MATHEMATICS

CURRICULUM OVERVIEW - YEAR 11 (2023/24)

Maximise our potential, to be the best we can be, every day.

Extra information specific to the Year 11:

Y11 is a more bespoke year based on input from mock examinations, end of Y10 exam and any other interim information.
Within the Y11 curriculum we teach all the content below to those students who are studying towards higher tier.
Those students who are more suited to foundation level will spend year Y11 studying content that is relevant to them and may not cover all the higher steps as this would be of detriment to them. Our policy is to go as high as possible for as long as possible, but we make educated decisions to adapt our SOL both in order and sequencing to suit our pupils.

Y11 Autumn Term

Year	Topic	Key Words	Key Skills & Key Knowledge (Small Steps)
11	Gradients & lines (2 weeks)	**curve (graph)** direct proportion equation function gradient graph parallel **perpendicular** positive (gradient) real-life (graph) rearrange steep <u>Word of the Block: Perpendicular</u> • Etymology Discussed • Frayer Model Used	Equations of lines parallel to the axis (R) Plot straight line graphs (R) Interpret $y = mx + c$ (R) Find the equation of a straight line from a graph (1) (R) Find the equation of a straight line from a graph (2) Equation of a straight-line graph given one point and gradient Equation of a straight-line graph given two points Determine whether a point is on a line Solve linear simultaneous equations graphically (R) **Recognise when straight lines are perpendicular** (H) **Find the equations of perpendicular lines** (H)

Cultural Capital	Assessment	NC Reference and Links
Literacy Task – Famous Mathematicians Pythagoras Teachers ensure that resources reference a wide range of scenarios reflecting modern society.	**1 x Recap and Review Assessment** *All students to complete this assessment, then the scores are to be kept secure.* *Optional extra assessment to support lower attainers.* ***Think Pink Go Green Feedback***	National Curriculum content covered includes: move freely between different numerical, algebraic, graphical and diagrammatic representations plot and interpret graphs interpret the gradient of a straight line graph as a rate of change use the form to identify parallel **{and perpendicular}** lines; find the equation of the line through two given points, or through one point with a given gradient

	This contains an analysis or strengths, weaknesses, and improvements to be made.	find approximate solutions to two simultaneous equations in two variables (linear/linear **{or linear/quadratic })** **using** a graph

Year	Topic	Key Words	Key Skills & Key Knowledge (Small Steps)
11	Non-linear graphs (2 weeks)	**curve (graph)** direct proportion equation function gradient graph parallel **perpendicular** positive (gradient) real-life (graph) rearrange steep <u>Word of the Block: Non-linear</u> • Etymology Discussed • Frayer Model Used	Plot and read from quadratic graphs Plot and read from cubic graphs Plot and read from reciprocal graphs Recognise graph shapes Identify and interpret roots and intercepts of quadratics **Understand and use exponential graphs** (H) **Find and use the equation of a circle centre (0, 0)** (H) **Find the equation of the tangent to any curve** (H)

Cultural Capital	Assessment	NC Reference and Links
Black History Month	**1 x Recap and Review Assessment** *All students to complete this assessment, then the scores are to be kept secure.* *Optional extra assessment to support lower attainers.* ***Think Pink Go Green Feedback*** *This contains an analysis or strengths, weaknesses, and improvements to be made.*	National Curriculum content covered includes: move freely between different numerical, algebraic, graphical and diagrammatic representations recognise, sketch and interpret graphs of linear functions, quadratic functions, simple cubic functions, the reciprocal function 1 **{the exponential function }** plot and interpret graphs (including reciprocal graphs **{and exponential graphs}**) find approximate solutions using a graph identify and interpret roots, intercepts of quadratic functions graphically **{recognise and use the equation of a circle with centre at the origin ;}**

