MATHEMATICS

CURRICULUM OVERVIEW – YEAR 10 2023/24

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Y10 Autumn Term

Year	Topic	Key Words	Key Skills & Key Knowledge (Small Steps)
10	Congruence, similarity, and enlargement (3 weeks)	congruent construction lines construction lines conversion corresponding side equidistant point protractor ratio rectangle reflection reflex <u>Word of the Block: Congruent</u> • Etymology Discussed • Frayer Model Used	Enlarge a shape by a positive integer scale factor (R) Enlarge a shape by a fractional scale factor (R) Enlarge a shape by a negative scale factor (H) Identify similar shapes Work out missing sides and angles in a pair given similar shapes (R) Use parallel line rules to work out missing angles Establish a pair of triangles are similar Explore areas of similar shapes (1) (H) Explore areas of similar shapes (2) (H) Explore volumes of similar shapes (H) Solve mixed problems involving similar shapes (H) Understand the difference between congruence and similarity Understand and use conditions for congruent triangles Prove a pair of triangles are congruent (H)

Cultural Capital	Assessment	NC Reference and Links
Literacy Task – Famous Mathematicians Euler Teachers ensure that resources reference a wide range of scenarios reflecting modern society.	**1 x Block 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 • extend and formalise their knowledge of ratio and proportion in working with measures and geometry • compare lengths, areas and volumes using ratio notation and/or scale factors; make links to similarity • interpret and use fractional {and negative} scale factors for enlargements • apply the concepts of congruence and similarity, including the relationships between lengths, {areas and volumes} in similar figures

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		• use mathematical language and properties precisely • make and test conjectures about the generalisations that underlie patterns and relationships; look for proofs or counter-examples • develop their mathematical knowledge, in part through solving problems and evaluating the outcomes, including multi-step problems

Year	Topic	Key Words	Key Skills & Key Knowledge (Small Steps)
10	Trigonometry (3 weeks)	opposite, angle hypotenuse, adjacent sine, cosine tangent, unit circle Right angle, length <u>Word of the Block: Adjacent</u> • Etymology Discussed • Frayer Model Used	Work with key angles in right-angled triangles (1) & (2) **Use trigonometry in 3-D shapes** (H) **Use the formula $\frac{1}{2}ab\sin C$ to find the area of a triangle** (H) **Understand and use the sine rule to find missing lengths** (H) **Understand and use the sine rule to find missing angles** (H) **Understand and use the cosine rule to find missing lengths** (H) **Understand and use the cosine rule to find missing angles** (H) **Choosing and using the sine and cosine rules (1) & (2)** (H) Work with key angles in right-angled triangles (1) & (2) **Use trigonometry in 3-D shapes** (H) **Use the formula $\frac{1}{2}ab\sin C$ to find the area of a triangle** (H) **Understand and use the sine rule to find missing lengths** (H) **Understand and use the sine rule to find missing angles** (H) **Understand and use the cosine rule to find missing lengths** (H) **Understand and use the cosine rule to find missing angles** (H) **Choosing and using the sine and cosine rules (1) & (2)** (H)

Cultural Capital	Assessment	NC Reference and Links
Black History Month	**1 x Block 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 Sheet*** *The Think Pink contains an analysis or strengths, weaknesses, and improvements to be made.*	National curriculum content covered: • extend and formalise their knowledge of ratio and proportion, including trigonometric ratios • 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 • know the exact values of sin θ, cos θ, tan θ for required angles • {know and apply the sine rule and cosine rule to find unknown lengths and angles} • {know and apply to calculate the area, sides or angles of any triangle} • develop their mathematical knowledge, in part through solving problems and evaluating the outcomes, including multi-step problems • make and use connections between different parts of mathematics to solve problems • model situations mathematically and express the results using a range of formal mathematical representations, reflecting on how their solutions may have been affected by any modelling assumptions • select appropriate concepts, methods and techniques to apply to unfamiliar and non-routine problems; interpret their solution in the context of the given problem.

