Curriculum & Assessment Map

MATHEMATICS

TRANSITION STAGE

YEAR 7 FOUNDATION	AUTUMN 1	AUTUMN 2	SPRING 1	SPRING 2	SUMMER 1	SUMMER 2
CONTENT	**Unit 1: Analysing and displaying data** Tables and pictograms; bar charts; grouped data; mode and modal class; range and the median; mean **Unit 2: Calculating** Adding; subtracting; multiplying; dividing; multiplying and dividing by 10, 100 and 1000; using the four operations; positive and negative numbers	**Unit 3: Expressions, functions and formulae** Using functions; function machines; simplifying expressions; writing expressions; STEM-using formulae; writing formulae **Unit 4: Graphs** Real-life graphs; coordinates; graphs of functions; STEM-scientific graphs	**Unit 5: Factors and multiples** Number rules and relationships; multiples; multiplications; division; factors and primes; common factors and multiples **Unit 6: Decimals and measure** Estimates and measures; decimal numbers; metric units; adding and subtracting decimals; rounding; multiplying and dividing decimals; FINANCE – calculating with money	**Unit 7: Angles and lines** Right angles and lines; measuring angles; drawing and estimating angles	**Unit 8: Measuring and shapes** Symmetry in shapes; regular polygons; perimeter; area; **Unit 9: Fractions, decimals and percentages** Comparing fractions; equivalent fractions; calculating with fractions; introducing percentages; FINANCE – finding percentages	**Unit 10: Transformations** Reflection; translation; rotation; STEM-congruency
SKILLS	S2; S4 Interpret and construct tables, charts and diagrams; interpret, analyse and compare the distributions of data sets through appropriate measures of central tendency (median, mean, mode and modal class) and spread (range) N1; N2; N3; N6; N14; N15	A1 A2 A3 A4 A5 A6 A7 Simplify and manipulate algebraic expressions; substitute numerical values into formulae and expressions, including scientific formulae; understand and use mathematical formulae; interpret simple expressions as functions with input and outputs A8 A9 A14	N2 N3 N4 Recognise and use relationships between operations; use the concepts and vocabulary of prime numbers, factors, multiples, highest common factors and multiples N1 N2 N13 N15 G14 Use standard units of mass, length time and money; round measures	G1 G3 Draw and identify types of angles, lines and shapes; apply the properties of angles at a point and on a line; use a protractor to accurately measure angles	G4 G14 G16 G17 Know and apply formulae to calculate area of rectangles, triangles and parallelograms; calculate perimeter of 2D shapes N1 N2 N8 N11 N12 R3 R9 Order fractions using the symbol =, ≠, <, >; add, subtract, multiply and divide with fractions; reduce fractions to their simplest form; interpret	G5 G7 Identify, describe and construct congruent and similar shapes, including on coordinate axes, by considering rotation, reflection, translation and enlargement

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	Apply the four operations, including formal written methods, to integers and decimals, both positive and negative; recognise and use relationships between operations, including inverse operations	Work with coordinates in all four quadrants; plot graphs of equations that correspond to straight lines; plot and interpret graphs in real context.	to an appropriate degree of accuracy		percentages and percentage change as fractions; apply finding percentages to real life problems	
ASSESSMENT	Data collection and representation project	Autumn term exam on units 1 – 4	Create revision worksheet for units 1-6	Spring term exam on units 5 – 7	Create mind map for units 1-9	End of year Exam on units 1 – 10
USEFUL RESOURCES / GUIDANCE: Pearson KS3 Progress Book Pi 1 https://vle.mathswatch.co.uk/vle/ https://corbettmaths.com/ https://www.youtube.com/user/HEGARTYMATHS						

YEAR 7 INTERMEDIATE	AUTUMN 1	AUTUMN 2	SPRING 1	SPRING 2	SUMMER 1	SUMMER 2
CONTENT	**Unit 1: Analysing and displaying data** Mode, median and range: Displaying and grouping data; averages and comparing data; line graphs and bar charts; using spreadsheets **Unit 2: Number skills** Mental maths; Addition and subtraction; Multiplication; Division; Finance- time and money; negative numbers; factors, multiples and primes; square and triangle numbers	**Unit 3: Expressions, functions and formulae** Functions; simplifying expressions; writing expressions; substituting into formulae; writing formulae **Unit 4: Decimals and measures** Rounding decimals; length, mass and capacity; scales and coordinates; working with decimals; perimeter; area	**Unit 5: Fractions** Comparing fractions; simplifying fractions; fractions and decimals; understanding percentages' percentages of amounts **Unit 6: Probability** Language of probability; calculating probability; experimental probability; Finance – expected outcomes	**Unit 7: Ratio and Proportion** Direct proportion; writing ratios; using ratios; scales and measures; proportions and fractions; proportions and percentages	**Unit 8: Lines and angles** Estimating, measuring and drawing angles; drawing triangles accurately; calculating angles; angles in a triangle; quadrilaterals; **Unit 9: Sequences and graphs** Sequences; pattern sequences; coordinates; straight line graphs; position to term rules.	**Unit 10: Transformations** Congruency and enlargements; symmetry; reflections; rotation; translation and combined transformations
SKILLS	S2 S4 Interpret and construct tables, charts and diagrams; interpret, find the mode, median, mean and range of a set of data; compare	A1 A2 A3 A4 A7 Simplify and manipulate algebraic expressions; substitute numerical values into formulae and expressions, including scientific formulae; understand and use	N8 N10 N11 N12 R3 Calculate with fractions; work interchangeably with terminating decimals P3 P4 Use appropriate probability language and	R3 R4 R5 Use ratio notation, including reducing to simplest form; relate ratios to fractions; apply ratio to real context	G1 G3 G4 Apply the properties of angles at a point, on a straight line and vertically opposite; use the standard conventions for labelling and referring to side and angles of triangles; apply	G5 G7 G8 G19 Identify, describe and construct congruent and similar shapes by considering rotation, reflection, translation and enlargement; describe the

	sets of data using the range and averages N1 N2 N3 N4 N6 N14 N15 Apply the four operations, including formal written methods, to integers and decimals, both positive and negative; recognise and use relationships between operations, including inverse operations	mathematical formulae; interpret simple expressions as functions with input and outputs N1 N2 N13 N15 A8 R2 G14 Add, subtract, multiply and divide decimals; use standard units of mass, length, time, money; round numbers and measures to an appropriate degree of accuracy; work with coordinates in all four quadrants; use scales; use standard units of measure for perimeter and area.	the 0-1 probability scale; apply the property that the probabilities of a set of outcomes sum to 1; relate relative frequency to theoretical probability		properties of special quadrilaterals. A8 A9 A23 A24 Work with coordinates in the four quadrants; plot graphs of equations that correspond to straight lines; generate a sequence from a position to term rule; recognise and use sequences of triangular, square and cube numbers and simple arithmetic progressions	changes achieved by the four transformations
ASSESSMENT	Data collection and representation project	Autumn term exam on units 1 – 4	Create revision worksheet for units 1-6	Spring term exam on units 5 – 7	Create a revision worksheet/ mind map	End of year Exam on units 1 – 10
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YEAR 7 HIGHER	AUTUMN 1	AUTUMN 2	SPRING 1	SPRING 2	SUMMER 1	SUMMER 2
CONTENT	Unit 1: Analysing and displaying data Two-way tables and bar charts; Averages and range; Grouped data; Pie charts Unit 2: Number skills Factors, primes and multiples; using negative numbers; multiplying and dividing; square and square roots	Unit 3: Equations, functions and formulae Simplifying and writing algebraic expressions; using and writing formulae; brackets and powers; factorising expressions Unit 4: Fractions Working with fractions; adding and subtracting fractions; converting between fractions; decimals and percentages; multiplying and dividing	Unit 5: Angles and shapes Angles and parallel lines; triangles; quadrilaterals; polygons Unit 6: Decimals Ordering decimals; rounding decimals; adding and subtracting decimals; multiplying decimals; dividing decimals; fractions, decimals and percentages; Finance- working with percentages	Unit 7: Equations Solving equations; trial and improvement	Unit 8: Multiplicative reasoning Metric and imperial units; writing ratios; sharing in a given ratio; proportion; proportional reasoning; using the unitary method Unit 9: Perimeter, area and volume Triangles, parallelograms and trapeziums; perimeter and area of compound shapes; properties of 3D solids; surface area;	Unit 10: Sequences and graphs The nth term; pattern sequences; coordinates and line segments; graphs