Year	Topic	Key Words	Key Skills & Key Knowledge (Small Steps)
11	Using graphs (2 weeks)	**curve (graph)** direct proportion equation function gradient graph parallel **perpendicular** positive (gradient) real-life (graph) rearrange steep <u>Word of the Block: Curve</u> • Etymology Discussed • Frayer Model Used	Reflect shapes in given lines (R) Construct and interpret conversion graphs (R) Construct and interpret other real-life straight line graphs (R) Interpret distance/time graphs Construct distance/time graphs Construct and interpret speed/time graphs Construct and interpret piece-wise graphs Recognise and interpret graphs that illustrate direct and inverse proportion Find approximate solutions to equations using graphs **Estimate the area under a curve** (H)

Cultural Capital	Assessment	NC Reference and Links
<u>Maths Careers</u> Guided reading comprehension task Illuminating the role of a Lawyer.	**1 x Recap and Review Assessment** *All students to complete this assessment, then the scores are to be kept secure.* *Optional extra assessment to support lower attainers.* ***Think Pink Go Green Feedback***	National Curriculum content covered includes: plot and interpret graphs of non - standard functions in real contexts, to find approximate solutions to problems such as simple kinematic problems involving distance, speed and acceleration **{interpret the gradient at a point on a curve as the instantaneous rate of change; apply the concepts of instantaneous and average rate of change (gradients of tangents and chords) in numerical, algebraic and graphical contexts}** **{calculate or estimate gradients of graphs and areas under graphs (including quadratic and other non - linear graphs), and interpret results in**

	This contains an analysis or strengths, weaknesses, and improvements to be made.	**cases such as distance - time graphs, velocity - time graphs and graphs in financial contexts}**

Year	Topic	Key Words	Key Skills & Key Knowledge (Small Steps)
11	Expanding & factorising (2 weeks)	coefficient common directed equivalent expand expression factor product **quadratic** satisfy side simplify solution solution set <u>Word of the Block: Expression</u> • Etymology Discussed • Frayer Model Used	Expand and factorise with a single bracket (R) Expand binomials (R) Factorise quadratic expressions **Factorise complex quadratic expressions** (H) Solve equations equal to 0 Solve quadratic equations by factorisation **Solve complex quadratic expressions by factorisation** (H) **Complete the square** (H) **Solve quadratic equations using the quadratic formula** (H)

Cultural Capital	Assessment	NC Reference and Links
Literacy Task – Engineering Great Pyramid of Giza Teachers ensure that resources reference a wide range of scenarios reflecting modern society.	**1 x Recap and Review Assessment** *All students to complete this assessment, then the scores are to be kept secure.*	National Curriculum content covered includes: know the difference between an equation and an identity; argue mathematically to show algebraic expressions are equivalent, and use algebra to support and construct arguments **{and proofs}**

	Optional extra assessment to support lower attainers. ***Think Pink Go Green Feedback*** *This contains an analysis or strengths, weaknesses, and improvements to be made.*	simplify and manipulate algebraic expressions by: factorising quadratic expressions of the form , including the difference of two squares; **{factorising quadratic expressions of the form }** know the difference between an equation and an identity; solve quadratic equations **{including those that require rearrangement}** algebraically by factorising, **{by completing the square and by using the quadratic formula}** identify and interpret roots; deduce roots algebraically **{and turning points by completing the square}** solve two simultaneous equations in two variables (linear/linear **{or linear/quadratic}**) algebraically; find approximate solutions using a graph

Year	Topic	Key Words	Key Skills & Key Knowledge (Small Steps)
11	Changing the subject (2 weeks)	coefficient common directed equivalent expand expression factor product **quadratic** satisfy side simplify solution solution set <u>Word of the Block: Solutio</u> • Etymology Discussed • Frayer Model Used	Solve linear equations (R) Solve inequalities (R) Form and solve equations and inequalities in the context of shape Change the subject of a simple formula (R) Change the subject of a known formula Change the subject of a complex formula **Change the subject where the subject appears more than once** (H) **Solve equations by iteration** (H)
Cultural Capital		**Assessment**	**NC Reference and Links**

