TNHA Subject Curriculum, 2023/24 Subject: Mathematics Year 8

	Autumn Term		Spring Term		Summer Term	
Topic title-	**Representations** Representing Data Tables and Probability Multiplying and Dividing Fractions	**Proportional Reasoning** Ratio and Scale Multiplicative Change Working in the Cartesian Plane	**Algebraic Techniques** Sequences Brackets, Equations and Inequalities.	**Developing Number Sense** Fractions and Percentages. Standard Index Form. Number Sense. Indices.	**Developing Geometry** Angles in Parallel Lines and Polygons. Area of Trapezia and Circles. Line Symmetry and Reflection.	**Reasoning with Data** The Data Handling Cycle. Measures of Location
Powerful knowledge (will vary depending on ability)	Averages: Mode and median Equivalent Fractions Fractions; mixed to improper, +/- same and multiple denominator Pie Charts: draw and interpret Stem and Leaf (Sept '24)	Long Multiplication Division: by single digit Metric conversions Coordinates: Four quadrants Four rules decimals and negative numbers Ratio and Proportion:	Simplifying Algebra: single variable Solving Equations: 2 step Number sequences: term to term rule Solving equations: 3 step	Factors, multiples, primes Square & cube numbers Multiplying and dividing: integers and decimals by 10/100 Percentages; Calculate 50, 25, 10, 5, 1% Rounding; dp, sf and estimating	Angles (point, line) Perimeter: compound shapes Area: Trapezium and compound area Volume & surface area; cuboid Angles: triangle including	

		sharing, 1:n, combined ratio (three way) Linear graphs Transformations: Translation and reflection (Sept '24)		Factors, multiples, primes; LCM, HCF, prime factors Index notation Percentage increase/decrease	special triangles, quadrilateral Circles: naming parts, area and circumference Constructing shapes (Sept '24)	
Links to prior learning-	Year 7; Sets and Probability Multiplication and Division Fractions	Year 7; Ratio intro Multiplying and Dividing Methods	Year 7; Sequences Solving 1 step equations	Year 7; Finding unit fractions Finding basic percentages Multiplying and Dividing by Powers of 10	Year 7; Angles on a straight line and in a full turn Angles in triangles and quadrilaterals Area and perimeter of basic shapes	Year 7; Basic Probability and the language of probability.
SMSC links (inc. careers)-	Bias use of Data in the Real World and on the News	Discovering PI. Cooking and Quantities of Ingredients. Converting between Currencies.	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.
Core knowledge and skills-	Operations with fractions	Multiplication and Division	Solving equations with	Identifying types of numbers	Understanding of properties of	Using previously

	Interpreting graphs and tables containing data	with negative and decimal numbers Understanding metric conversions	up to 3 steps with a reliable method Interpreting inequalities	Finding basic percentages	shapes including angles, area and perimeter	learned averages to evaluate and compare data.
Assessment (inc. homework)-	End of half term/term assessments on taught knowledge. Powerful knowledge assessment at the end of the year. Homework set on Sparx weekly.					
Stretch and Challenge Opportunities	•Opportunity to visit Bletchley Park for curriculum enrichment trip. •Learning about History and origins of Maths through Literacy and comprehension tasks. •Extension of curriculum to include topics outside of NC. •Extension of curriculum to include Higher Level only topics, extending into year 9 curriculum and beyond.					