		fractions; working with mixed numbers			volume; measures of area and volume	
SKILLS	S1 S2 S3 S4 S5 S6 Interpret and draw frequency tables, two-way tables, bar charts (dual and compound), pie charts and scatter graphs; find and compare the mode, median, mean and range for a set of data N1 N2 N3 N4 N6 N7 N14 N15 Identify multiples, factors and primes; find HCF and LCM of two numbers; use the four operations with negative numbers; carry out calculations involving squares, square roots, cubes and cube roots	A1 A2 A3 A4 A5 A6 A7 Construct and simplify algebraic expressions using the four operations; derive formulae from a description; substitute positive and negative numbers into formulae; expand expressions involving single brackets; factorise linear expressions N1 N2 N3 N4 N6 N8 N10 N12 N15 R3 R9 Compare and simplify fractions; write one number as a fraction of another; work out fractions of amounts; convert between fractions, decimal and percentages; use the four operations with fractions and mixed numbers	G3 G4 G6 G11 Work out unknown angles in parallel lines; use properties of triangles to work out unknown angles; describe properties of quadrilaterals and use them to find missing angles; work out interior and exterior angles of polygons. N1 N2 N3 N4 N6 N10 N12 N14 N15 R9 Write decimals in ascending and descending order; round to decimal places; use the four operations with decimals; convert between fractions, decimals and percentages; calculate percentage of amounts; calculate percentage increase and decrease.	A1 A2 A4 A5 A7 Write and solve two step equations; write and solve equations with unknowns on both sides; solve equations that include squares and cubes; use trial and improvement to find solutions to 1 decimal place	R4 R5 R6 R7 R8 R10 Convert between metric and imperial units of length, mass and volumes; write a ratio in its simplest form; share a quantity in two or more parts in a given ratio; apply ratio and proportion to solve worded problems; use the unitary method; solve best buy problems N13 R1 G1 G12 G13 G14 G15 G16 G17 Calculate area of triangles, parallelograms and trapeziums; calculate area and perimeter of compound shapes; identify nets of 3D solids; know properties of 3D solids; calculate surface area and volume of cubes and cuboids	A8 A9 A10 A23 A24 A25 Work out terms of an arithmetic sequence using term to term rules; work out and use expressions for the nth term of an arithmetic sequence; generate sequences and predict how they continue; use positive and negative coordinates; work out the midpoint of a line segment; draw and recognise straight line graphs of given equations
ASSESSMENT	Data collection and representation project	Autumn term exam on units 1 – 4	Create revision worksheet for units 1-6	Spring term exam on units 5 – 7	Create a revision worksheet/ mind map	End of year Exam on units 1 – 10
USEFUL RESOURCES / GUIDANCE: Pearson KS3 Progress Book Delta 1 https://vle.mathswatch.co.uk/vle/ https://corbettmaths.com/ https://www.youtube.com/user/HEGARTYMATHS						

FOUNDATION STAGE

YEAR 8 FOUNDATION	AUTUMN 1	AUTUMN 2	SPRING 1	SPRING 2	SUMMER 1	SUMMER 2
CONTENT	Unit 1: Number properties and calculations Adding and subtracting large integers; negative numbers; STEM – writing	Unit 3: Statistics Data collection; interpreting and drawing bar charts; STEM – pie charts	Unit 5: Decimal calculations Adding and subtracting decimals; multiplying decimals; ordering and rounding decimals; STEM-	Unit 7: Number properties Squares, cubes and roots; calculating with brackets and indices; LCM and	Unit 8: Sequences Generating sequences; extending sequences; special sequences; position-to-term rules; finding the nth term	Unit 10: Probability Language of probability; outcomes; probability calculation; experimental probability; FINANCE- comparing probability

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	ratios; using ratios; multiplicative reasoning **Unit 2: Shapes and measures in 3D** 3D solids; Nets of 3D solids; surface area; volume; working with measures	**Unit 4: Expressions and equations** Simplifying expressions; functions; solving equations; using brackets	problem solving with decimals **Unit 6: Angles** Measuring and drawing angles; vertically opposite angles; angles in triangles; drawing triangles accurately; designing nets	HCF; prime factor decomposition	**Unit 9: Fractions and percentages** Comparing fractions; fractions of amounts; adding and subtracting fractions; fractions and percentages; STEM-percentages and proportion	
SKILLS	N2 N3 R4 R5 R6 R7 R8 R10 Use the four operations with large numbers; apply the four operations to negative numbers; work with ratio in real-life context; find equivalent ratio; understand the relationship between ratio and proportion; use proportion to solve worded problems N13 R1 G1 G2 G12 G13 G14 G16 G17 Recognise and name 3D solids; count faces, edges and vertices; identify and draw nets of 3D solids; calculate the surface area and volume of cubes and cuboids; solve problems involving units of length, area and capacity; convert between units of volume	S2 S4 Design a data collection sheet; group data into equal class intervals; draw and interpret bar charts for more than 1 set of data; interpret pie charts A1 A2 A3 A4 A5 A6 A7 Simplify expressions by collecting like terms; find inputs and outputs of function machines; understand the difference between an expression, equation and identity;	N1 N2 N13 N15 R2 G14 Apply the four operations to decimals; round and order decimals G1 G2 G3 G6 Use a protractor to measure and draw obtuse and reflex angles; estimate the size of reflex angles; use vertically opposite angles; work out unknown angles in a triangle; accurately draw triangles using a protractor and ruler; accurately draw nets of 3D shapes	N2 N3 N4 N6 Calculate squares, square roots, cubes and cube roots; use index notation; use the roots and brackets keys on a calculator; find HCF and LCM of two or more numbers; write the prime factor decomposition of any number	A23 A24 A25 Recognise and continue sequences including special sequences and geometric sequence; generate terms of a sequence using term-to-term and position-to-term rules; find the nth term of a simple arithmetic sequence N1 N2 N8 N11 N12 R3 R9 Use the four operations with fractions; calculate fractions of amounts; convert between fractions and percentages; compare proportions using percentages; write one number as a percentage of another; calculate percentages	P1 P3 P4 Use the language of probability; use the probability scale with words; understand that probabilities can be written as fraction, percentages and decimals; find all possible outcomes of an event; use equally likely outcomes to calculate probability; calculate the probability of an event not happening; use data from an experiment to calculate probabilities
ASSESSMENT	Create a box using nets	Autumn term exam on units 1 – 4	Student paired teaching	Spring term exam on units 5 – 7	Research Poster – Famous Mathematicians	End of year Exam on units 1 – 10
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YEAR 8 INTERMEDIATE	AUTUMN 1	AUTUMN 2	SPRING 1	SPRING 2	SUMMER 1	SUMMER 2
CONTENT	**Unit 1: Number** Calculations; calculating with negative numbers; powers, roots and brackets; multiples and factors **Unit 2: Area and volume** Area of a triangle; area of a parallelogram and trapezium; volume of cubes and cuboids; 3D shapes; Surface area of cubes and cuboids	**Unit 3: Statistics, graphs and charts** Pie charts; using tables; stem and leaf diagrams; comparing data; FINANCE- misleading graphs **Unit 4: Expressions and equations** Algebraic powers; expression and brackets; factorising expressions; solving equations	**Unit 5: Real-life graphs** Conversion graphs; distance-time graphs; line graphs; real life graphs; STEM – graphs of functions **Unit 6: Decimals and ratio** Ordering and rounding decimals; place-value calculations; calculations with decimals; ratio and proportion with decimals; STEM- using ratios	**Unit 7: Lines and angles** Quadrilaterals; alternate angles and proof; geometrical problems; exterior and interior angles	**Unit 8: Calculating with fractions** Adding and subtracting fractions; multiplying fractions; fractions, decimals and reciprocals; dividing fractions; calculating with mixed numbers **Unit 9: Straight-line graphs** Direct proportion on graphs; gradients; equations of straight lines; STEM- direct proportion problems	**Unit 10: Percentages, decimals and fractions** Fractions and decimals; equivalent proportions; writing percentages; percentages of amounts
SKILLS	N2 N3 N4 N6 Use written methods to add and subtract decimals and calculate with money; estimate answers to calculations; use four operations with negative numbers; use mental methods to calculate combinations of powers, roots and brackets; use index notation; use prime factorisation to find HCF and LCM G14 G16 G17 Derive and use formula for area of a triangle, parallelogram and trapezium; calculate the volume and surface area of cubes and cuboids; draw nets of 3D solids; convert between units for area, volume and capacity; convert between metric and imperial units	S2 S4 S6 Draw and interpret pie charts and scatter graphs; explain why a graph or chart could be misleading A1 A2 A3 A4 A5 A6 A7 Understand and simplify algebraic powers; Substitute values into formulae involving powers; Expand brackets; make and simplify algebraic expressions; Factorise expressions; solve simple equations using function machines; solve real-life problems using equations; solve equations using the balancing method.	A9 A10 A14 Draw, use and interpret conversion graphs; draw and interpret distance-time graphs and line graphs; interpret information from real life graphs; plot the graph of a function derived from a real-life problem N1 N2 N15 Round numbers to an appropriate degree of accuracy; order positive and negative numbers, including decimals; multiply decimals with up to two decimal places; multiply any number by 0.1 and 0.01; use ratios involving decimals; solve engineering problems using ratio and proportion; use unit ratios	G3 G4 Solve geometric problems using side and angle properties of quadrilaterals and triangles; solve problems using properties of angles in parallel and intersecting lines; identify corresponding angles; solve problems involving angles by setting up equations	N8 N10 Use the four operations with fractions and mixed numbers; Convert fractions to decimals; write one amount as a fraction of another Find the reciprocal of a number A9 A10 R10 R11 R14 Recognise when values are in direct proportion; plot the graphs of linear functions; Find midpoints of line segments; write the equations of straight-line graphs in the form $y = mx + c$; Identify and describe practical examples of direct proportion	N10 N12 R9 Recall and use equivalent fractions, decimals and percentages to compare proportion; recognise recurring and terminating decimals; order fractions by converting them to decimals or equivalent fractions; express one number as a percentage of another; work out a percentage increase or decrease using multipliers