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Teachers ensure that resources reference a wide range of scenarios reflecting modern society.	**1 x Recap and Review Assessment** *All students to complete this assessment, then the scores are to be kept secure.* *Optional extra assessment to support lower attainers.* ***Think Pink Go Green Feedback*** *This contains an analysis or strengths, weaknesses, and improvements to be made.*	National Curriculum content covered includes: solve linear inequalities in one variable know the difference between an equation and an identity; argue mathematically to show algebraic expressions are equivalent, and use algebra to support and construct arguments **{and proofs}** translate simple situations or procedures into algebraic expressions or formulae; derive an equation (or two simultaneous equations), solve the equation(s) and interpret the solution **{find approximate solutions to equations numerically using iteration}**

Year	Topic	Key Words	Key Skills & Key Knowledge (Small Steps)

11	Functions (2 weeks)	**curve (graph)** direct proportion equation function gradient graph parallel **perpendicular** positive (gradient) real-life (graph) rearrange steep <u>Word of the Block: Function</u> • Etymology Discussed • Frayer Model Used	Use function machines (R) Substitution into expressions and formulae (R) Use function notation **Work with composite functions** (H) **Work with inverse functions** (H) Graphs of quadratic functions **Solve quadratic inequalities** (H) Understand and use trigonometric functions (R)

Cultural Capital	Assessment	NC Reference and Links
Teachers ensure that resources reference a wide range of scenarios reflecting modern society.	**1 x Recap and Review Assessment** *All students to complete this assessment, then the scores are to be kept secure.* *Optional extra assessment to support lower attainers.* ***Think Pink Go Green Feedback*** *This contains an analysis or strengths, weaknesses, and improvements to be made.*	National Curriculum content covered includes: where appropriate, interpret simple expressions as functions with inputs and outputs; **{interpret the reverse process as the 'inverse function'; interpret the succession of two functions as a 'composite function'}** solve two simultaneous equations in two variables (linear/linear **{or linear/quadratic}**) algebraically; find approximate solutions using a graph identify and interpret roots; deduce roots algebraically **{and turning points by completing the square}** solve linear inequalities in one **{or two}** variable **{s}** , **{and quadratic inequalities in one variable}** ; represent the solution set on a number line, **{using set notation and on a graph}** recognise, sketch and interpret graphs of quadratic functions apply Pythagoras' Theorem and trigonometric ratios to find angles and lengths in right - angled triangles **{and, where possible, general triangles}** in two **{and three}** dimensional figures

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Year 11 Spring Term

Year	Topic	Key Words	Key Skills & Key Knowledge (Small Steps)
11	Multiplicative reasoning (2 weeks)	centi- coefficient common commutative convert divide milli- multiple multiply odd ones operation <u>Word of the Block: Common</u> • Etymology Discussed • Frayer Model Used	Use scale factors (R) Understand direct proportion **Construct complex direct proportion equations** (H) Calculate with pressure and density Understand inverse proportion **Construct inverse proportion equations** (H) Ratio problems (R)

Cultural Capital	Assessment	NC Reference and Links
Literacy Task – Astronomy First person in space Teachers ensure that resources reference a wide range of scenarios reflecting modern society.	**1 x Recap and Review Assessment** *All students to complete this assessment, then the scores are to be kept secure. Optional extra assessment to support lower attainers.* ***Think Pink Go Green Feedback*** *This contains an analysis or strengths, weaknesses, and improvements to be made.*	National Curriculum content covered includes: compare lengths, areas and volumes using ratio notation and/or scale factors; make links to similarity understand that X is inversely proportional to Y is equivalent to X is proportional to **{construct and}** interpret equations that describe direct and inverse proportion extend and formalise their knowledge of ratio and proportion, including trigonometric ratios, in working with measures and geometry, and in working with proportional relations algebraically and graphically