Year	Topic	Key Words	Key Skills & Key Knowledge (Small Steps)
10	Representing solutions of equations & inequalities (3 weeks)	coefficient equation inequality form formula satisfy solution solve **square root** subject <u>Word of the Block: Inequality</u> • Etymology Discussed • Frayer Model Used	Understand the meaning of a solution Form and solve one-step and two-step equations (R) Form and solve one-step and two-step inequalities (R) Show solutions to inequalities on a number line Interpret representations on number lines as inequalities **Represent solutions to inequalities using set notation** (H) Draw straight line graphs (R) Find solutions to equations using straight line graphs **Represent solutions to single inequalities on a graph** (H) **Represent solutions to multiple inequalities on a graph** (H) Form and solve equations with unknowns on both sides (R) Form and solve inequalities with unknowns on both sides Form and solve more complex equations and inequalities **Solve quadratic equations by factorisation*** (*Also Foundation tier. Higher cover now, Core will cover in Year 11) (H) **Solve quadratic inequalities in one variable** (H)

Cultural Capital	Assessment	NC Reference and Links

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<u>Maths Careers</u> Guided reading comprehension task Illuminating the role of an Civil Engineer.	**1 x Block 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 • consolidate their algebraic capability from key stage 3 and extend their understanding of algebraic simplification and manipulation to include quadratic expressions • translate simple situations or procedures into algebraic expressions or formulae; derive an equation, solve the equation and interpret the solution • select appropriate concepts, methods and techniques to apply to unfamiliar and non-routine problems; interpret their solution in the context of the given problem. • recognise, sketch and interpret graphs of linear functions, • factorising quadratic expressions of the form x^2 + bx + c (Higher only at this stage) • solve quadratic equations algebraically by factorising (Higher only at this stage) • 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}

Year	Topic	Key Words	Key Skills & Key Knowledge (Small Steps)
10	Simultaneous equations (3 weeks)	**balance** like terms **subtract** multiply out bracket negative check minus coefficient product <u>Word of the Block: Coefficient</u> • Etymology Discussed • Frayer Model Used	Understand that equations can have more than one solution Determine whether a given (x, y) is a solution to a pair of linear simultaneous equations Solve a pair of linear simultaneous equations by substituting a known variable Solve a pair of linear simultaneous equations by substituting an expression (1) & (2) Solve a pair of linear simultaneous equations using graphs Solve a pair of linear simultaneous equations by subtracting equations Solve a pair of linear simultaneous equations by adding equations Use a given equation to derive related facts R Solve a pair of linear simultaneous equations by adjusting one equation Solve a pair of linear simultaneous equations by adjusting both equations Form a pair of linear simultaneous equations from given information Form and solve pair of linear simultaneous equations from given information **Determine whether a given (x, y) is a solution to both a linear and quadratic equation** H **Solve a pair of simultaneous equations (one linear, one quadratic) using graphs** H **Solve a pair of simultaneous equations (one linear, one quadratic) algebraically** H **Solve a pair of simultaneous equations involving a third unknown** H

Cultural Capital	Assessment	NC Reference and Links
Literacy Task – Engineering The Brooklyn Bridge Teachers ensure that resources reference a wide range of scenarios reflecting modern society.	**1 x Block 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 • consolidate their algebraic capability from key stage 3 and extend their understanding of algebraic simplification and manipulation to include quadratic expressions • model situations mathematically and express the results using a range of formal mathematical representations, reflecting on how their solutions may have been affected by any modelling assumptions • 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

	End of Term Assessment *WRM Assessment Paper*	• select appropriate concepts, methods and techniques to apply to unfamiliar and non-routine problems; interpret their solution in the context of the given problem. • solve two simultaneous equations in two variables (linear/linear {or linear/quadratic}) algebraically; • recognise, sketch and interpret graphs of linear functions and quadratic functions.

Year 10 Spring Term

Year	Topic	Key Words	Key Skills & Key Knowledge (Small Steps)
10	Angles and bearings (2 weeks)	angles, compass, compound, construct, decagon, degrees, notation, obtuse, parallel, perpendicular, point, three-figure <u>Word of the Block: Bearing</u> • Etymology Discussed • Frayer Model Used	Use cardinal directions and related angles (R) Draw and interpret scale diagrams (R) Understand and represent bearings Measure and read bearings Make scale drawings using bearings Calculate bearings using angles rules Solve bearings problems using Pythagoras and trigonometry **Solve bearings problems using the sine and cosine rules** (H)

Cultural Capital	Assessment	NC Reference and Links
Literacy Task – Astronomy Flight of the first private spacecraft	**1 x Block Assessment** *All students to complete this assessment, then the scores are to be kept secure. Optional extra assessment to support lower attainers.*	National curriculum content covered: • interpret and use bearings • compare lengths…using scale factors

Teachers ensure that resources reference a wide range of scenarios reflecting modern society.	***Think Pink Go Green Feedback*** *This contains an analysis or strengths, weaknesses, and improvements to be made.*	• apply Pythagoras' Theorem and trigonometric ratios to find angles and lengths in right-angled triangles {and, where possible, general triangles} in two dimensional figures • {know and apply the sine rule and cosine rule to find unknown lengths and angles} • use mathematical language and properties precisely • reason deductively in geometry, number and algebra, including using geometrical constructions • make and use connections between different parts of mathematics to solve problems