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ASSESSMENT	Create a box using nets	Autumn term exam on units 1 – 4	Student paired teaching	Spring term exam on units 5 – 7	Research Poster – Famous Mathematicians	End of year Exam
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YEAR 8 HIGHER	AUTUMN 1	AUTUMN 2	SPRING 1	SPRING 2	SUMMER 1	SUMMER 2
CONTENT	**Unit 1: Factors and powers** Prime factor decomposition; laws of indices; STEM – powers of 10; calculating and estimating **Unit 2: Working with powers** Simplifying expressions; expanding and factorising expressions; substituting and solving	**Unit 3: 2D shapes and 3D solids** Plans and elevations; surface area of prisms; circumference of a circle; area of a circle; cylinders; Pythagoras' theorem **Unit 4: Real life graphs** Direct proportion; FINANCE – interpreting financial graphs; distance-time graphs; rates of change; misleading graphs	**Unit 5: Transformations** Reflection and translation; rotation; enlargement;2D shapes and 3D solids **Unit 6: Fractions, decimals and percentages** Recurring decimals; using percentages; percentage change; FINANCE – repeated percentage change	**Unit 7: Constructions and loci** Accurate drawings; constructing shapes; loci	**Unit 8: Probability** Comparing probabilities; mutually exclusive events; estimating probability; experimental probability; probability diagrams; tree diagrams **Unit 9: Scale drawings and measure** Maps and scales; bearings; scales and ratio; congruent and similar shapes; solving geometry problems	**Unit 10: Graphs** Plotting linear graphs; the gradient; equation of straight lines; parallel and perpendicular lines; inverse functions; STEM – non-linear graphs
SKILLS	**N2 N4 N6 N7 N14 N15** Use prime number decomposition to find HCF and LCM; use the laws of indices for multiplying and dividing; multiply and divide by any integer power of 10; calculate with powers; round to significant figures **A1 A3 A4 A6** Understand the meaning of an identity; write and simplify expression involving brackets and powers; factorise algebraic expressions; substitute integers into	**G6 G9 G11 G13 G16 G17 G20** Use 2D representations of 3D solids; Sketch nets of 3D solids; calculate the surface area of prisms; name different parts of a circle; calculate the circumference and area of a circle; calculate the radius or diameter when you know the circumference or area; calculate the volume and surface area of a cylinder; use Pythagoras' theorem in right-angled triangles. **A8 A9 A10 R10 R14 R15**	**R2 G4 G6 G7 G8 G24 G25** Describe and carry out reflections, translations, rotations and enlargements; enlarge shapes using fractional and negative scale factors; identify planes of reflection symmetry in 3D solids; find the perimeter and area of 2D shapes after enlargements; find the volume of 3D solids after enlargements. **N3 N10 N12 R9 R16** Recognise fractional equivalents to recurring decimals; change a	**G1 G2 G13** Construct triangles using a rule, protractor and compass; bisect a line using a ruler and compasses; construct perpendicular lines using a ruler and compass; bisect angles using a ruler and compasses; draw accurate diagrams to solve problems; draw a locus; use loci to solve problems.	**P1 P2 P3 P4 P5 P6 P7 P8 P9** Calculate and compare probabilities; find the probability of an event not happening; use relative frequency to estimate the probability of an event; estimate probability using data from an experiment; calculate expected outcomes; list all possible outcomes of one or two events in a sample space or Venn diagram; use tree diagrams to find the probabilities of two or more events.	**A8 A9 A10 A12 A14 A24 R10 R14** Plot straight-line graphs Find the y-intercept of a straight-line graph.; find the gradient of a straight-line graph; plot graphs using the gradient and y-intercept; find the equation of a straight-line graph; identify parallel and perpendicular lines; find the inverse of a linear function; plot and use non-linear graphs.