Year	Topic	Key Words	Key Skills & Key Knowledge (Small Steps)
11	Geometric reasoning (2 weeks)	construct, decagon, degrees, diagonal, edges, equal, perpendicular, point, polygon, proportion, protractor, rectangle Word of the Block: Vector • Etymology Discussed • Frayer Model Used	Angles at points (R) Angles in parallel lines and shapes (R) Exterior and interior angles of polygons (R) Proving geometric facts Solve problems involving vectors (R) **Review of circle theorems** (H) **Circle theorem: Angle between radius and chord** (H) **Circle theorem: Angle between radius and tangent** (H) **Circle theorem: Two tangents from a point** (H) **Circle theorem: Alternate segment theorem** (H) Review Pythagoras' theorem and using trig ratios (R)

Cultural Capital	Assessment	NC Reference and Links
Teachers ensure that resources reference a wide range of scenarios reflecting modern society.	**1 x Recap and Review Assessment** *All students to complete this assessment, then the scores are to be kept secure.* *Optional extra assessment to support lower attainers.* ***Think Pink Go Green Feedback*** *This contains an analysis or strengths, weaknesses, and improvements to be made.*	National Curriculum content covered includes reason deductively in geometry, number and algebra, including using geometrical constructions **{apply and prove the standard circle theorems concerning angles, radii, tangents and chords, and use them to prove related results}** interpret and use bearings apply addition and subtraction of vectors, multiplication of vectors by a scalar, and diagrammatic and column representations of vectors; **{use vectors to construct geometric arguments and proofs}**

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Year	Topic	Key Words	Key Skills & Key Knowledge (Small Steps)
11	Algebraic reasoning (2 weeks)	greater than increase indices inverse less than solve square substitute subtract symmetric <u>Word of the Block: Inverse</u> • Etymology Discussed • Frayer Model Used	Simplify complex expressions Find the rule for the n^{th} term of a linear sequence (R) **Find the rule for the n^{th} term of a quadratic sequence** (R) (H) Use rules for sequences Solve linear simultaneous equations (R) **Solve simultaneous equations with one quadratic** (R) (H) **Formal algebraic proof** (H) **Inequalities in two variables** (H)

Cultural Capital	Assessment	NC Reference and Links
<u>Maths Careers</u> Guided reading comprehension task Illuminating the role of Retail Banker	**1 x Recap and Review Assessment** *All students to complete this assessment, then the scores are to be kept secure.* *Optional extra assessment to support lower attainers.* ***Think Pink Go Green Feedback*** *This contains an analysis or strengths, weaknesses, and improvements to be made.* *to be made.*	National Curriculum content covered includes: make and test conjectures about the generalisations that underlie patterns and relationships; look for proofs or counter - examples; begin to use algebra to support and construct arguments **{and proofs}** th deduce expressions to calculate the term of linear **{and quadratic}** sequences solve two simultaneous equations in two variables (linear/linear **{or linear/quadratic}**) algebraically; find approximate solutions using a graph solve linear inequalities in one **{or two}** variable **{s}** ,**{and quadratic inequalities in one variable}** ; represent the solution set on a number line, **{using set notation and on a graph}**

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Year	Topic	Key Words	Key Skills & Key Knowledge (Small Steps)
11	Transforming & constructing (2 weeks)	**conjecture** convex concave **corresponding** degrees equilateral point polygon quadrilateral **regular** rhombus right-angled <u>Word of the Block: Convex</u> • Etymology Discussed • Frayer Model Used	Perform and describe line symmetry and reflection (R) Perform and describe rotation/rotational symmetry (R) Perform and describe translations of shapes (R) Perform and describe enlargements of shapes (R) **Perform and describe negative enlargements of shapes** (R) (H) Identify transformations of shapes (R) Perform and describe a series of transformations of shapes **Identify invariant points and lines** (H)

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			Perform standard constructions using ruler and protractor or ruler and compasses (R) Solve loci problems **Understand and use trigonometrical graphs** (H) **Sketch and identify translations of the graph of a given function** (H) **Sketch and identify reflections of the graph of a given function** (H)

