

Year 7 Mathematics Mastery Success Criteria

Autumn Term	Spring Term	Summer Term
Place Value & the Four Operations Clips N1 – N4	Geometry & Fractions	Algebra, Percentages & Pie Charts
UNIT 1 – Place Value of Numbers <input type="checkbox"/> recognise concrete representations and place value models of whole numbers <input type="checkbox"/> read & write whole numbers in figures and words <input type="checkbox"/> mark the approximate position of a number on a number line <input type="checkbox"/> multiply, and divide, any whole number by 10, 100, 1000, or 10 000 CLIP N5 <input type="checkbox"/> round whole numbers to the nearest 1000, 100 or 10 CLIP N27A, N27B <input type="checkbox"/> put a set of numbers in ascending or descending order CLIP N2	UNIT 8 – Reading Scales <input type="checkbox"/> record and order measurements using decimal notation CLIP N1, N2, N7, N8, <input type="checkbox"/> estimate and measure: length in kilometres (km) /metres (m)/centimetres (cm)/ millimetres(mm), mass in kilograms (kg) /grams (g), volume of liquid in litres (l) / millilitres (ml) CLIP R2	UNIT 16 – Order of Operations CLIP N20 <input type="checkbox"/> carry out combined operations involving all four operations <input type="checkbox"/> understand and use brackets
UNIT 2 – Addition of Whole Numbers <input type="checkbox"/> add with & without concrete representation & place value tables <input type="checkbox"/> mentally add a set of numbers CLIP N3, N13 <input type="checkbox"/> calculate and work with perimeters and solve word problems involving length CLIP G8	UNIT 9 – Angles and Angle Properties of Straight Lines <input type="checkbox"/> draw and measure acute and obtuse angles reliably to the nearest degree CLIP G10 <input type="checkbox"/> estimate the size of any given angle <input type="checkbox"/> recognise acute, right, obtuse and reflex angles CLIP G10 <input type="checkbox"/> 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 = CLIP G13	UNIT 17 – Simplify & Evaluate Algebraic Expressions <input type="checkbox"/> represent an unknown number using a letter, write simple algebraic expressions and understand simple algebraic expressions CLIP A2, A3, A6, A7 <input type="checkbox"/> evaluate simple algebraic expressions by substitution, substitute numerical values into formulae and expressions CLIP A10 <input type="checkbox"/> multiply out brackets, collect like terms, identify and take out common factors to simplify expressions CLIP A6, A7, A8, A18 <input type="checkbox"/> recognise that different-looking expressions may be identical and prove simple algebraic identities
UNIT 3 – Subtraction of Whole Numbers <input type="checkbox"/> subtract with and without concrete representation and place-value tables <input type="checkbox"/> mentally subtract one number from another CLIP N4, N14 <input type="checkbox"/> calculate and work with perimeters and solve word problems involving length CLIP G8	UNIT 10 – Properties of Triangles CLIP G15, G16, G17 <input type="checkbox"/> talk about and work with triangles <input type="checkbox"/> use a ruler and protractor to draw triangles with given data <input type="checkbox"/> correctly copy drawings including triangles <input type="checkbox"/> know and use the fact that the sum of interior angles of a triangle is 180°	UNIT 18 – Algebraic Generalisations in Rich Contexts <input type="checkbox"/> representing an unknown number using a letter, write simple algebraic expressions and understand simple algebraic expressions CLIP A2, A3, A4 <input type="checkbox"/> evaluating simple algebraic expressions by substitution, substitute numerical values into formulae and expressions CLIP A10 <input type="checkbox"/> multiplying out brackets, collect like terms, identify and take out common factors to simplify expressions CLIP A6, A7, A8, A18 <input type="checkbox"/> recognising that different-looking expressions may be identical and prove simple algebraic identities