	expressions; construct and solve equations	Recognise when values are in direct proportion; Understand financial graphs; draw and interpret distance-time graphs; interpret curved graphs; interpret real-life graphs; understand when graphs are misleading.	recurring decimal into a fraction; calculate percentages; work out an original quantity before a percentage increase or decrease; calculate percentage change; calculate the effect of repeated percentage change.		R2 G2 G3 G4 G5 G6 G7 G15 Use and interpret scales drawings and maps; measure and draw bearings; use congruency to solve problems in triangles and quadrilaterals; use similarity to solve problems in 2D	
ASSESSMENT	Create a box using nets	Autumn term exam on units 1 – 4	Student paired teaching	Spring term exam on units 5 – 7	Research Poster – Famous Mathematicians	End of year Exam on units 1 – 10
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YEAR 9 FOUNDATION	AUTUMN 1	AUTUMN 2	SPRING 1	SPRING 2	SUMMER 1	SUMMER 2
CONTENT	**Unit 1: Number calculations** Adding and subtracting; multiplying; dividing; multiplying and dividing negative numbers; squares, cubes and roots; **Unit 2: Sequences and equations** Algebraic expressions; using and finding the nth term; solving equations	**Unit 3: Statistics** Planning a survey; statistics from tables; comparing data; tables' pie charts; scatter diagrams; FINANCE – misleading graphs; writing a report **Unit 4: Fractions, decimals and percentages** Equivalent proportions; recurring decimals; adding and subtracting fractions; multiplying and dividing fractions; comparing proportions; FINANCE – percentage change	**Unit 5: Geometry in 2D and 3D** Angles; maps and scales; constructions; 3D solids; MODELLING – Pythagoras' theorem **Unit 6: Algebraic and real-life graphs** Reading graphs; plotting graphs; distance-time graphs; midpoints; intercepts and gradients	**Unit 7: Multiplicative reasoning** STEM – using ratios; using proportions; problem solving with proportions; measures and conversions	**Unit 8: Algebraic and geometric formulae** Substituting into formulae; formulae in geometry; compound shapes; circles **Unit 9: Probability** Probability experiments; sample space diagrams; MODELLING – two-way tables; tree diagrams	**Unit 10: Polygons and transformations** Quadrilaterals; triangles; enlargement; congruent shapes
SKILLS	N2 N3 N4 N6 N7 N14 N15 Use the four operations with integers, decimals and negative numbers;	S1 S2 S4 S5 S6 Plan and collect data; find range and mean from a frequency table; use media, mean and range to	G1 G2 G3 G4 G14 G15 G16 Identify alternate and corresponding angles; calculate angles in	R1 R4 R5 R6 R7 R8 R10 R11 G14 Share a quantity into a given ratio; simplify ratios with different units; solve	A1 A2 A5 G9 G16 G17 Substitute into formulae and solve equations; use inverse operations in formulae; work out area	G3 G4 G5 G7 Identify properties of quadrilaterals; calculate missing angles and sides in triangles; translate,

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	find all positive and negative square roots; work with cubes and cube roots; calculate using squares, cubes, square roots, cube roots and brackets; use index notation and laws for positive powers; use prime factor decomposition to find HCF and LCM A1 A2 A4 A5 A23 A24 A25 Write algebraic expressions from descriptions; simplify expressions; use algebra to generate terms of a sequence; work out the nth term of a linear sequence; solve complex equations	compare data; use two-way tables; group discrete and continuous data; construct and interpret pie charts and scatter graphs N1 N2 N3 N8 N10 N11 N12 R9 Convert between and compare fractions, decimals and percentages; write recurring decimals as fractions; use the four operations with fractions and mixed numbers; use a calculator to work out percentages; work out percentage increase and decrease.	polygons; use scales in maps and plans; draw diagrams to scale; bisect a line segment and an angle; Use 2D representations of 3D solids; work out the volume of shapes made from cuboids; use Pythagoras' theorem to find missing lengths A8 A9 A10 A14 Read information from a graph; plot graphs of simple functions; draw and interpret distance-time graphs; find the midpoint of a line segment; work out the y-intercept and gradient of a line	problems using direct and inverse proportion; use graphs to solve proportion problems; use units of measurement to solve problems; convert between metric and imperial units	and perimeter of shapes made from triangles and rectangles; work out circumference and area of a circle; P1 P2 P3 P4 P6 P7 P8 Compare experimental and theoretical probabilities; list outcomes of 2 events in sample space diagrams; calculate estimates of probability from experiments or survey results; use experimental probabilities to predict outcomes; work out probabilities from tree diagrams	reflect, rotate and enlarge shapes on a coordinate axis; solve problems using congruent shapes; recognise when triangles are congruent
ASSESSMENT	Research Poster – Maths Careers	Autumn term exam on units 1 – 4	Design a Garden Project	Spring term exam on units 5 – 7	Student paired teaching	End of year Exam on units 1 – 10
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YEAR 9 INTERMEDIATE	AUTUMN 1	AUTUMN 2	SPRING 1	SPRING 2	SUMMER 1	SUMMER 2
CONTENT	**Unit 1: Indices and standard form** Indices; calculations and estimates; STEM – standard form **Unit 2: Expressions and formulae** Substituting into expressions; writing	**Unit 3: Dealing with data** Planning a survey; collecting data; calculating averages; display and analyse data; writing a report **Unit 4: Multiplicative reasoning**	**Unit 5: Constructions** Using scales; basic constructions; constructing triangles; Loci **Unit 6: Equations, inequalities and proportionality**	**Unit 7: Circles, Pythagoras and prisms** Circumference of a circle; area of a circle; Pythagoras' theorem; prisms and cylinders; STEM – errors and bounds	**Unit 8: Sequences and graphs** Nth term of arithmetic sequences; non-linear sequences; graphing rates of change; straight line graphs; simultaneous equations; graphs of quadratic functions; non-linear graphs	**Unit 10: Comparing shapes** Congruent and similar shapes; ratios in triangles; tangent, sine and cosine ratio

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	expressions from formulae; STEM – using formulae; rules of indices and brackets; expanding double brackets	Enlargement; negative and fractional scale factors; FINANCE – percentage change; rates of change	Solving and using equations; trial and improvement; using and solving inequalities; STEM – proportion; simultaneous equations		Unit 9: Probability Calculating probabilities; experimental probability; probability diagrams; independent events	
SKILLS	N3 N6 N7 N9 Calculate with indices, fractions and brackets; Use index laws to simplify expressions; estimate answers to calculations; write numbers using standard form; use standard form on a calculator; order numbers written in standard form. A2 A4 A5 Substitute integers into expressions involving powers and roots; write expressions and formulae; substitute into formulae; Rearrange formulae; simplify expressions involving brackets; use the rules for indices for multiplying and dividing; factorise an expression; expand double brackets and collect like terms.	S1 S2 S3 S4 S5 S6 Identify sources of primary and secondary data; design and use data collection sheets and tables; find the modal class of a set of grouped data, estimate the mean of grouped data; construct and use a line of best fit; identify and explain outliers; construct and use frequency polygons. N3 N15 R6 R9 R11 R12 G7 Enlarge 2D shapes using negative and fractional scale factors; find the centre of enlargement; find an original value using inverse operations; calculate percentage change; solve problems using compound measures, constant rates and related formulae; round numbers to a given number of significant figures	R2 G2 G3 G13 Use scales on maps and diagrams; draw diagrams to scale; construct accurate triangles; construct accurate nets of solids involving triangles; draw loci for the paths of points. A3 A6 A17 A18 A19 A20 A21 A22 Construct and solve equations with the unknown on both sides, including brackets, powers and fractions; convert a recurring decimal to a fraction; use trial and improvement methods to find solutions to equations; solve linear inequalities and represent solutions on a number line; set up and solve equations for direct proportion; solve simultaneous equations	G6 G9 G16 G17 G18 G20 N15 N16 Calculate the circumference and area of a circle; estimate calculations involving pi (π); use Pythagoras' theorem to find missing sides in right angled triangles; calculate the volume and surface area of prims including cylinders; find lower and upper bounds of measurements; calculate percentage error intervals	A9 A10 A11 A12 A13 A14 A18 A19 A23 A24 A25 Find and use the nth term of sequences; recognise and continue geometric and quadratic sequences; use distance-time graphs; interpret graphs showing rates of change; use y = mx + c to draw graphs and find parallel lines; solve simultaneous equations by drawing graphs; draw and interpret quadratic and cubic graphs P1 P2 P3 P4 P5 P6 P7 P8 P9 Calculate and compare probabilities from tables; use experimental probabilities to predict outcomes; list outcomes in Venn diagrams, tables and sample space diagrams; use tree diagrams; compare theoretical and experimental probabilities	G5 G6 G7 G19 G20 G21 G24 G25 Identify congruent and similar shapes; use congruent shapes to solve problems involving quadrilaterals and triangles; solve problems involving similar triangle; use the tangent, sine and cosine ratios to find missing sides in right angled triangles
ASSESSMENT	Research Poster – Maths Careers	Autumn term exam on units 1 – 4	Design a Garden Project	Spring term exam on units 5 – 7	Student paired teaching	End of year Exam on units 1 – 10

USEFUL RESOURCES / GUIDANCE:
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https://www.youtube.com/user/HEGARTYMATHS