Cultural Capital	Assessment	NC Reference and Links
Literacy Task – Sport Red Rum's first win Teachers ensure that resources reference a wide range of scenarios reflecting modern society.	**1 x Recap and Review Assessment** *All students to complete this assessment, then the scores are to be kept secure.* *Optional extra assessment to support lower attainers.* ***Think Pink Go Green Feedback*** *This contains an analysis or strengths, weaknesses, and improvements to be made.*	National Curriculum content covered includes: • describe translations as 2D vectors • reason deductively in geometry, number and algebra, including using geometrical constructions • interpret and use fractional **{and negative}** scale factors for enlargements • **{describe the changes and invariance achieved by combinations of rotations, reflections and translations}** • recognise, sketch and interpret graphs of **{the trigonometric functions (with arguments in degrees) for angles of any size}** • **{sketch translations and reflections of the graph of a given function}**

Year	Topic	Key Words	Key Skills & Key Knowledge (Small Steps)

11	Listing & describing (2 weeks)	equally likely event expected experiment fair frequency product relative frequency **replacement** sample space trial unbiased <u>Word of the Block: Sample space</u> • Etymology Discussed • Frayer Model Used	Work with organised lists Sample spaces and probability R **Use the product rule for counting** H Complete and use Venn diagrams R Construct and interpret plans and elevations R Use data to compare distributions R Interpreting scatter diagrams R

Cultural Capital	Assessment	NC Reference and Links
Real- life application of mathematical concepts	**1 x Recap and Review Assessment** *All students to complete this assessment, then the scores are to be kept secure.* *Optional extra assessment to support lower attainers.* ***Think Pink Go Green Feedback*** *This contains an analysis or strengths, weaknesses, and improvements to be made.*	National Curriculum content covered includes: explore what can and cannot be inferred in statistical and probabilistic settings, and express their arguments formally calculate the probability of independent and dependent combined events, including using tree diagrams and other representations, and know the underlying assumptions **{calculate and interpret conditional probabilities through representation using expected frequencies with two-way tables, tree diagrams and Venn diagrams}** apply systematic listing strategies, **{including use of the product rule for counting}** construct and interpret plans and elevations of 3D shapes

Year	Topic	Key Words	Key Skills & Key Knowledge (Small Steps)
11	Show that (2 weeks)	• Not Applicable	"Show that" with number "Show that" with algebra "Show that" with shape "Show that" with angles "Show that" with data "Show that" with vectors (H) "Show that" with congruent triangles Formal proof with congruent triangles (H)

Cultural Capital	Assessment	NC Reference and Links
Real- life application of mathematical concepts	**1 x Recap and Review Assessment** *All students to complete this assessment, then the scores are to be kept secure.* *Optional extra assessment to support lower attainers.* ***Think Pink Go Green Feedback*** *This contains an analysis or strengths, weaknesses, and improvements to be made.*	National Curriculum content covered includes: • know the difference between an equation and an identity; argue mathematically to show algebraic expressions are equivalent, and use algebra to support and construct arguments **{and proofs}** • apply the concepts of congruence and similarity • make and use connections between different parts of mathematics to solve problems • **{change recurring decimals into their corresponding fractions and vice versa}** • apply addition and subtraction of vectors, multiplication of vectors by a scalar, and diagrammatic and column representations of vectors; **{use vectors to construct geometric arguments and proofs}**

Y11 Summer Term

Year	Topic	Key Words	Key Skills & Key Knowledge (Small Steps)
11	Revision and examinations (4 weeks)	• Not Applicable	Area Volume Circles Fractions, decimals and percentages Angles Pythagoras Transformations Directed number

Cultural Capital	Assessment	NC Reference and Links
Literacy Task – Art MC Escher Teachers ensure that resources reference a wide range of scenarios reflecting modern society.	**1 x Recap and Review Assessment** *All students to complete this assessment, then the scores are to be kept secure.* *Optional extra assessment to support lower attainers.*	All the KS4 Curriculum

