

Long Term Plan - Maths

Year 7

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
<p>Key Themes: Understanding of Number with Addition and Subtraction</p>	<p>Key Themes: Multiplication and Division</p>	<p>Key Themes: Introduction to Algebra and Fractions</p>	<p>Key Themes: Geometry</p>	<p>Key Themes: Percentages</p>	<p>Key Themes: Ratio</p>
<p>Key Concepts: Students will have a strong understanding of addition and subtraction along with topics related to this. Students will understand the value of separate digits and will become fluent with applying place value. This topic continues from Key Stage 2 Mathematics, with added extension topics to challenge our more able students. The content of this unit is vital for all work throughout the 5 year scheme of work.</p>	<p>Key Concepts: Students will have a strong understanding of Multiplication and Division along with topics related to this. Through classwork, students will develop fluency and be introduced to different methods in which they can obtain answers. This topic continues from Key Stage 2 Mathematics with added extension topics to challenge our more able students. The content of this unit is vital for all work throughout</p>	<p>Key Concepts: Students will have a strong understanding of the concept of Algebra. This topic continues from Key Stage 2 Mathematics with added extension topics to challenge our more able students. Students will be introduced to more complex calculations and will be challenged on their ability to balance and rearrange equations in a variety of contexts. The content of this unit is vital for all work throughout</p>	<p>Key Concepts: Students will have a strong understanding of different types of angles, angles on a straight line, at a point and properties of quadrilaterals. This topic continues from Key Stage 2 Mathematics with added extension topics (bearings, tessellations and parallel/perpendicular lines) to challenge our more able students. The content of this unit is vital for all work throughout the Mathematics scheme of work and</p>	<p>Key Concepts: Students will have a strong understanding of all aspects of Percentages, this will include finding a percentage of an amount, increasing and decreasing a percentage and applying to real life situations. An extension topic for this strand will be reverse percentages, which will provide our more able students with stretch and challenge. This topic continues from Key Stage 2 Mathematics, the</p>	<p>Key Concepts: Students will have a strong understanding of ratio and proportional reasoning and be able to use these skills to a variety of real world contexts. This topic continues from Key Stage 2 Mathematics with added extension topics to challenge our more able students. The content of this unit is vital for all work during the remainder of the scheme of work.</p>

	the Mathematics scheme of work.	the Mathematics scheme of work. Students will have a strong understanding of all operations of Fractions. This topic continues from Key Stage 2 Mathematics with added extension topics to challenge our more able students. The content of this unit is vital for all work throughout the Mathematics scheme of work.	will be revisited through DIN activities and homework throughout the 5 years period.	content of this unit is vital for all work throughout the Mathematics scheme of work. There are also strong links between this strand and Unit 4 (Fractions).	
<p>Links to prior learning:</p> <p>1.1 - Seen before: Initially seen in KS1 and KS2 understanding on values of number</p> <p>1.2 - Seen before: Initially seen in KS1 and KS2. Developed knowledge of formal methods.</p> <p>1.3 - Seen before: Initially seen in KS2</p>	<p>Links to prior learning:</p> <p>2.1 - Seen before: Initially seen in KS2 with understanding on division and multiplication.</p> <p>2.2 - Seen before: Initially seen in KS2 with understanding on division and multiplication.</p> <p>2.3 - Seen before: Initially seen in KS2</p>	<p>Links to prior learning:</p> <p>3.1 - Seen before: Initially seen in simple form in KS2</p> <p>3.2 - Seen before: Initially seen in simple form in KS2</p> <p>3.3 - Seen before: Initially seen in simple form in KS2</p> <p>3.4 - Seen before: New topic with elements of multiplication seen</p>	<p>Links to prior learning:</p> <p>5.1 - Seen before: Seen in KS2 with geometry units and understanding how to read a protractor</p> <p>5.2 - Seen before: Initially learnt about angles on a straight line and round a point in KS2 when studying use of a protractor.</p>	<p>Links to prior learning:</p> <p>6.1 - Seen before: Seen in KS2 while studying percentages as part of FDP</p> <p>6.2 - Seen before: Seen in KS2 when studying standard percentages</p>	<p>Links to prior learning:</p> <p>7.1 - Seen before: Knowledge from 2.2 with multiplication will be required to convert units.</p> <p>7.2 - Seen before: New topic not previously studied. Links can be made to fractions, however.</p> <p>7.3 - Seen before: New topic not previously studied.</p>

<p>through rounding to a given place value. 1.4 - Seen before: Initially seen in KS2 within geometry units combine with area of shapes</p>	<p>where emphasis is on use of brackets 2.4 - Seen before: Initially seen in KS2 with geometry units combined with perimeter. 2.5 - Seen before: Initially seen in KS2 when studying all other types of averages</p>	<p>earlier in year 7 and at KS1/2 3.5 - Seen before: New topic with elements of highest common factors seen earlier in year 7. 4.1 - Seen before: Seen in KS2 with an understands of what fractions are. May have been seen while studying division 4.2 - Seen before: Seen in KS2 when initially learning about common and different denominators 4.3 - Seen before: Seen in KS2 for multiplication and some students may have been taught division with fractions</p>	<p>5.3 - Seen before: Studied the properties of stand 2D shapes in KS2</p>		<p>Links can be made to fractions and percentages. 7.4 - Seen before: New topic not previously studied. Links can be made to fraction of amounts and increasing and decreasing by percentages</p>
<p>Vocabulary: Place Value, Estimate, Perimeter, Decimal, Significant Figure, Add, Sum, Difference, Subtract, Round,</p>	<p>Vocabulary: Multiply, product, area, commutative, compound, dividend, divisor, quotient, decomposition,</p>	<p>Vocabulary: Formula, expression, expanding, brackets, binomials, linear, equation, identity, algebraic, substitute,</p>	<p>Vocabulary: Quadrilateral, equal, length, properties, vertically opposite, parallel, alternate, co-interior, allied,</p>	<p>Vocabulary: Calculate, percentage, increase, decrease, express, interpret, reverse, original, decimal,</p>	<p>Vocabulary: Simplify, divide, express, quantity, direct proportion, convert, highest common factor,</p>

<p>Truncate, Compound, Integer, Range, Mode, Calculate, Inequality, Median, Convert, Commutative, Systematic, bound, upper, lower</p>	<p>associative, indices, index, prime, product, inverse, factorisation, mean, triangle, parallelogram, trapezium, mode, median, square, cube, power, positive, negative, formula, integer, operation, venn, compare</p>	<p>rearrange, positive, negative, variable, simplify, factor, manipulate, quadratic, coefficient, manipulate, sum, product, decimal, collect, simultaneous, inequality, highest common factor.</p> <p>Proper, improper, numerator, denominator, equivalent, simplify, lowest common multiple, mixed number, add, subtract, multiply, divide, inequality, integer, identify, convert, calculate, percentage, order, fraction.</p>	<p>corresponding, sum, angle, polygon, face, surface, edge, vertices, cuboid, angle, bearing, north, perpendicular, bisector, interior, exterior, parallelogram, rhombus, triangle, trapezium, interior, exterior, isosceles, base angle.</p>	<p>fraction, convert, evaluate, calculator, multiplier, justify, inequality, simple, compound, interest, numerator, denominator, compare, order, profit, loss.</p>	<p>prime factor, order, equivalent, ratio, fraction, decimal, similarity, compound, unit, ratio, colon, convert, combine, currency, scale, inverse.</p>
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