Curriculum & Assessment Map

YEAR 9 HIGHER	AUTUMN 1	AUTUMN 2	SPRING 1	SPRING 2	SUMMER 1	SUMMER 2
CONTENT	**Unit 1: Powers and roots** Reciprocals; indices; standard form; STEM – calculating with standard form; fractional indices; surds **Unit 2: Quadratics** Sequences; expanding; factorising; solving quadratic equations	**Unit 3: Inequalities, equations and formulae** Inequalities; using index laws; solving equations; changing the subject; algebraic fractions **Unit 4: Collecting and analysing data** STEM – data collection; presenting and comparing data; estimating statistics; box plots; cumulative frequency graphs; histograms	**Unit 5: Multiplicative reasoning** Direct proportion; non-linear proportion; arcs and sectors of circles **Unit 6: Non-linear graphs** Graphs of quadratic functions; solving quadratic functions; graphs of cubic functions; STEM – graphs of reciprocal functions	**Unit 7: Accuracy and measures** Rates of change; density and pressure; upper and lower bounds; calculating with bounds; STEM – accurate measures in real life	**Unit 8: Graphical solutions** Simultaneous equations; equation of a straight line; graphical simultaneous equations; solving inequalities **Unit 9: Trigonometry** Tangent, sine and cosine ratio; using trigonometry to find missing angle; trigonometric graphs	**Unit 10: Mathematical reasoning** Explain, show and justify; MODELLING – real-life situations; proof
SKILLS	**N3 N6 N7 N8 N9 A4 A5** Find reciprocals of numbers; use negative indices; work out powers of fractions; write numbers in standard form; order numbers in standard form; calculate with standard form; calculate with fractional indices; use surds; identify rational and irrational numbers **A4 A23 A24 A25** Generate quadratic sequences; find the nth term of a quadratic sequence; expand double brackets; use quadratic identities; factorise quadratic expressions; solve quadratic equations	**A3 A5 A6 A17 A18 A19 A20 A21 A22** Solve linear inequalities and represent solutions on a number line; use index laws for powers of zero and negative numbers; construct and solve complex equations; rearrange formulae; change algebraic fractions to equivalents **S1 S2 S3 S4 S5 S6** Identify sources of primary and secondary data; understand how to reduce bias in sampling; draw and interpret stem and leaf diagrams; construct and interpret frequency polygons; estimate the mean and ranged from grouped frequency tables; draw and interpret box plots, cumulative frequency graphs and histograms	**R10 R13 G9 G17 G18** Set up and solve equations that show proportion; work out the length of and arc and area of a sector **A11 A12 A13 A14 R10** Identify quadratic curves and their features; use quadratic graphs to solve equations; identify cubic graphs and their features; identify and draw reciprocal graphs	**N15 N16 R1 R11 R14** Solve problems involving rates of change; convert units with compound measures; solve problems involving the compound measures of density, pressure and speed; find upper and lower bounds; calculate upper and lower bounds for areas, volumes and compound measures	**A3 A9 A14 A19** Solve simultaneous equations by elimination and substitution; rearrange equations of lines to find gradients and intercepts; find equations of lines between two points; solve simultaneous equations by drawing graphs; solve inequalities by graphing straight lines and quadratics **A12 G20 G21 G22 G23** Use the tangent, sine and cosine ratios to find missing lengths and angles in right angled triangles; plot and sketch graphs of trigonometric ratios	**A6 A14 G6 G25** Explain, show and justify a mathematical solution; draw graphs to solve mathematical problems; identify the difference between giving an example and providing a theory; understand how to use a mathematical proof; present a logical argument using algebra

Curriculum & Assessment Map

ASSESSMENT	Research Poster – Maths Careers	Autumn term exam on units 1 – 4	Design a Garden Project	Spring term exam on units 5 – 7	Student paired teaching	End of year Exam on units 1 – 10

USEFUL RESOURCES / GUIDANCE:
Pearson KS3 Progress Book Delta 3
https://vle.mathswatch.co.uk/vle/
https://corbettmaths.com/
https://www.youtube.com/user/HEGARTYMATHS

Curriculum & Assessment Map

EXAMINATION STAGE

YEAR 10 FOUNDATION	AUTUMN 1	AUTUMN 2	SPRING 1	SPRING 2	SUMMER 1	SUMMER 2
CONTENT	Unit 1: Number Unit 2: Algebra Unit 3: Graphs, Tables and Charts	Unit 3: Graphs, Tables and Charts Unit 4: Fractions and Percentages Unit 5: Equations, Inequalities and Sequences	Unit 6: Angles Unit 7: Averages and the Range Unit 8: Perimeter, Area and Volume 1	Unit 8: Perimeter, Area and Volume 1 Unit 9: Graphs Unit 10: Transformations	Unit 11: Ratio and Proportion Unit 12 : Right-angled Triangles Unit 13 : Probability	Unit 13: Probability Unit 14: Multiplicative Reasoning Unit 15: Constructions, Loci and Bearings
SKILLS	Unit 1: Calculations; Decimal Numbers; Place Value; Factors and Multiples; Squares, Cubes and Roots; Index Notation; Prime Factors. Unit 2: Algebraic Expressions, Substitution, Formulae, Expanding Brackets, Factorising, Using Expressions and Formulae. Unit 3: Frequency Tables, Two-way Tables, Representing Data, Time Series.	Unit 3: Stem and Leaf Diagrams, Pie Charts, Scatter Graphs, Line of Best Fit. Unit 4: Working with fractions, Operations with Fractions, Multiplying Fractions, Dividing Fractions, Fractions and Decimals, Fractions and Percentages, Calculating Percentages. Unit 5: Solving Equations, Solving Equations with Brackets, Inequalities, Using Formulae, Generating Sequences, Using the Nth Term of a Sequence	Unit 6: Properties of Shapes, Angles in Parallel Lines, Angles in Triangles, Exterior and Interior Angles, Geometrical Problems. Unit 7: Mean and Range; Mode, Median and Range; Types of Average; Estimating the Mean; Sampling. Unit 8: Rectangles, Parallelograms and Triangles; Trapezia and Changing Units; Area of Compound Shapes.	Unit 8: Surface Area of 3D Solids, Volume of Prisms, More Volume and Surface Area. Unit 9: Coordinates, Linear Graphs, Gradient, y=mx+c, Real-life Graphs, Distance-time Graphs, More Real-life Graphs. Unit 10: Translation, Reflection, Rotation, Enlargement, Describing Enlargements, Combining Transformations.	Unit 11: Writing Ratios, Using Ratios 1, Ratios and Measures, Using Ratios 2, Comparing using Ratios, Using Proportion, Proportion and Graphs, Proportion Problems. Unit 12: Pythagoras' Theorem, The Sine Ratio, The Cosine Ratio, The Tangent Ratio, Finding Lengths and Angles using Trigonometry. Unit 13: Calculating Probability, Two Events, Experimental Probability.	Unit 13: Venn Diagrams, Tree Diagrams & More Tree Diagrams. Unit 14: Percentages; Growth and Decay; Compound Measures; Distance, Speed and Time; Direct and Inverse Proportion. Unit 15: 3D Solids, Plans and Elevations, Accurate Drawings 1, , Scale Drawings and Maps, Accurate Drawings 2, Constructions, Loci and regions, Bearings.
ASSESSMENT	Unit Tests 1 & 2 Exam Practice Assessment	Unit Tests 3, 4 & 5 Exam Practice Assessment	Unit Tests 6 & 7 Exam Practice Assessment	Unit Tests 8, 9 & 10 Exam Practice Assessment	Unit Tests 11 & 12 Exam Practice Assessment	Unit Tests 13, 14 & 15 Exam Practice Assessment
USEFUL RESOURCES / GUIDANCE: https://vle.mathswatch.co.uk/vle/ https://corbettmaths.com/contents/ https://www.mathsgenie.co.uk/gcse.html https://senecalearning.com/en-GB/						