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Autumn Term 1

Lesson 1	Lesson 2	Lesson 3	Lesson 4 LSQ QLA
Expanding and Factorising *Expand Binomials* *Factorise and Solve Quadratics* *Solve Quadratics by Formula*	*Changing the Subject* *Solve linear equations with unknowns on both sides*	*Changing the Subject* *Solve Inequalities* *QUADRATIC INEQUALITIES*	*QLA Lesson*
Changing the Subject *Form and solve equations and inequalities in the context of shape*	*Changing the Subject* *Change the subject of a complex formula*	*Changing the Subject* *Change the subject where the subject appears more than once*	
FUNCTIONS, COMPOSITE AND INVERSE FUNCTIONS	*COMPLETING THE SQUARE AND FINDING RELATIVE EXTREMA (MAX AND MIN POINTS)*	*Changing the Subject* *Solve equations by iteration*	
SURDS *SIMPLIFYING AND RATIONALISING*	*Gradients and lines* *STRAIGHT LINE GRAPHS* *Determine if a point is on a line*	*Gradients and lines* *Equation of a line from a point and a gradient* *Equation of a line from two points*	
Gradients and lines *PARALLEL LINES* *Find the equations of perpendicular lines*	*Gradients and lines* *Solve linear simultaneous equations graphically*	*PYTHAGORAS*	
RIGHT ANGLED TRIGONOMETRY	*EXACT TRIG VALUES*	*AREA OF A NON RIGHT ANGLED TRIANGLE*	
SINE RULE *ANGLES AND SIDES*	*COSINE RULE* *ANGLES AND SIDES*	*MIXED PROBLEMS IN ADVANCED TRIGONOMETRY*	

	Think Pink Go Green Feedback *This contains an analysis or strengths, weaknesses, and improvements to be made.*	

First Wave of Adaptations: Y11 Higher

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Autumn Term 2

PROBABILITY TREE DIAGRAMS	*CONDITIONAL PROBABILITY*	*EXPECTATION*	*QLA Lesson*
Listing and Describing *Using the product rule for counting*	*Listing and Describing* *Complete and use venn diagrams*	*Listing and Describing* *Interpreting scatter diagrams* *EXTRAPOLATION*	
STANDARD FORM: SMALL, LARGE AND ORDERING *FOUR RULES*	*FOUR RULES OF IMPROPER FRACTIONS*	*Transforming and Constructing* *Reflection and line symmetry* *Translations of shapes*	
Transforming and Constructing *Rotation and rotational symmetry*	*Transforming and Constructing* *Enlargements of shapes*	*Transforming and Constructing* *Perform and describe negative enlargements of shapes*	
Transforming and Constructing *Identify transformations of shapes*	*Transforming and Constructing* *Identify invariant points and lines*	*Transforming and Constructing* *Understand and use trigonometrical graphs*	
Transforming and Constructing *Sketch and identify reflections and translations of a function*	*Transforming and Constructing* *Perform standard constructions using a ruler protactor ot rule and compasses*	*Transforming and Constructing* *Solve loci problems*	
Non-linear Graphs *Plot and read from quadratic graphs*	*Non-linear Graphs* *Plot and read from cubic graphs* *Plot and read from recipricol graphs*	*Non-linear Graphs* *Recognise graphs shapes*	

