

Year 6 MTP-Autumn Term

Power Maths Unit	Wk	National Curriculum Objective	Small Steps
Unit 1 Place Value- within 10,000,000	1	<ul style="list-style-type: none"> Read, write, order and compare numbers up to 10,000,000 and determine the value of each digit 	Numbers to 1,000,000, Numbers to 10,000,000, Partition numbers to 10,000,000, Powers of 10, Number line to 10,000,00
	2	<ul style="list-style-type: none"> Read, write, order and compare numbers up to 10,000,000 and determine the value of each digit round any whole number to a required degree of accuracy use negative numbers in context, and calculate intervals across zero 	Compare and order any number, Round any number, Negative numbers.
Unit 2 Number- 4 operations	3	<ul style="list-style-type: none"> solve addition and subtraction multi- step problems in contexts, deciding which operations and methods to use and why identify common factors, common multiples and prime numbers 	Add integers, Subtract integers, Problem solving (+/-), Common factors, Common multiples,
	4	<ul style="list-style-type: none"> identify common factors, common multiples and prime numbers Recognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3) (year 5) 	Rules of divisibility, Primes to 100, Squares and cubes
Unit 3 Number-4 operations	5	<ul style="list-style-type: none"> multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context identify common factors, common multiples and prime numbers 	Multiply by a 1 digit number, Multiply up to 4 digit by 2 digit number, Divide 3 digit number by a 2 digit number(long division) Short division Division using factors
	6	<ul style="list-style-type: none"> divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context use their knowledge of the order of operations to carry out calculations involving the four operations perform mental calculations, including with mixed operations and large numbers 	Divide a 4 digit number by a 2 digit number (long division), Long division with remainders, Order of operations, Brackets Mental calculations
	7	<ul style="list-style-type: none"> perform mental calculations, including with mixed operations and large numbers use their knowledge of the order of operations to carry out calculations involving the four operations 	Mental calculations, Reason from known facts
Unit 4 Number Fractions	1	<ul style="list-style-type: none"> use common factors to simplify fractions; use common multiples to express fractions in the same denomination compare and order fractions, including fractions > 1 add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions 	Equivalent fractions and simplifying, Equivalent fractions on a number line, Compare and order fractions, Add and subtract simple fractions, Add and subtract any 2 fractions
	2	<ul style="list-style-type: none"> add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions 	Add mixed numbers, Subtract mixed numbers, Multi-step problems, Problem solving(+/- fractions)

Unit 5 Number Fractions (2)	3	<ul style="list-style-type: none"> multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams multiply simple pairs of proper fractions, writing the answer in its simplest form [for example, $1/4 \times 1/2 = 1/8$] divide proper fractions by whole numbers [for example, $1/3 \div 2 = 1/6$] 	<p>Multiply fractions by integers</p> <p>Multiply fractions by fractions (2),</p> <p>Divide a fraction by an integer (2)</p>
	4	<ul style="list-style-type: none"> divide proper fractions by whole numbers [for example, $1/3 \div 2 = 1/6$] add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions use written division methods in cases where the answer has up to two decimal places 	<p>Divide a fraction by an integer</p> <p>Mixed questions with fractions,</p> <p>Fractions of an amount, Fraction of an amount (find the whole)</p>
Unit 6 Measure- Imperial/m	5	<ul style="list-style-type: none"> use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places 	<p>Metric measures, Convert metric measures, Calculate with metric measures, Miles and km, Imperial measures</p>