Curriculum & Assessment Map

YEAR 10 HIGHER	AUTUMN 1	AUTUMN 2	SPRING 1	SPRING 2	SUMMER 1	SUMMER 2
CONTENT	Unit 1: Number Unit 2: Algebra Unit 3: Interpreting and Representing Data	Unit 3: Interpreting and Representing Data Unit 4: Fractions, Ratio and Percentages Unit 5: Angles and Trigonometry	Unit 6: Graphs Unit 7: Area and Volume Unit 8: Transformations and Constructions	Unit 8: Transformations and Constructions Unit 9: Equations and Inequalities Unit 10: Probability	Unit 11: Multiplicative Reasoning Unit 12 : Similarity and Congruence Unit 13 : More Trigonometry	Unit 13: More Trigonometry Unit 14: Further Statistics Unit 15: Equations and Graphs
SKILLS	Unit 1: Number Problems and reasoning; Place Value and Estimating; HCF and LCM; Calculating with powers; Zero, Negative and Fractional Indices; Powers of 10 and Standard Form; Surds Unit 2: Algebraic Indices, Expanding and Factorising, Equations, Formulae, Linear Sequences, Non-Linear Sequences, More Expanding and Factorising. Unit 3: Statistical Diagrams 1, Time Series, Scatter Graphs.	Unit 3: Line of Best Fit, Averages and Range, Statistical Diagrams 2. Unit 4: Fractions; Ratios; Ratio and Proportion; Percentages; Fractions, Decimals and Percentages. Unit 5: Angles Properties of Triangles and Quadrilaterals, Interior Angles of a Polygon, Exterior Angles of a Polygon, Pythagoras' Theorem, Trigonometry.	Unit 6: Linear Graphs, More Linear Graphs, Graphing Rates of Change, Real-life Graphs, Line Segments, Quadratic Graphs, Cubic and Reciprocal Graphs, More Graphs. Unit 7: Perimeter and Area, Units and Accuracy, Prisms, Circles, Sectors of Circles, Cylinders and Spheres, Pyramids and Cones. Unit 8: 3D Solids, Reflection and Rotation, Enlargement, Transformations and Combinations of Transformations.	Unit 8: Bearings and Scale Drawings, Constructions, Loci. Unit 9: Solving Quadratic Equations, Completing the Square, Solving Simple Simultaneous Equations, More Simultaneous Equations, Solving Linear and Quadratic Simultaneous Equations, Solving Linear Inequalities. Unit 10: Combined Events, Mutually Exclusive Events, Experimental Probability, Independent Events and Tree Diagrams, Conditional Probability, Venn Diagrams and Set Notation.	Unit 11: Growth and Decay, Compound Measures, More Compound Measures, Ratio and Proportion. Unit 12: Congruence, Geometric Proof and Congruence, Similarity, More Similarity, Similarity in 3D Solids. Unit 13: Accuracy, Graph of the Sine Functions, Graph of the Cosine Function, The Tangent Function.	Unit 13: Calculating Areas and the Sine Rule, The Cosine Rule and 2D Trigonometric Problems, Solving Problems in 3D, Transforming Trigonometric Graphs. Unit 14: Sampling, Cumulative Frequency, Box Plots, Drawing Histograms, Interpreting Histograms, Comparing and Describing Populations. Unit 15: Solving Simultaneous Equations Graphically, Representing Inequalities Graphically, Graphs of Quadratic Functions, Solving Quadratic Equations Graphically, Graphs of Cubic Functions
ASSESSMENT	Unit Tests 1 & 2 Exam Practice Assessment	Unit Tests 3, 4 & 5 Exam Practice Assessment	Unit Tests 6 & 7 Exam Practice Assessment	Unit Tests 8, 9 & 10 Exam Practice Assessment	Unit Tests 11 & 12 Exam Practice Assessment	Unit Tests 13, 14 & 15 Exam Practice Assessment
USEFUL RESOURCES / GUIDANCE: https://vle.mathswatch.co.uk/vle/ https://corbettmaths.com/contents/ https://www.mathsgenie.co.uk/gcse.html https://senecalearning.com/en-GB/						

Curriculum & Assessment Map

YEAR 11 FOUNDATION w/ FUNCTIONAL SKILLS	AUTUMN 1	AUTUMN 2	SPRING 1	SPRING 2	SUMMER 1	SUMMER 2
CONTENT	Unit 16: Quadratic Equations and Graphs Unit 17: Perimeter, Area and Volume 2 Unit 18: Fractions, Indices and Standard Form	Unit 18: Fractions, Indices and Standard Form Unit 19: Congruence, Similarity and Vectors Unit 20: More Algebra	Functional Skills Level 1 Directed Practice Teacher Directed GCSE Revision	Functional Skills Level 2 Directed Practice Teacher Directed GCSE Revision	Functional Skills Level 2 Directed Practice Teacher Directed GCSE Revision	
SKILLS	Unit 16: Expanding Double Brackets, Plotting Quadratic Graphs, Using Quadratic Graphs, Factorising Quadratic Expressions, Solving Quadratic Equations. Unit 17: Circumference of a Circle, Area of a Circle, Semicircles and Sectors, Composite 2D Shapes and Cylinders, Pyramids and Cones, Spheres and Composite Solids. Unit 18: Multiplying and Dividing Fractions, Index Laws.	Unit 18: Writing Large Numbers in Standard Form, Writing Small Numbers in Standard Form, Calculating with Standard Form. Unit 19: Similarity and Enlargement, More Similarity, Using Similarity, Congruence, Vectors, Vector Arithmetic. Unit 20: Graphs of Cubic and Reciprocal Functions, Non-Linear Graphs, Solving Simultaneous Equations Graphically, Solving Simultaneous Equations Algebraically, Rearranging Formulae, Proof.	**Functional Skills Level 1 Directed Practice** Exam focused practice and review with teacher coordinated revision. **Teacher Directed GCSE Revision** Practice Set 1 Practice Set 2 Practice Set 3 Practice Set 4 Practice Set 5 Accompanying past paper practice directed by teacher.	**Functional Skills Level 2 Directed Practice** Exam focused practice and review with teacher coordinated revision. **Teacher Directed GCSE Revision** Practice Set 6 Practice Set 7 Practice Set 8 Practice Set 9 Practice Set 10 Accompanying past paper practice directed by teacher.	**Functional Skills Level 2 Directed Practice** Exam focused practice and review with teacher coordinated revision. **Teacher Directed GCSE Revision** Practice Set 11 Practice Set 12 Practice Set 13 Accompanying past paper practice directed by teacher.	
ASSESSMENT	Unit Tests 16 & 17 Exam Practice Assessment	Unit Tests 18, 19 & 20 Exam Practice Assessment	Exam Practice Assessment	Exam Practice Assessment	Exam Practice Assessment	
USEFUL RESOURCES / GUIDANCE: https://vle.mathswatch.co.uk/vle/ https://corbettmaths.com/contents/ https://www.mathsgenie.co.uk/gcse.html https://senecalearning.com/en-GB/						