Spring Term 1

Non-linear Graphs *Understand and use exponential graphs*	*Non-linear Graphs* *Find and use the equation of a circle centre (0, 0)*	*Non-linear Graphs* *Find the equation of a tangent to a curve*	*QLA Lesson*
Multiplicative Reasoning *Construct direct proportion equations*	*Multiplicative Reasoning* *Construct inverse proportion equations*	*Multiplicative Reasoning* *Use scale factors (similarity)* *SIMILAR SOLIDS*	
SPEED DISTANCE TIME	*Multiplicative Reasoning* *Calculate with pressure and density*	*Geometric Reasoning* *Angles in parallel lines and shapes* *Exterior and interior angles of polygons*	
BEARINGS AND MAP SCALES	*Using Graphs* *Interpret distance / time graphs* *Interpret speed / time graphs*	*Using Graphs* *Find approximate solutions to equations using graphs* *Estimate the area under a curve*	
Algebraic Reasoning *INDEX LAWS* *CANCELLING ALGEBRAIC FRACTIONS*	*Algebraic Reasoning* *Find the nth tem of a linear sequence* *Find the nth term of a quadratic sequence*	*Algebraic Reasoning* *Solve linear simultaneous equations*	
Algebraic Reasoning *Solve simultaneous equations with one quadratic*	*Algebraic Reasoning* *Formal algebraic proof*	*Algebraic Reasoning* *Inequalities in two variables*	

Spring Term 2

MEAN, MEDIAN, MODE AND RANGE FROM FREQUENCY TABLES (NON GROUPED)	*MEAN, MEDIAN, MODE AND RANGE FROM FREQUENCY TABLES (GROUPED)*	*BOX PLOTS, QUARTILES AND CUMULATIVE FREQUENCY*	*QLA Lesson*
SAMPLING & *CAPTURE / RECAPTURE*	*INTERPRETING PIE CHARTS*	*PERCENTAGES & COMPOUND INTEREST*	
REVERSE PERCENTAGES	*RATIO:* *SHARING A TOTAL* *SMALLER LARGER SHARE* *CONVERTING TO A FRACTION*	*UPPER AND LOWER BOUNDS AND ERROR INTERVALS*	
Geometric Reasoning *VECTOR ARITHMETIC* *Solve problems involving vectors*	*VOLUME AND SURFACE AREA OF RECTILINEAR SHAPES INC TRAPEZIA BASED*	*CIRCLES,* *ARC LENGTHS AND* *AREA OF SECTORS*	
VOLUME AND SURFACE AREA OF CIRCULAR SHAPES	*CIRCLE THEOREMS 1*	*CIRCLE THEOREMS 2*	
GEOMETRIC PROOF	*ALGEBRAIC FRACTIONS* *SIMPLIFYING*	*ALGEBRAIC FRACTIONS* *SOLVING*	

Summer Term 1

TEACHER DIRECTED BASED ON QLA FROM MOST RECENT ASSESSMENT	*WEEKLY LOW STAKES QUIZ FOLLOWED BY TEACHER DIRECTED QLA*

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First Wave of Adaptations: Y11 Foundation

Autumn Term 1

Lesson 1 POTW	Lesson 2	Lesson 3	Lesson 4 LSQ QLA
Expanding and Factorising *Expand and factorise with a single bracket*	*Expanding and Factorising* *Expand Binomials*	*Expanding and Factorising* *Factorise Quadratics* *Solve Quadratics by Factorisation*	*QLA Lesson*
Functions *INPUTS AND OUTPUTS* *Substitute into expressions and formulae*	*Changing the Subject* *Solve linear equations involving one and two step*	*Changing the Subject* *Solve linear equations with unknowns on both sides*	
Changing the Subject *Solve Inequalities*	*Changing the Subject* *Form and solve equations and inequalities in the context of shape*	*Changing the Subject* *Change the subject of a formula*	
Changing the Subject *Change the subject of a complex formula*	*Gradients and lines* *Equations of lines parallel to the axis*	*Gradients and lines* *Tabulate and plot straight line graphs*	
Gradients and lines *Find the equation of a straight line from a graph* *Interpret y=mx+c*	*Gradients and lines* *Solve linear simultaneous equations graphically*	*DECIMAL PLACES AND SIGNIFICANT FIGURES FOUR RULES OF DECIMALS*	
FRACTIONS: *FOUR RULES*	*BIDMAS, APPROXIMATION AND USING A CALCUALTOR*	*FACTORS, MULTIPLES, HCF, LCM AND PRODUCT OF PRIMES*	
PYTHAGORAS	*TRIGONOMETRY*	*TRIGONOMETRY*	

