyclic quadrilaterals(U251) Circle theorems for chords and tangents(U489) Alternate segment theorem(U130)	Using Pythagoras' theorem in 2D(U385) Applying Pythagoras' theorem in 2D(U828) Finding unknown sides in right-angled triangles(U283) Finding unknown angles in right-angled triangles(U545) Using the exact values of trigonometric ratios(U627) Angles of elevation and depression(U967) Calculating bearings(U107) Calculating with trigonometry and bearings(U164) The sine rule(U952) The cosine rule(U591) The area rule(U592) Using Pythagoras' theorem in 3D(U541) Trigonometry in 3D shapes(U170)		Finding the surface area of cones and spheres(U771) Finding the surface area of frustums(U334) Finding the surface area of composite shapes(U561) Finding the volume of cones and spheres(U426) Finding the volume of frustums(U350) Finding the volume of composite shapes(U543)	
Year 11 (Foundation)	Unit	M8	M9		M10	M11	M12	M13	M14		M15	M16	M17
		Statistical Diagrams	Probability		Inequalities	Vectors	Percentages	Compound Measures	Ratio and Proportion		Standard Form	Sequences	Linear Graphs
	Skills	Drawing pie charts(U508) Interpreting pie charts(U172) Plotting scatter graphs(U199) Interpreting scatter graphs(U277) Using lines of best fit(U128)	Probabilities of mutually exclusive events(U683) Sample space diagrams(U104) Expected results from repeated experiments(U166) Venn diagrams with set notation(U748) Using set notation(U296) Tree diagrams for independent events(U558) Tree diagrams for dependent events(U729) Experimental probabilities(U580)		Solving inequalities with the unknown on both sides(U738) Solving double inequalities(U145) Constructing and solving inequalities(U337)	Adding and subtracting column vectors(U903) Multiplying column vectors by a scalar(U564) Identifying parallel vectors(U660) Solving geometric problems using vectors(U781)	Percentage change with a calculator(U671) Finding original values in percentage calculations(U286) Finding the percentage an amount has been changed by(U278) Compound interest calculations(U332) Growth and decay(U988)	Calculating with speed(U151) Calculating with rates(U256) Calculating with density(U910) Calculating with pressure(U527)	Combining ratios(U921) Calculating with ratios and algebra(U676) Changing ratios(U865)	Solving direct proportion word problems(U721) Solving inverse proportion word problems(U357) Currency conversion(U610)	Multiplying and dividing numbers in standard form(U264) Adding and subtracting numbers in standard form(U290) Standard form with a calculator(U161)	Position-to-term rules for arithmetic sequences(U498) Position-to-term rules for sequences of patterns(U978) Position-to-term rules for geometric sequences(U958) Special sequences(U680)	Plotting straight line graphs(U741) Finding equations of straight line graphs(U315) Interpreting equations of straight line graphs(U669) Equations of parallel lines(U377) Finding the equation of a straight line from its gradient and a point(U477) Finding the equation of a straight line from two points on the line(U848)
Year 11 (Higher)	Unit	M8	M9		M10	M11	M12		M13	M14	M15	M16	
		Statistical Diagrams	Probability		Inequalities	Surds	Functions		Tramsformations	Iteration	Similarity	Proofs	
	Skills	Drawing histograms with equal class widths(U185) Drawing histograms with unequal class widths(U814) Interpreting histograms(U983) Calculating averages from histograms(U267)	Conditional probabilities from tables(U246) Conditional probabilities from Venn diagrams(U699) Using the conditional probability formula(U821) Conditional probabilities from tree diagrams(U806) Using the product rule for counting(U369)		Graphs of linear inequalities(U747) Solving quadratic inequalities(U133)	Multiplying and dividing surds(U633) Simplifying surds(U338) Adding and subtracting surds(U872) Expanding brackets with surds(U499) Rationalising denominators containing a single term(U707) Rationalising denominators containing two terms(U281)	Substituting into functions(U637) Substituting into composite functions(U895)	Finding composite functions(U448) Finding inverse functions(U996)	Translating graphs(U598) Reflecting graphs(U487) Transforming graphs(U455) Graphs of trigonometric functions(U450)	Using recurrence relations(U171) Substituting into iterative formulae(U434) Finding approximate solutions to equations using iteration(U168)	Finding the perimeter and area of similar shapes(U630) Finding the surface area and volume of similar shapes(U110)	Writing algebraic proofs(U582) Solving geometric problems using vectors(U781) Geometric proofs with vectors(U560)	Geometric proofs with angle facts(U471) Geometric proofs with congruence and similarity(U887) Proving the circle theorems(U807)
Year 11 (Foundation)	Unit												
	Skills	Revision											
Year 11 (Higher)	Unit												
	Skills	Revision											