Curriculum & Assessment Map

YEAR 11 FOUNDATION	AUTUMN 1	AUTUMN 2	SPRING 1	SPRING 2	SUMMER 1	SUMMER 2
CONTENT	Unit 16: Quadratic Equations and Graphs Unit 17: Perimeter, Area and Volume 2 Unit 18: Fractions, Indices and Standard Form	Unit 18: Fractions, Indices and Standard Form Unit 19: Congruence, Similarity and Vectors Unit 20: More Algebra	Teacher Directed GCSE Revision	Teacher Directed GCSE Revision	Teacher Directed GCSE Revision	
SKILLS	Unit 16: Expanding Double Brackets, Plotting Quadratic Graphs, Using Quadratic Graphs, Factorising Quadratic Expressions, Solving Quadratic Equations. Unit 17: Circumference of a Circle, Area of a Circle, Semicircles and Sectors, Composite 2D Shapes and Cylinders, Pyramids and Cones, Spheres and Composite Solids. Unit 18: Multiplying and Dividing Fractions, Index Laws.	Unit 18: Writing Large Numbers in Standard Form, Writing Small Numbers in Standard Form, Calculating with Standard Form. Unit 19: Similarity and Enlargement, More Similarity, Using Similarity, Congruence, Vectors, Vector Arithmetic. Unit 20: Graphs of Cubic and Reciprocal Functions, Non-Linear Graphs, Solving Simultaneous Equations Graphically, Solving Simultaneous Equations Algebraically, Rearranging Formulae, Proof.	**Teacher Directed GCSE Revision** Practice Set 1 Practice Set 2 Practice Set 3 Practice Set 4 Practice Set 5 Accompanying past paper practice directed by teacher.	**Teacher Directed GCSE Revision** Practice Set 6 Practice Set 7 Practice Set 8 Practice Set 9 Practice Set 10 Accompanying past paper practice directed by teacher.	**Teacher Directed GCSE Revision** Practice Set 11 Practice Set 12 Practice Set 13 Accompanying past paper practice directed by teacher.	
ASSESSMENT	Unit Tests 16 & 17 Exam Practice Assessment	Unit Tests 18, 19 & 20 Exam Practice Assessment	Exam Practice Assessment	Exam Practice Assessment	Exam Practice Assessment	
USEFUL RESOURCES / GUIDANCE: https://vle.mathswatch.co.uk/vle/ https://corbettmaths.com/contents/ https://www.mathsgenie.co.uk/gcse.html https://senecalearning.com/en-GB/						

Curriculum & Assessment Map

YEAR 11 HIGHER	AUTUMN 1	AUTUMN 2	SPRING 1	SPRING 2	SUMMER 1	SUMMER 2
CONTENT	Unit 16: Circle Theorems Unit 17: More Algebra Unit 18: Vectors and Geometric Proof	Unit 18: Vectors and Geometric Proof Unit 19: Proportion and Graphs	Teacher Directed GCSE Revision	Teacher Directed GCSE Revision	Teacher Directed GCSE Revision	
SKILLS	Unit 16: Radii and Chords, Tangents, Angles in Circles, Applying Circle Theorems. Unit 17: Rearranging Formulae, Algebraic Fractions, Simplifying Algebraic Fractions, More Algebraic Fractions, Surds, Solving Algebraic Fraction Equations, Functions, Proof. Unit 18: Vectors and Vector Notation, Vector Arithmetic, More Vector Arithmetic	Unit 18: Parallel Vectors and Colinear Points, Solving Geometric Problems. Unit 19: Direct Proportion, More Direct Proportion, Inverse Proportion, Exponential Functions, Nin-Linear Graphs, Translating Graphs of Functions, Reflecting and Stretching Graphs of Functions.	Teacher Directed GCSE Revision Practice Set 1 Practice Set 2 Practice Set 3 Practice Set 4 Practice Set 5 Accompanying past paper practice directed by teacher.	Teacher Directed GCSE Revision Practice Set 6 Practice Set 7 Practice Set 8 Practice Set 9 Practice Set 10 Accompanying past paper practice directed by teacher.	Teacher Directed GCSE Revision Practice Set 11 Practice Set 12 Practice Set 13 Accompanying past paper practice directed by teacher.	
ASSESSMENT	Unit Tests 16 & 17 Exam Practice Assessment	Unit Tests 18 & 19 Exam Practice Assessment	Exam Practice Assessment	Exam Practice Assessment	Exam Practice Assessment	
USEFUL RESOURCES / GUIDANCE: https://vle.mathswatch.co.uk/vle/ https://corbettmaths.com/contents/ https://www.mathsgenie.co.uk/gcse.html https://senecalearning.com/en-GB/						

Curriculum & Assessment Map

YEAR 11 HIGHER w/ FURTHER MATHS	AUTUMN 1	AUTUMN 2	SPRING 1	SPRING 2	SUMMER 1	SUMMER 2
CONTENT	Unit 16: Circle Theorems Unit 17: More Algebra Unit 18: Vectors and Geometric Proof	Unit 18: Vectors and Geometric Proof Unit 19: Proportion and Graphs FM 1: Functions FM 2: Equations of Straight Lines and Circles FM 3: Simultaneous Equations	FM 4: Basic Algebra FM 5: Introductory Calculus FM 6: Matrix Multiplication FM 7: Trigonometry and Pythagoras Teacher directed GCSE revision.	FM 8: Calculus Applications FM 9: Sequences FM 10: Factor Theorem FM 11: Matrix Transformations Teacher directed GCSE revision.	FM 11: Further Trigonometry Teacher directed GCSE revision.	
SKILLS	Unit 16: Radii and Chords, Tangents, Angles in Circles, Applying Circle Theorems. Unit 17: Rearranging Formulae, Algebraic Fractions, Simplifying Algebraic Fractions, More Algebraic Fractions, Surds, Solving Algebraic Fraction Equations, Functions, Proof. Unit 18: Vectors and Vector Notation, Vector Arithmetic, More Vector Arithmetic	Unit 18: Parallel Vectors and Colinear Points, Solving Geometric Problems. Unit 19: Direct Proportion, More Direct Proportion, Inverse Proportion, Exponential Functions, Nin-Linear Graphs, Translating Graphs of Functions, Reflecting and Stretching Graphs of Functions. FM 1: Work out the Domain and Range of a Function. FM 2: Equation of a Circle, Simultaneous Equations with Circles, Circle Theorems. FM 3: Solving Simultaneous Equations with 3 variables.	FM 4: Pascal's Triangle, Expand and Simplify a Product of Binomials, Find a particular Coefficient or Term in a Product of Binomials. FM 5: Understand and use the notation dy/dx, Understand the Concept of Gradient and Rate of Change, Find the Gradient at a Point, Find the Tangent Equation at a Point, Find dy/dx. FM 6: Multiply Matrices by a Scalar, Multiply Matrices by other Matrices (up to 2x2), Understand the Identity Matrix. FM 7: Solve Angle Problems Involving Planes. Teacher Directed GCSE Revision: Accompanying past paper practice directed by teacher.	FM 8: Work out the Equation of a Tangent & Normal to a Curve, Find Stationary Points, Increasing or Decreasing Functions, The Second Derivative, Maxima and Minima, Natures of Stationary Points, Modelling. FM 9: Limiting Values of Sequences. FM 10: Understand the Factor Theorem to Factorise Polynomials, Find Rational Roots, Show Factors of Polynomials, Solve Polynomials. FM 11: Find the Image of any Unit Square Vertex under a Transformation, Matrix Operators. Teacher Directed GCSE Revision: Accompanying past paper practice directed by teacher.	FM 11: Use trigonometric Identities in Simplification, Proof and Solving, Work out All Solutions in a Given Interval, Use Factorisation with Trigonometry. Teacher Directed GCSE Revision: Accompanying past paper practice directed by teacher.	
ASSESSMENT	Unit Tests 16 & 17	Unit Tests 18 & 19	Exam Practice Assessment	Exam Practice Assessment	Exam Practice Assessment	

	Exam Practice Assessment	Exam Practice Assessment				

USEFUL RESOURCES / GUIDANCE:
https://vle.mathswatch.co.uk/vle/
https://corbettmaths.com/contents/
https://www.mathsgenie.co.uk/gcse.html
https://senecalearning.com/en-GB/
http://www.mrbartonmaths.com/students/aqa-level-2-certificate-in-further-mathematics/