Year 6 MTP-Spring Term

PM Unit	Wk	National Curriculum Objective	Small Steps
Unit 7 Number Ratio and Proportion	1	<ul style="list-style-type: none"> • solve problems involving unequal sharing and grouping using knowledge of fractions and multiples • solve problems involving similar shapes where the scale factor is known or can be found 	Use ratio language, Introduce the ratio symbol, Ratio and factors, Scale drawing, scale factors,
	2	<ul style="list-style-type: none"> • solve problems involving similar shapes where the scale factor is known or can be found • solve problems involving unequal sharing and grouping using knowledge of fractions and multiples 	Similar shapes, Ratio problems, Problem solving (ratio/proportion)
Unit 8 Number Algebra	3	<ul style="list-style-type: none"> • generate and describe linear number sequences • express missing number problems algebraically 	Find a rule (1 step), Find a rule (2 steps), From expressions Substitution (2)
	4	<ul style="list-style-type: none"> • use simple formulae • express missing number problems algebraically • find pairs of numbers that satisfy an equation with two unknowns 	Formulae, Form and solve equations, solve one step equations, Solve 2 step equations, Find pairs of values
	5	<ul style="list-style-type: none"> • enumerate possibilities of combinations of two variables 	Solve problems with up to 2 unknowns
Unit 9 Number Decimals	1	<ul style="list-style-type: none"> • identify the value of each digit in numbers given to three decimal places and multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places • solve problems which require answers to be rounded to specified degrees of accuracy 	PV to 3 dp, round decimals, Multiply by 10,100,1000, Divide by 10,100,100 Add and subtract decimals
	2	<ul style="list-style-type: none"> • multiply one-digit numbers with up to two decimal places by whole numbers • use written division methods in cases where the answer has up to two decimal places • associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction [for example, 3/8] 	Multiply decimals by integers, Divide decimals by integers, Fractions to decimals, Fractions as division
Unit 10 Number Percentages	3	<ul style="list-style-type: none"> • recall and use equivalences between simple fractions, decimals and percentages, including in different contexts • compare and order fractions, including fractions > 1 • solve problems involving the calculation of percentages [for example, of measures, and such as 15% of 360] and the use of percentages for comparison 	Understand percentages, Fractions to percentages, Equivalent FDP, Order FDP, Simple % of an amount
	4	<ul style="list-style-type: none"> • solve problems involving the calculation of percentages [for example, of measures, and such as 15% of 360] and the use of percentages for comparison • recall and use equivalences between simple fractions, decimals and percentages, including in different contexts 	% of an amount (1), % of an amount Percentages (missing values)
Unit 11 Measure Perimeter and Volume	5	<ul style="list-style-type: none"> • recognise that shapes with the same areas can have different perimeters and vice versa • calculate the area of parallelograms and triangles 	Shapes-same area, Area and perimeter, Area and perimeter (missing lengths) Area of triangles counting squares, Area of right angled triangle

	<p>6</p> <ul style="list-style-type: none"> •calculate the area of parallelograms and triangles •recognise when it is possible to use formulae for area and volume of shapes •recognise that shapes with the same areas can have different perimeters and vice versa •calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm³) and cubic metres (m³), and extending to other units [for example, mm³ and km³] 	<p>Area of my triangle, Problem solving (area) Area of a parallelogram Problem solving (perimeter)</p> <p>Volume (count cubes), Volume of a cuboid</p>
--	--	--

Year 6 MTP-Summer Term

PM Unit	Wk	National Curriculum Objective	Small Steps
Unit 12-statistics	1	<ul style="list-style-type: none"> interpret and construct pie charts and line graphs and use these to solve problems 	Interpret line graphs, Draw line graphs, Advanced bar charts, Understand and complete pie charts, Read and interpret pie charts,
	2	<ul style="list-style-type: none"> interpret and construct pie charts and line graphs and use these to solve problems calculate and interpret the mean as an average 	Pie charts and fractions (2), Pie charts and %, Introduction to the mean, Calculate the mean
	3	<ul style="list-style-type: none"> calculate and interpret the mean as an average 	Problem solving (mean)
Unit 13 Geometry Properties of shapes	4	<ul style="list-style-type: none"> draw 2D shapes using given dimensions and angles recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons 	Measure and classify angles, Vertically opposite angles, Angles in a triangle, Angles in a triangle (special cases), Angles in a triangle- missing angles
	5	<ul style="list-style-type: none"> compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius draw 2D shapes using given dimensions and angles 	Angles in quadrilaterals, Angles in polygons, Circles, parts of a circle Draw shapes accurately
	6	<ul style="list-style-type: none"> recognise, describe and build simple 3D shapes, including making nets 	Nets of 3D shapes (2)
Unit 14 Position & direction	1	<ul style="list-style-type: none"> describe positions on the full coordinate grid (all four quadrants) draw and translate simple shapes on the coordinate plane, and reflect them in the axes 	The first quadrant, Read and plot in four quadrants, Solve problems with coordinates Translations, Reflections
Unit 15 Number 4 operations	2	<ul style="list-style-type: none"> Solve number and practical problems that involve all of the above use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy solve problems involving addition, subtraction, multiplication and division 	Problem solving-place value, negative numbers Problem solving- +/- Problem solving-four operations (2)
	3	<ul style="list-style-type: none"> recall and use equivalences between simple fractions, decimals and percentages, including in different contexts solve problems involving unequal sharing and grouping using knowledge of fractions and multiples 	Problem solving-fractions, decimals, % Problem solving-ratio and proportion

	4	<ul style="list-style-type: none">• use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places• describe positions on the full coordinate grid (all four quadrants)• recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles	Problem solving-time(2) Problem solving-position and directions Problem solving properties of shapes (2)
--	---	--	--