# Curriculum Overview Template

| | Focus | Autumn 1 | Autumn 2 | Spring 1 | Spring 2 | Summer 1 | Summer 2 |
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| Year 7 Maths | **Topic** | Numbers and the number system. Place value and adding and subtracting. | Decimals, multiplying and dividing, and area. | The mean, converting units, angles | Shape and space: triangles, quadrilaterals and symmetry | Fractions, fractions of amounts, order of operations | Percentages, fraction/decimal /percentage conversions, working with data |
| | **Key concepts/ideas** | 1) Understand place value to compare and order numbers including decimals<br>2) Use approximation and rounding in problem solving<br>3) Understand and solve problems involving addition and subtraction including perimeter | 1) Multiply and divide multi-digit numbers including decimals<br>2) Find and understand factors and multiples, including LCMs and HCFs<br>3) Understand and apply the formulae for area of a rectangle, triangle and parallelogram | 1) Mean Average<br>2) Accurately draw, measure, and identify types of angles<br>3) Use facts to solve problems involving unknown angles on a line and at a point<br>4) Convert between units | 1) Understand and use properties of triangles and quadrilaterals<br>2) Symmetry and tessellation | 1) Understand and use fraction notation in a variety of contexts<br>2) Compare and order fractions, decimals and mixed numbers<br>3) Multiply and divide with fractions<br>4) Carry out combined calculations using all four operations with brackets | 1) Understand and use percentage including percentage increase and decrease<br>2) Draw, read and interpret statistical diagrams, including pie charts |
| | **Key skills** | Unit 1: Place Value<br>• Read and write whole numbers in figures and words<br>• Multiply, divide and round any whole number by 10, 100, 1000, or 10 000<br>• Learn about different bases<br><br>Unit 2 and 3: Addition and Subtraction<br>• Use mental strategies<br>• Add and subtract using formal algorithms<br>• Calculate and work with **perimeters**<br>• Model solve word problems including using bar models<br>• Adding and subtracting in different bases<br><br>Unit 4: Addition and Subtraction of decimals | Unit 5,6,7: Multiplication and Division<br>• Use multiplication facts to solve mental calculations<br>• Use the terms ‘product’, ‘multiple’ and ‘LCM’<br>• Understand and use the column method to multiply integers and decimals<br>• Divide whole numbers and decimals by whole numbers<br>• Use the terms ‘quotient’, ‘remainder’, ‘factor’, ‘HCF’<br>• Represent multiplication word problems using bar models<br>• Find the **area** of 2-D shapes | Unit 8: Mean<br>• Find the **mean average**, interpreting average as “total amount ÷ number of items" and solve word problems involving average<br><br>Unit 9: Working with units<br>• Record and order measurements using decimal notation<br>• Estimate and/or measure:<br>○ length in kilometres (km) /metres (m)/ centimetres (cm)/ millimetres (mm) | Unit 11 and 12: Triangles and Quadrilaterals<br>• Classify triangles and quadrilaterals according to their properties<br>• Use a ruler and protractor to construct triangles and quadrilaterals from given data<br>• Know and use the fact that the sum of interior angles of a triangle is 180°<br>• know and use the fact that the interior angles of a quadrilateral sum to 360°<br>• Solve problems involving | Unit 14: Understand and use fractions<br>• Represent fractions using area diagrams, bar models and number lines<br>• Recognise and name equivalent fractions<br>• Convert fractions to decimals<br>• Convert terminating decimals to fractions in their simplest form<br>• Convert between mixed numbers and | Unit 20: Percentages<br>• Understand percentage as a fractional operator with denominator of 100<br>• Express a part of a whole as a percentage<br>• Convert between fractions, decimals and percentages<br>• Find fractions and percentages of given quantities<br>• Find the whole given a part and the percentage<br>• Increasing and decreasing by a percentage<br><br>Unit 21: Handling data |