UNIT 4 – Addition & Subtraction of Decimals <input type="checkbox"/> Understand decimal notation and place values <input type="checkbox"/> Read & write decimals with up to 6 digits in figures & words CLIP N1, N2 <input type="checkbox"/> Convert between decimal & fraction where denominator is a factor of 10 or 100 CLIP N32 <input type="checkbox"/> Use the number line to display decimals and round decimals to the nearest whole number, to 1 or 2 decimal places CLIP N27 <input type="checkbox"/> Use correctly the symbols $<$, $>$ etc. and the associated language to order a set of positive integers and decimals. CLIP N9, A20 <input type="checkbox"/> Solve word problems involving the addition and subtraction of money in decimal notation CLIP N7 <input type="checkbox"/> Relate decimal arithmetic to integer arithmetic <input type="checkbox"/> Use standard written methods in column format for addition and subtraction of integers and decimals CLIP N13, N14 <input type="checkbox"/> Calculate the perimeter of rectangles, squares and rectilinear figures CLIP G8	UNIT 11 – Properties of Quadrilaterals CLIP G14, G15 <input type="checkbox"/> talk about and work with quadrilaterals <input type="checkbox"/> use a ruler and protractor to draw quadrilaterals with given data <input type="checkbox"/> correctly copy drawings including quadrilaterals <input type="checkbox"/> know and use the fact that the interior angles of a quadrilateral sum to 360°	UNIT 19 – Pie Charts <input type="checkbox"/> read and interpret pie charts CLIP S9 <input type="checkbox"/> find fractions of amounts CLIP N33 <input type="checkbox"/> find the whole given a part
UNIT 5 – Multiplication of Whole Numbers <input type="checkbox"/> use multiplication facts to solve mental calculations CLIP N5, N11, N15, N17, N28 <input type="checkbox"/> use the terms 'product', 'multiple' and 'LCM' CLIP N31 <input type="checkbox"/> understand and use the column method to multiply integers <input type="checkbox"/> represent multiplication word problems using bar models, and solve	UNIT 12 – 2D Shape in Rich Contexts <input type="checkbox"/> solve problems involving 2D shape in rich contexts <input type="checkbox"/> connect content from all previous units <input type="checkbox"/> apply content from all previous units	UNIT 20 – Percentages <input type="checkbox"/> understand percentage as a fractional operator with denominator of 100 <input type="checkbox"/> express a part of a whole as a percentage, using the percentage symbol (%) CLIP N24 <input type="checkbox"/> write fractions as percentages and vice versa CLIP N32, N39 <input type="checkbox"/> represent percentages on a pie chart CLIP S9, N24
UNIT 6 – Multiplication of Decimals and Areas of Rectangles & Triangles <input type="checkbox"/> multiply whole numbers and decimals CLIP N15, N17, N28, N40, <input type="checkbox"/> estimate answers in calculations and check that results are reasonable CLIP N43 <input type="checkbox"/> find the area of a rectangle and triangle CLIP G9, G20 <input type="checkbox"/> solve problems involving length, perimeter and area CLIP G8, G9, G20 <input type="checkbox"/> measure time, calculate with time and solve time word problems CLIP N1, N7B, N21B,	UNIT 13 – Understand and Use Equivalent Fractions <input type="checkbox"/> Represent fractions using area diagrams, bar models and number lines CLIP N23 <input type="checkbox"/> Recognise equivalent fractions CLIP N23 <input type="checkbox"/> Convert fractions to decimals CLIP N32 <input type="checkbox"/> Convert terminating decimals to fractions in their simplest form CLIP N32 <input type="checkbox"/> Convert between mixed numbers and improper fractions CLIP N35 <input type="checkbox"/> Compare and order numbers CLIP N34 <input type="checkbox"/> Convert simple fractions and decimals to percentages CLIP N32	UNIT 21 – Percentage of a Quantity <input type="checkbox"/> find fractions and percentages of given quantities CLIP N24, N32 <input type="checkbox"/> find the whole given a part and the percentage CLIP N32, N39, R12 <input type="checkbox"/> find percentage increase and percentage decrease CLIP R9
UNIT 7 – Factors & Division of Whole Numbers & Decimals <input type="checkbox"/> divide whole numbers & decimals by integers CLIP N6, N17, N29, N40, N43 <input type="checkbox"/> use the terms 'quotient', 'remainder', 'factor', 'HCF' CLIP N31 <input type="checkbox"/> estimate answers in calculations and check that results are reasonable CLIP N43 <input type="checkbox"/> find the mean average, interpreting average as "total amount ÷ number of items" and solve word problems involving average CLIP S6, S7, S10	UNIT 14 – Fractions of Amounts <input type="checkbox"/> Express a quantity as a fraction of another CLIP N33 <input type="checkbox"/> Find a fraction of a quantity CLIP N33	
	UNIT 15 – Multiply and Divide Fractions <input type="checkbox"/> Use the unitary method to find the whole given a fractional part <input type="checkbox"/> Multiply a whole number or fraction by a whole number or fraction CLIP N37, N42 <input type="checkbox"/> Multiply a mixed number and a whole number CLIP N37, N42 <input type="checkbox"/> Divide a whole number or proper fraction by a whole number or proper fraction CLIP N37, N42	