



TNHA Curriculum Planning Document

Subject: Mathematics

Year: 7

Timescale	Autumn		Spring		Summer	
Prior Learning (from KS2/3)	KS2: Basic Sequences and continuation of Patterns. KS2: Basic Algebra Skills. KS2: Inverse Operations.	KS2: Place Value. KS2: Basic Fraction, Decimal and Percentage Conversions.	KS2: Written Strategies of Addition and Subtraction. KS2: Written Strategies of Multiplication and Division.	KS2: Understanding of Negative Numbers and Place Value. KS3: Fraction, Decimal, Percentage Equivalence.	KS2: Basic Angle Facts. KS2: Written Strategies of Addition and Subtraction. KS3: Mental Strategies of Addition and Subtraction.	KS2: Language of Probability. KS3: Special Sequences.
Topic/ Unit title	Algebraic Thinking Learning: Sequences. Understanding and Using Algebra. Equality and Equivalence.	Place Value and Proportion Learning: Place Value. Ordering Integers and Decimals. Fraction, Decimal, Percentage Equivalence.	Application of Number Learning: Solving Problems with Addition and Subtraction. Solving Problems with Multiplication and Division.	Directed Number and Fractional Thinking Learning: Four Operations with Directed Number. Addition and Subtraction of Fractions.	Lines and Angles Learning: Constructing, Measuring and Using Geometric Notation. Developing Geometric Reasoning.	Reasoning with Number Learning: Developing Number Sense Sets and Probability. Prime Numbers and Proof.
SMSC/Cultural Capital/Character/FBV-outline specific areas that are covered in this unit	Golden Ratio's. History of Maths. Origin of Ratio's in art and the Human Body.	Types of Number and their Origin. Rangoli Patterns and their Cultural Origin.	Financial Maths. Varying Multiplication Methods used around the World.	History of Maths. Types of Number and their Origin.	Euclidean Geometry. Mental Strategies for 'Every Day' Maths.	Research into Famous Mathematician's, looking at Social and Moral Barriers to their Lives.
Assessment Opportunities	Each block is assessed by an end of topic test. Each term is assessed using an end of termly test. The whole year is assessed using an end of year test.					
Links to other units in KS3/4.	KS3: Finding and Using the Nth Term. KS3: Solving Algebraic Equations. KS4: Manipulating Algebraic Expressions.	KS3:: Application of Numbers using Standard Form. KS4: Converting between Recurring Decimals and Fractions. KS4: Problem Solving involving FDP Equivalence.	KS3: Simplifying Ratios and Fractions. KS3 Calculating Perimeter and Area of 2D shapes. KS3: Calculating Averages.	KS3: Multiplying and Dividing Fractions. KS3: Fractions and Percentages of an Amount. KS4: Secured Skills needed for the Foundation GCSE.	KS3: Angles in Parallel Lines and Polygons. KS3: Bearings. KS4: Solving Angle Problems involving Algebra.	KS3: Probability from Two-Way Tables. KS4: Dependent and Conditional Probability Trees. KS4: Algebraic Proofs (Higher).



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Year: 8

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Prior Learning (from KS2/3)	KS3: Written and Mental Strategies of Multiplication and Division. KS3: Converting between Ratio's and Fractions. KS3: Simplifying Fractions.	KS2: Coordinates in the Positive Quadrant. KS2: Graphs and Charts. KS3: Parallel Lines. KS3: Substitution. KS3: Probability Terminology.	KS2: Inequality Notation. KS3: Equivalence. KS3: Factors and Multiples. KS3: Number and Pattern Sequences. KS3: Algebraic Notation.	KS2: Multiplying by 10, 100... KS2: Rounding. KS3: Estimation. KS3: FDP Equivalence. KS3: Squares, Cubes and Roots. KS3: Laws of Indices.	KS3: Written and Mental Strategies of Addition and Subtraction, Multiplication and Division. KS3: Basic Understanding of the Equation of a Straight Line.	KS3: Written and Mental Strategies of Addition and Subtraction, Multiplication and Division. KS3: Measuring Angles.
Topic/ Unit title	Proportional Reasoning Learning: Ratio and Scale. Multiplicative Change. Multiplying and Dividing Fractions.	Representations Learning: Working in the Cartesian Plane. Collecting and Representing Data. Tables.	Algebraic Techniques Learning: Brackets, Equations and Inequalities. Sequences. Indices.	Developing Number Learning: Fractions and Percentages. Standard Index Form. Number Sense.	Developing Geometry Learning: Angles in Parallel Lines and Polygons. Area of Trapezia and Circles. Line Symmetry and Reflection.	Reasoning with Data Learning: The Data Handling Cycle. Measures of Location.
SMSC/Cultural Capital/Character/FBV-outline specific areas that are covered in this unit	Discovering PI. Cooking and Quantities of Ingredients. Converting between Currencies.	Bias use of Data in the Real World and on the News.	Discovery of Fibonacci Sequences and its link to Nature.	Financial Maths. Standard Form and it's link to Space.	Awe and Wonder in Real World Patterns and Shapes. Islamic Art.	Bias use of Data in the Real World and on the News.
Assessment Opportunities	Each block is assessed by an end of topic test. Each term is assessed using an end of termly test. The whole year is assessed using an end of year test.					
Links to other units in KS3/4.	KS3: Maps and Scales. KS3: Gradients of Lines. KS4: Conversion Graphs. KS4: Direct and Inverse Proportion. KS4: Similar Shapes.	KS3: Drawing Pie Charts. KS4: Equation of a line in the form $y = mx + c$. KS4: Sample Space Diagrams and Probability Trees.	KS3: Standard Form. KS4: Expanding and Factorising Binomials. KS4: Nth term of Quadratic Sequences. KS4: Representing Inequalities Graphically.	KS4: Reverse Percentages. KS4: Negative and Fractional Indices. KS4 Converting between units of Area and Volume.	KS4: Multi-step Angle Problems. KS4: Area of Sectors. KS4: Area of Compound Shapes.	KS4: Averages from Frequency Tables. KS4: Cumulative Frequency Graphs, Histograms and Boxplots.

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