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| | | • Understand decimal notation and place values<br>• Convert between decimals and fractions where the denominator is a factor of 10 or 100<br>• Rounding decimals<br>• Use correctly the symbols <, > etc. and the associated language to order a set of decimals<br>• Multiply and divide decimals by 10, 100, 1000, or 10 000<br>• Solve word problems involving the addition and subtraction of money in decimal notation<br>• Use written methods in column format for addition and subtraction of decimals<br>• Extend existing mental calculation to include decimals<br>• Calculate the **perimeter** of rectangles, squares and rectilinear figures | • Solve problems involving length, perimeter and area<br>• Estimate answers in calculations and check that results are reasonable<br>• Measure **time**, calculate with time and solve time word problems | ○ mass in kilograms (kg) /grams (g)<br>○ volume of liquid in litres (l) / millilitres (ml)<br><br>Unit 10: Angles<br>• Draw and measure acute and obtuse angles reliably to the nearest degree<br>• Estimate the size of any given angle<br>• Recognise acute, right, obtuse and reflex angles<br>• Know and use the fact that the angles round a point total 360°, that angles on a straight line total 180°, and that vertically opposite angles are equal | coordinates in the first quadrant<br><br>Unit 13: Symmetry and Tessellation<br>• Identify lines of symmetry in any shape<br>• Identify the order of rotational symmetry in any shape<br>• Create shapes given details of their symmetries<br>• Investigation and create tessellations | improper fractions<br>• Compare and order numbers<br>• Convert simple fractions and decimals to percentages<br>• Express one quantity as a fraction of another<br><br>Unit 15: Fractions of amounts<br>• Find a fraction of a set of objects or quantity<br>• Find the whole given a fraction<br><br>Unit 16: Multiplying and Dividing decimals<br>• Multiply a whole number or fraction by a whole number or fraction<br>• Multiply a mixed number and a whole number<br>• Divide a whole number or proper fraction by a whole number or proper fraction<br><br>Unit 17: Order of operations<br>• Carry out combined operations involving all four operations<br>• Underst and and use brackets<br>• Use simple index notation<br><br>• | • Understand the difference between types of data<br>• Construct and interpret<br>○ Tables (including tally and two way)<br>○ Bar charts (including comparative and composite)<br>○ Pictograms<br>○ Line graphs<br>• Read and interpret pie charts<br>• Draw pie charts from raw data<br>• Explore misleading graphical representations |
| | **Key terms/vocab** | Addition, Subtraction, Decimal, Integer, Commutativity, Associativity, Perimeter, Adjusting, Compensating, Tenths, Hundredths, Thousandths | Product, multiple, lowest common multiple, Quotient, Remainder, Factor, Highest Common Factor | Volume, Capacity, Millimetres, Centimetres, Metres, Kilometres, Grams, Kilograms, Litres, Millilitres, | Quadrilateral, Scalene, Equilateral, Isosceles, Interior, Exterior, Symmetry, | Equivalent, Terminating, Mixed numbers, Improper fractions, Vinculum, Numerator, | Increasing, Decreasing, Multiplier, Pictograms, Bar charts (comparative and composite), Line graphs, Pie |

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| | | | | Acute, Obtuse, Reflex, Mean Average | Tessellation, Rotational Symmetry | Denominator, BODMAS, Index notation, Powers | Charts, Raw Data, Hypothesis, Qualitative, Quantitative, Discrete, Continuous, Primary, Secondary |
| | **Independent learning / wider reading** | For more support and lots of practice questions go to www.mymaths.co.uk | For more support and lots of practice questions go to www.mymaths.co.uk | For more support and lots of practice questions go to www.mymaths.co.uk | For more support and lots of practice questions go to www.mymaths.co.uk | For more support and lots of practice questions go to www.mymaths.co.uk | For more support and lots of practice questions go to www.mymaths.co.uk |
| | **Assessment** | Initial test to test prior knowledge | Test on all topics covered so far | Test on all topics covered so far | | Test on all topics covered so far | Test on all topics covered this year |
| | **Careers links** | Finance, Biologist, Chemist, Physicist, Business Analyst, Forecaster, Computer scientist | Finance, Biologist, Chemist, Physicist, Business Analyst, Forecaster, Computer scientist | Finance, Biologist, Chemist, Physicist, Business Analyst, Forecaster, Computer scientist | Finance, Biologist, Chemist, Physicist, Business Analyst, Forecaster, Computer scientist | Finance, Biologist, Chemist, Physicist, Business Analyst, Forecaster, Computer scientist | Finance, Biologist, Chemist, Physicist, Business Analyst, Forecaster, Computer scientist |