Year	Topic	Key Words	Key Skills & Key Knowledge (Small Steps)
10	Working with circles (2 weeks)	diameter, tangent, centre, chord, area, radius, circumference, formula Word of the Block: Diameter • Etymology Discussed • Frayer Model Used	Recognise and label parts of a circle (R) Calculate fractional parts of a circle Calculate the length of an arc Calculate the area of a sector **Circle theorem: Angles at the centre and circumference** (H) **Circle theorem: Angles in a semicircle** (H) **Circle theorem: Angles in the same segment** (H) **Circle theorem: Angles in a cyclic quadrilateral** (H) Understand and use the volume of a cylinder and cone Understand and use the volume of a sphere Understand and use the surface area of a sphere Understand and use the surface area of a cylinder and cone **Solve area and volume problems involving similar shapes** (R) (H)

Cultural Capital	Assessment	NC Reference and Links
Teachers ensure that resources reference a wide range of scenarios reflecting modern society.	**1 x Block 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: • identify and apply circle definitions and properties, including: centre, radius, chord, diameter, circumference, tangent, arc, sector and segment • calculate arc lengths, angles and areas of sectors of circles • calculate surface areas and volumes of spheres, pyramids, cones and composite solids • apply and prove the standard circle theorems concerning angles, radii, tangents and chords, and use them to prove related results

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Year	Topic	Key Words	Key Skills & Key Knowledge (Small Steps)
10	Vectors (2 weeks)	vector column scalar movement Word of the Block: Vector • Etymology Discussed • Frayer Model Used	Understand and represent vectors Use and read vector notation Draw and understand vectors multiplied by a scalar Draw and understand addition of vectors Draw and understand addition and subtraction of vectors **Explore vector journeys in shapes** H **Explore quadrilaterals using vectors** H **Understand parallel vectors** H **Explore collinear points using vectors** H **Use vectors to construct geometric arguments and proofs** H

Cultural Capital	Assessment	NC Reference and Links
Maths Careers Guided reading comprehension task Illuminating the role of an apprenticeship	**1 x Block 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: • describe translations as 2D vectors • 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}.

Year	Topic	Key Words	Key Skills & Key Knowledge (Small Steps)
10	Ratio and fractions (2 weeks)	change, conversion, decimal, decrease, denominator, equivalent, estimate, factor, fraction, integer, interest, invest, loss, multiplier, numerator, percentage, profit, reduce Word of the Block: Conversion • Etymology Discussed • Frayer Model Used	Compare quantities using a ratio (R) Link ratios and fractions (R) Share in a ratio (given total or one part) (R) Use ratios and fractions to make comparisons Link ratios and graphs (R) Solve problems with currency conversion Link ratios and scales (R) Use and interpret ratios of the form $1:n$ and $n:1$ Solve 'best buy' problems Combine a set of ratios Link ratio and algebra **Ratio in area problems** (H) **Ratio in volume problems** (H) Mixed ratio problems

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Literacy Task – Sport 1966 World Cup Teachers ensure that resources reference a wide range of scenarios reflecting modern society.	**1 x Block 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: Consolidating subject content from key stage 3: • Use ratio notation, including reduction to simplest form. • Divide a given quantity into two parts in a given $part:part$ or $part:whole$ ratio; express the division of a quantity into two parts as a ratio. • Relate the language of ratios and the associated calculations to the arithmetic of fractions and to linear functions. • Use compound units such as speed, unit pricing and density to solve problems. • Compare lengths, areas and volumes using ratio notation and/or scale factors; make links to similarity.

		• Apply the concepts of congruence and similarity, including the relationships between lengths, {areas and volumes} in similar figures.

Year	Topic	Key Words	Key Skills & Key Knowledge (Small Steps)
10	Percentages and interest (2 weeks)	**change** loss convert multiplier decimal original decrease percentages **depreciated** **appreciate** equivalent profit <u>Word of the Block: Appreciate</u> • Etymology Discussed • Frayer Model Used	Convert and compare fractions, decimals and percentages (R) Work out percentages of amounts (with and without a calculator) (R) Increase and decrease by a given percentage (R) Express one number as a percentage of another (R) Calculate simple and compound interest Repeated percentage change Find the original value after a percentage change (R) Solve problems involving growth and decay **Understand iterative processes** (H) Solve problems involving percentages, ratios and fractions
Cultural Capital		**Assessment**	**NC Reference and Links**

Real- life application of mathematical concepts	**1 x Block 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: • Consolidating subject content from key stage 3: Interpret these multiplicatively, express one quantity as a percentage of another, compare two quantities using percentages, and work with percentages greater than 100%. • Solve problems involving percentage change, including: percentage increase, decrease and original value problems and simple interest in financial mathematics. • Set up, solve and interpret the answers in growth and decay problems, including compound interest {and work with general iterative processes}.

