

Maths - Year 8

 Topic list Autumn 1	Topic list Autumn 2	Topic list Spring 1	Topic list Spring 2	Topic list Summer 1	Topic list Summer 2
- Ratio, proportion and scale - Algebraic manipulation - Coordinates and graphs	- Multiply and divide fractions - Symmetry and reflection	- Area, volume and density - Equations and inequalities - Percentages	- Indices - Standard form - Interpret and represent data	- Angles in parallel lines and polygons - Tables and probability - Circles	- Graphs and charts - Sequences
Why this Why Now	Why this Why Now	Why this Why Now	Why this Why Now	Why this Why Now	Why this Why Now
- Strengthens fluency with scaling, sharing, and comparing quantities in context. - Strengthens fluency in expanding, factorizing, simplifying and rearranging expressions and equations. - Encourages links between algebra and geometry, fostering deeper mathematical connections	- Develops fluency with fraction operations which are essential for proportional reasoning, algebra, and problem-solving. - Develops geometric reasoning, understanding of transformation and spatial awareness. - Prepares for more complex transformations later in KS3, including rotation, translation and enlargement.	- Develops spatial reasoning and the ability to link 2D and 3D measurement. - Introduces inequality symbols and interpretation on number lines, linking algebra to graphical understanding. - Develops fluency with percentage increase, decrease and change, which is vital for financial literacy and real-life problem- solving.	- Develops understanding of repeated multiplication and exponential notation which is essential for higher for higher-level algebra and scientific calculations. - Enables pupils to handle very large and very small numbers efficiently - Strengthens statistical literacy: collecting representing and interpreting data.	- Encourages logical thinking and systematic problem-solving in geometry. - Develops understanding of organising, representing and interpreting data systematically using tables and charts - Develops problem-solving skills with formulae and proportional reasoning in circular contexts.	- Develops the ability to represent, interpret and analyse data visually, reinforcing mathematical literacy. - Introduces arithmetic and geometric sequences, including finding the nth term.
Tier 3 Vocabulary and Reading		Tier 3 Vocabulary and Reading		Tier 3 Vocabulary and Reading	
Multiplying Menace: the Revenge of Rumpelstiltskin by Pam Calvert <u>Keywords:</u> Scale factor, direct proportion, inverse proportion, constant, rearrange, y-intercept	Sir Cumference and the Dragon of Pi by Cindy Neuschwander <u>Keywords:</u> Improper fraction, proper fraction, reciprocal, line of symmetry, transformation	Think of a number by Johnny Ball <u>Keywords:</u> Surface area, mass, volume, inequality, expression, multiplier, percentage change	Euclid's Window: The story of Geometry from parallel lines to hyperspace by Leonard Mlodinow <u>Keywords:</u> Index, base, laws of indices, power of ten, frequency, trend.	<u>Practice makes perfect in Geometry by John Parnell</u> <u>Keywords:</u> Alternate angles, corresponding angles, co-interior angles, regular, irregular, tally, two-way table, relative frequency, radius, diameter, arc, tangent, chord.	Tiger math by Ann Whitehead Nagda <u>Keywords:</u> Line graphs, distribution, common difference, nth term