Autumn Term 2

Listing and Describing *Work with organised lists*	*Listing and Describing* *Sample spaces and probability*	*PROBABILITY TREE DIAGRAMS*	*QLA Lesson*
EXPECTATION AND RELATIVE FREQUENCY	*Listing and Describing* *Complete and use venn diagrams*	*Listing and Describing* *Interpreting scatter diagrams*	
PIE CHARTS	*Listing and Describing* *Constructing and interpreting plans and elevations*	*VECTOR ARITHMETIC*	
Geometric Reasoning *Solve problems involving vectors*	*Transforming and Constructing* *Reflection and line symmetry*	*Transforming and Constructing* *Rotation and rotational symmetry*	
Transforming and Constructing *Translations of shapes*	*Transforming and Constructing* *Enlargements of shapes*	*Transforming and Constructing* *Identify transformations of shapes*	
Transforming and Constructing *Perform standard constructions using a ruler protactor ot rule and compasses*	*Transforming and Constructing* *Solve loci problems*	*Transforming and Constructing* *Solve loci problems*	
Non-linear Graphs *Plot and read from quadratic graphs*	*Non-linear Graphs* *Plot and read from cubic graphs*	*Non-linear Graphs* *Plot and read recipricol graphs*	

Spring Term 1

Multiplicative Reasoning *Understand direct proportion*	*Multiplicative Reasoning* *Understand Inverse Proportion*	*Multiplicative Reasoning* *Use scale factors (similarity)*	*QLA Lesson*
SPEED DISTANCE TIME	*Multiplicative Reasoning* *Calculate with pressure and density*	*Geometric Reasoning* *Angles at a point also include angle laws*	
Geometric Reasoning *Angles in parallel lines and shapes*	*Geometric Reasoning* *Exterior and interior angles of polygons*	*BEARINGS AND MAP SCALES*	
Using Graphs *Reflect shapes in given lines*	*Using Graphs* *CURRENCY CONVERSION* *Construct and interpret conversion graphs*	*Using Graphs* *Interpret distance / time graphs* *Interpret speed / time graphs*	
Algebraic Reasoning *INDEX LAWS* *Simplify complex expressions*	*Algebraic Reasoning* *Find the nth tem of a linear sequence*	*Algebraic Reasoning* *Use rules for sequences*	
Algebraic Reasoning *Solve linear simultaneous equations*	*Algebraic Reasoning* *Solve linear simultaneous equations*	*BEST BUYS*	

Spring Term 2

MEAN, MEDIAN, MODE & RANGE STEM AND LEAF	*MEAN FROM GROUPED AND NON GROUPED*	*MODE MEDIAN AND RANGE FROM A FREQUENCY TABLE*	*QLA Lesson*
COMPOUND INTEREST	*REVERSE PERCENTAGES*	*PERCENTAGE OF AMOUNTS AND FRACTION OF AMOUNTS*	
FDP CONVERSION AND ORDERING	*STANDARD FORM: SMALL, LARGE AND ORDERING*	*STANDARD FORM:* *FOUR RULES OF ARITHMETIC*	
RATIO: *SHARING A TOTAL* *SMALLER LARGER SHARE*	*RATIO:* *RECIPES*	*RATIO:* *CONVERSION TO FRACTION*	
2D COMPOUND SHAPES	*VOLUME OF 3D SHAPES*	*SURFACE AREA OF 3D SHAPES*	
CIRCLES CIRCUMFERENCE	*CIRCLES AREA*	*VOLUME OF CIRCULAR SHAPES*	

Summer Term 1

TEACHER DIRECTED BASED ON QLA FROM MOST RECENT ASSESSMENT	*WEEKLY LOW STAKES QUIZ FOLLOWED BY TEACHER DIRECTED QLA*

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