Year	Topic	Key Words	Key Skills & Key Knowledge (Small Steps)
10	Probability (2 weeks)	complement element equally likely equivalent even outcomes possibilities sample space independent mutually exclusive <u>Word of the Block: Independent</u> • Etymology Discussed • Frayer Model Used	Know how to add, subtract and multiply fractions (R) Find probabilities using equally likely outcomes (R) Use the property that probabilities sum to 1 (R) Using experimental data to estimate probabilities Find probabilities from tables, Venn diagrams and frequency trees Construct and interpret sample spaces for more than one event (R) Calculate probability with independent events Use tree diagrams for independent events Use tree diagrams for dependent events **Construct and interpret conditional probabilities (Tree diagrams)** (H) **Construct and interpret conditional probabilities (Venn diagrams and two-way tables)** (H)

Cultural Capital	Assessment	NC Reference and Links
Real- life application of mathematical concepts	**1 x Block 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.* ***End of Term Assessment***	National curriculum content covered: • Apply the property that the probabilities of an exhaustive set of mutually exclusive events sum to one. • Use a probability model to predict the outcomes of future experiments; understand that empirical unbiased samples tend towards theoretical probability distributions, with increasing sample size. • 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}.

Y10 Summer Term

Year	Topic	Key Words	Key Skills & Key Knowledge (Small Steps)
10	Collecting, representing and interpreting data (4 weeks)	bar chart biased bivariate change compare comparison consistent continuous histogram difference discrete distribution enquiry fraction frequency investigation line chart mislead pictogram pie chart correlation proportion questionnaire range range sample stratified scatter graph secondary data spread <u>Word of the Block: Primary Data</u> • Etymology Discussed • Frayer Model Used	Understand populations and samples **Construct a stratified sample** H Primary and secondary data Construct and interpret frequency tables and frequency polygons Construct and interpret two-way tables R Construct and interpret line and bar charts (including composite bar charts) Construct and interpret pie charts R Criticise charts and graphs **Construct histograms** H **Interpret histograms** H Find and interpret averages from a list R Find and interpret averages from a table R Construct and interpret time series graphs R Construct and interpret stem-and-leaf diagrams **Construct and interpret cumulative frequency diagrams** H **Use cumulative frequency diagrams to find measures** H **Construct and interpret box plots** H Compare distributions using charts and measures **Compare distributions using complex charts and measures** H Construct and interpret scatter graphs R Draw and use a line of best fit R Understand extrapolation

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Literacy Task – Art Geometry in Art by Salvador Dali Teachers ensure that resources reference a wide range of scenarios reflecting modern society.	**1 x Block 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: • consolidating subject content from key stage 3: • use describe, interpret and compare observed distributions of a single variable through: appropriate graphical representation involving discrete, continuous and grouped data • construct and interpret appropriate tables, charts, and diagrams, including frequency tables, bar charts, pie charts, and pictograms for categorical data, and vertical line (or bar) charts for ungrouped and grouped numerical data • describe, interpret and compare observed distributions of a single variable through: appropriate graphical representation involving discrete, continuous and grouped data; and appropriate measures of central tendency (mean, mode, median) and spread (range, consideration of outliers) • infer properties of populations or distributions from a sample, whilst knowing the limitations of sampling • interpret and construct tables and line graphs for time series data • {construct and interpret diagrams for grouped discrete data and continuous data, i.e. histograms with equal and unequal class intervals and cumulative frequency graphs, and know their appropriate use} • interpret, analyse and compare the distributions of data sets from univariate empirical distributions through appropriate graphical representation involving discrete, continuous and grouped data, {including box plots} • apply statistics to describe a population • interpret, analyse and compare the distributions of data sets from univariate empirical distributions through appropriate measures of

		central tendency (including modal class) and spread {including quartiles and inter-quartile range}