ADVANCED STAGE: MATHEMATICS

YEAR 12	AUTUMN 1	AUTUMN 2	SPRING 1	SPRING 2	SUMMER 1	SUMMER 2
CONTENT	Pure Bk1; Chap 1-5 Algebraic Expressions; Quadratics; Equations & Inequalities; Graphs & Transformations; Straight Line Graphs App Bk 1; Chap 1-3 Data Collection; Measures of Location & Spread Representation of Data	Pure Bk1; Chap 6-9, 11 Circles; Algebraic Methods Binomial Expansion; Trigonometric Ratio; Vectors App Bk 1; Chap 3-6 Correlation; Probability Statistical Distribution	Pure Bk1; Chap 10-12,14 Trigonometric Identities & Equations; Differentiation Exponential & Logarithms App Bk 1; Chap 7,9 Hypothesis Testing; Modelling in Mechanics Constant Acceleration	Pure Bk1; Chap 12-14 Integration App Bk 1; Chap 9-10 Motion under gravity; Variable Acceleration; Forces & Motion	Review Pure Bk1; App Bk 1	Pure Bk2; Chap 1-4 Algebraic Methods Functions; Sequence& Series; Binomial Expansion
SKILLS	Manipulating Expressions and Equations; Analysing data	Manipulating Trig and Binomial; Statistical Analysis	Recall and Manipulate Identities and facts; Apply Statistical Reasoning	Manipulate Calculus; Apply Mechanical Reasoning	Practice Exam Paper Technique Time Management	Further Manipulating Expressions
ASSESSMENT	September Bridging Test	November Pure1 Reduced Chap 1-7	January Resit from November	February App 1 Reduced Chap 1-7	April Mock P1, P2	Exam

USEFUL RESOURCES / GUIDANCE:
Students are expected to do 3 hours per subject teacher per week of independent work – summarising class notes, past exam paper practice. End of Chapter and Review exercises which are then tested as feedback questions in class for understanding. RAG sheets for each textbook.
Past Paper Practice https://www.examsolutions.net/a-level-maths/edexcel/
PowerPoints of chapters https://www.drfrostmaths.com/sow.php?year=A%20Level%202017&term=Main
Support Material https://sites.google.com/site/tlmaths314/home/a-level-maths-2017/full-a-level

Curriculum & Assessment Map

YEAR 13	AUTUMN 1	AUTUMN 2	SPRING 1	SPRING 2	SUMMER 1	SUMMER 2
CONTENT	Pure Bk2; Chap 1-6, 10,12 Algebraic Methods; Sequence & Series; Radians; Binomial Expansion; Trigonometric Functions; Numerical Methods; Vectors	Pure Bk2; Chap 7-9, 11 Differentiation; Trigonometry and Modelling; Integration, Parametric Equations	Pure Bk2; Chap 11 Parametric Equations App Bk2; Chap 1,2 4,5,6 Regression, Correlation; Hypothesis Testing; Conditional Probability; Moments Forces & Friction	App Bk2; Chap 2,3 6-8 Conditional Probability; Normal Distribution; Projectiles; Application of Forces; Further Kinematics	Review Pure Bk2; App Bk2	
SKILLS	Applying Algebraic Methods in Problems	Manipulating Trig Complex Differentiation and Integration	Apply Probability in real world scenarios, Application of Forces and Moments	Further Application of Forces	Practice Exam Paper Technique Time management	
ASSESSMENT	September Pure 2 Reduced Chapters 1-4 Test	November Pure2 Reduced Chapters 1-7	January Resit from November	Feb App 2 Reduced Chapters 1, 2, 4-6 Test	Apr Mock P1, P2, P3	

USEFUL RESOURCES / GUIDANCE:

Students are expected to do 3 hours per subject teacher per week of independent work – summarising class notes, past exam paper practice. End of Chapter and Review exercises which are then tested as feedback questions in class for understanding. RAG sheets for each textbook.

Past Paper Practice https://www.examsolutions.net/a-level-maths/edexcel/

PowerPoints of chapters https://www.drfrostmaths.com/sow.php?year=A%20Level%202017&term=Main

Support Material https://sites.google.com/site/tlmaths314/home/a-level-maths-2017/full-a-level

ADVANCED STAGE: FURTHER MATHEMATICS

YEAR 12	AUTUMN 1	AUTUMN 2	SPRING 1	SPRING 2	SUMMER 1	SUMMER 2
CONTENT	Core Pure Bk1; Chap 1-6 Complex Numbers; Argand Diagram; Series; Root of Polynomials; Volume of Revolution; Matrices	Core Pure Bk1; Chap 5 -9 Volume of Revolution; Matrices, Vectors, Proof by Induction, Transformation	FMech 1 Chap 1-2 Momentum and Impulse; Work Energy and Power FStats 1 Chap 1-2 Discrete Random Variables; Poisson Distribution	FMech 1 Chap 2, 4 Work Energy and Power; Elastic Collision FStats 1 Chap 4,6 Hypothesis Testing Chi-Squared Tests	Review Core Pure Bk1; Optional Applied Modules FMech 1 ; FStats 1	Core Bk2; Chap 1-4 Complex Numbers; Series; Methods in Calculus; Volume of Revolution
SKILLS	Applying Complex Algebraic Methods in Problems	Manipulating Complex Matrices Problems	Applying Mechanical Reasoning; Apply statistics in real world scenarios	Further Mechanical Reasoning; Apply statistics in real world scenarios	Practice Exam Paper Technique Time Management	Practice Exam Paper Technique Time Management
ASSESSMENT	September Bridging Test	November Core Pure1 Reduced Chapters 1-6	January Resit from Nov	February Optional Applied Modules FMech 1 Chap 1-2 FStats 1 Chap 1-2	April Mock P1, P2	Exam

USEFUL RESOURCES / GUIDANCE:

Students are expected to do 3 hours per subject teacher per week of independent work – summarising class notes, past exam paper practice, End of Chapter and Review exercises which are then tested as feedback questions in class for understanding. RAG sheets for each textbook.

Past Paper Practice https://www.examsolutions.net/a-level-maths/edexcel/

PowerPoints of chapters https://www.drfrostmaths.com/sow.php?year=A%20Level%202017&term=Main

Support Material https://sites.google.com/site/tlmaths314/home/a-level-maths-2017/full-a-level / https://sites.google.com/site/tlmaths314/home/a-level-further-maths-2017

Curriculum & Assessment Map

YEAR 13	AUTUMN 1	AUTUMN 2	SPRING 1	SPRING 2	SUMMER 1	SUMMER 2
CONTENT	CoreBk2; Chap 1-9 Complex Numbers; Series; Methods in Calculus; Volume of Revolution; Polar Coordinates; Hyperbolic Functions; Methods in differential equations; Modelling with differential equations	FMech 1 Chap 1,3,5 Momentum and Impulse; Elastic Strings and Springs; Elastic Collision in Two Dimensions Work Energy and Power FPure 1 Chap 1,4,5,6 Vectors; Inequalities; t-formula; Taylors Series	FMech 1 Chap 2,4,5 Elastic Collision in Two Dimensions Elastic Collisions Work Energy and Power FPure 1 Chap 3,7,8 Conic Sections2; Conic Sections3; Methods in Calculus; Simpsons' Rule	FPure 1 Chap 9 Reducible Differential Equations	Review Core Bk2; Optional Applied Modules FMech 1 ; FPure 1	
SKILLS	Applying Method of Calculations and Modelling	Application of Motion in Strings and Springs	Further Mechanical Reasoning	Further Manipulation of Calculus	Practice Exam Paper Technique Time management	
ASSESSMENT	September Core2 Reduced Chap 1-4 Test	November Core Pure2 Full Chapters 1-8	Jan Resit from Nov	February FMech 1 Full Chapters 1-5	April Mock P1, P2, P3, P4	

USEFUL RESOURCES / GUIDANCE:

Students are expected to do 3 hours per subject teacher per week of independent work – summarising class notes, past exam paper practice, End of Chapter and Review exercises which are then tested as feedback questions in class for understanding. RAG sheets for each textbook.

Past Paper Practice https://www.examsolutions.net/a-level-maths/edexcel/

PowerPoints of chapters https://www.drfrostmaths.com/sow.php?year=A%20Level%202017&term=Main

Support Material https://sites.google.com/site/tlmaths314/home/a-level-maths-2017/full-a-level / https://sites.google.com/site/tlmaths314/home/a-level-further-maths-2017