

Long Term Plan Maths

Year 7

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Unit	<ul style="list-style-type: none"> Calculating Number and the number system 	<ul style="list-style-type: none"> Checking, approximating, and estimating Counting and Comparing Visualising and constructing 	<ul style="list-style-type: none"> Properties of shapes Algebraic Proficiency: tinkering Exploring FDP 	<ul style="list-style-type: none"> Proportional Reasoning Patterns Measuring Space Angles 	<ul style="list-style-type: none"> Calculating FDP Solving Equations Calculating Space 	<ul style="list-style-type: none"> Mathematical Movement Presentation of data Measuring data
Skills, Knowledge, and Learning	<p>Over the course of this term pupils will be further developing their knowledge from KS2 and the number system; by demonstrating their understanding of place value for large and small numbers, applying the basic four operations for integers and whole numbers, further developing fluency to include the use of brackets and BIDMAS. Pupils will then further develop their mathematical knowledge by understanding prime numbers, factors, multiples and further developing their mathematical knowledge with Highest Common Factors & Lowest Common Multiples. Pupils will be developing their problem solving skills by applying their</p>	<p>Over the course of this term pupils will be developing their mathematical fluency with their understanding of rounding to appropriate degrees of accuracy and using rounded numbers to estimate effectively, a vital skill that can be used when applying their knowledge to problem solving questions. Pupils will further develop their mathematical fluency by demonstrating their knowledge to order positive & negative numbers, decimal and fractions, alongside using the correct inequality notation. Pupils will then be focused on understanding the language used within Geometry, pupils will be developing their</p>	<p>During this term pupils will be further developing their geometry knowledge by identifying key properties of 2D and 3D shapes and be able to categorise and describe special quadrilaterals further developing their mathematical reasoning skills. Pupils will begin to develop their knowledge of Algebra, understanding key vocabulary used. Pupils will develop fluency with their interpretation of algebraic notation, as well as developing skills to simplify and manipulate basic expressions. Pupils will begin to develop an understanding of substitution and apply these skills to problem solving scenarios using formula and expressions. Pupils will be developing their reasoning and fluency of Fractions, decimals, and percentages. They will</p>	<p>During this term pupils will be further developing their mathematical reasoning and fluency skills for FDP, with the introduction of ratio notation and sharing into a given ratio, applying these skills to problem solving questions. Pupil will be recalling knowledge on sequences from Autumn 1, further developing their knowledge of sequence by generating sequences. Pupils will develop their knowledge of measurement system, understanding the conversion between metric measurements, using their knowledge of place value to support these conversions, and applying their knowledge to real life problem solving scenarios. Pupils will</p>	<p>Throughout this term pupils will be recalling prior knowledge of FDP, understanding the use of fractions and being able to use fractions with basic operations including improper and mixed numbers. Pupils will then develop fluency between fractions and percentages, as well as developing calculator skills to calculate percentages and percentage change, before applying these skills to real life problem solving situations. Pupils will further develop their algebra skills, recalling previous knowledge and further developing fluency with solving linear equations, understanding the connections between inverse operations. Pupils</p>	<p>During this final term pupils will be developing an understanding of the co-ordinate system, including reading and plotting coordinates, understanding equations of line (horizontal and vertical), and developing problem solving skills on a coordinate axes. Pupils will then spend the last weeks of terms developing their statistical knowledge, recalling, and developing fluency in data collection and presentation; understanding the optimum charts or graph to display information effectively. Pupils will also understand the difference between the averages and which average is</p>

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	knowledge to functional based questions. Pupils will also begin to understand square numbers and their associated roots, as well as recognising the use of powers such as 2, 3, 4, 5. Pupils will also begin to recognise sequences including basic arithmetic progressions, triangular numbers, square & cube numbers.	mathematical fluency by demonstrating an understanding of the vocabulary used for 2D & 3D shapes, as well as angles. Pupils will further develop fluency by drawing accurate shapes from written descriptions, demonstrating their understanding of key vocabulary.	demonstrate an understanding of percentages being out of 100 and be able to express numbers accurately as a fraction of another, as well as defining numbers as a percentage of another.	recall basic angles facts from Key stage 2, such as angles on a line and around a point, and further develop these rules to include vertically opposite angles and multi-step problem solving involving more than one angle rule.	will use their knowledge of measurements to apply this to calculating perimeter and area of basic shapes, including reasoning and problem solving questions. Pupils will develop the connection between algebra and geometry, using basic formula to substitute in values to calculate solutions.	more suitable to set scenarios.
NC/Qualification Objectives	<ul style="list-style-type: none"> • N1 • N4 • N5 • N6 • N3 • N7 • A15 • A16 	<ul style="list-style-type: none"> • N13 • N14 • N6 • N2 • G5 • G6 	<ul style="list-style-type: none"> • G15 • G7 • A3 • A1 • A4 • A2 • N5 • R1 • N10 	<ul style="list-style-type: none"> • R4 • R5 • A14 • N12 • R1 • G3 • G10 	<ul style="list-style-type: none"> • N4 • N10 • R8 • N6 • A7 • N12 • G2 • G1 • A5 	<ul style="list-style-type: none"> • A8 • G9 • G16 • S1 • S2
Enrichment/ Experiences	<ul style="list-style-type: none"> - Sea life centre– Weighing and measuring feed for animals. - Space centre/ Think tank - – planning the journey, trains, driving, average speeds. 					
Curriculum End Point / Goal	<p>Over the course of Year 7 Pupils will have been recalling skills and facts from Key Stage 2, and further developing their knowledge, fluency, and reasoning skills. Pupils will be ensuring they have a secure understanding of the number system and applying it to real life scenarios. Pupils will have demonstrated mastery of basic shapes, calculating the area and perimeter; further developing fluency and problem solving skills. Pupils will have a more in depth knowledge of basic algebra terminology and be able to identify term and expressions. Pupils will have demonstrated their mathematical reasoning and problem solving skills, when solving basic algebra equations. Over the year Pupils will have been introduced to ratio and proportion, understanding the effect on variable if they are directly proportional as well and identify and use conversion graphs. Finally, Pupils will have consolidated their KS2 knowledge of statistics, deepening their knowledge of data presentation, as well as applying their reasoning skills when calculating the various averages.</p>					