Year	Topic	Key Words	Key Skills & Key Knowledge (Small Steps)
10	Non-calculator methods (2 weeks)	bound commutative compensation denominator divide efficient equal parts equality multiply number line numerator overestimate surd decimal place product quotient <u>Word of the Block: Surd</u> • Etymology Discussed • Frayer Model Used	Mental/written methods of integer/decimal addition and subtraction (R) Mental/written methods of integer/decimal multiplication and division (R) The four rules of fraction arithmetic (R) Exact answers **Rational and irrational numbers (convert recurring decimals here)** (H) **Understand and use surds** (H) **Calculate with surds** (H) Rounding to decimal places and significant figures (R) Estimating answers to calculations (R) Understand and use limits of accuracy **Upper and lower bounds** (H) Use number sense Solve financial maths problems Break down and solve multi-step problems

Cultural Capital	Assessment	NC Reference and Links
<u>Maths Careers</u> Guided reading comprehension task Illuminating the role of a Robotics engineer	**1 x Block 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: • consolidate their numerical and mathematical capability from key stage 3 • calculate exactly with fractions, {surds} and multiples of π; {simplify surd expressions involving squares and rationalise denominators} • {change recurring decimals into their corresponding fractions and vice versa} • apply and interpret limits of accuracy when rounding or truncating, {including upper and lower bounds} • develop their use of formal mathematical knowledge to interpret and solve problems, including in financial contexts • make and use connections between different parts of mathematics to solve problems

Year	Topic	Key Words	Key Skills & Key Knowledge (Small Steps)
10	Types of number & sequences (2 weeks)	axes axis descending difference Fibonacci 2nd difference position rule second difference sequence table term Word of the Block: Fibonacci • Etymology Discussed • Frayer Model Used	Understand the difference between factors and multiples (R) Understand primes and express a number as a product of its prime factors (R) Find the HCF and LCM of a set of numbers (R) Describe and continue arithmetic and geometric sequences Explore other sequences **Describe and continue sequences involving surds** (H) Find the rule for the nth term of a linear sequence (R) **Find the rule for the nth term of a quadratic sequence** (H)

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Literacy Task – Cryptography Prime numbers and credit cards Teachers ensure that resources reference a wide range of scenarios reflecting modern society.	**1 x Block 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: • consolidating subject content from key stage 3: • factors, multiples, primes, HCF and LCM • describe and continue sequences • recognise and use sequences of triangular, simple arithmetic progressions, Fibonacci type sequences, quadratic sequences, and simple geometric progressions (r^n where n is an integer, and r is a positive rational number {or a surd}) {and other sequences}

	This contains an analysis or strengths, weaknesses, and improvements to be made.	• deduce expressions to calculate the nth term of linear {and quadratic} sequence.

Year	Topic	Key Words	Key Skills & Key Knowledge (Small Steps)
10	Indices and roots (2 weeks)	commutative exponent **fraction** index/indices power **reciprocal** **root** standard form <u>Word of the Block: Reciprocal</u> • Etymology Discussed • Frayer Model Used	Square and Cube numbers (R) Calculate higher powers and roots Powers of ten and standard form (R) The addition and subtraction rules for indices (R) Understand and use the power zero and negative indices Work with powers of powers **Understand and use fractional indices** (H) Calculate with numbers in standard form (R)

Cultural Capital	Assessment	NC Reference and Links
Real- life application of mathematical concepts	**1 x Block 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: • recognise and use sequences of square and cube numbers • {estimate powers and roots of any given positive number} • calculate with roots, and with integer {and fractional} indices • calculate with numbers in standard form $A \times 10^n$, where $1 \leq A < 10$ and n is an integer • simplifying expressions involving sums, products and powers, including the laws of indices

	This contains an analysis or strengths, weaknesses, and improvements to be made.	

Year	Topic	Key Words	Key Skills & Key Knowledge (Small Steps)
10	Manipulating expressions (2 weeks)	bracket, check, coefficient, LCM, directed, equivalent, negative, positive, product, quadratic, satisfy, side Word of the Block: LCM • Etymology Discussed • Frayer Model Used	Simplify algebraic expressions (R) Use identities **Add and subtract simple algebraic fractions** (H) **Add and subtract complex algebraic fractions** (H) **Multiply and divide simple algebraic fractions** (H) **Multiply and divide complex algebraic fractions** (H) Form and solve equations and inequalities with fractions **Solve equations with algebraic fractions** (H) Represent numbers algebraically Algebraic arguments and proof

Cultural Capital	Assessment	NC Reference and Links
Teachers ensure that resources reference a wide range of scenarios reflecting modern society.	**1 x Block 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.* ***End of Year Assessment*** *3 x 1hr Papers*	National curriculum content covered: • simplify and manipulate algebraic expressions (including those involving surds {and algebraic fractions} by factorising quadratic expressions of the form $x^2 + bx + c$ • 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}

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