Power Maths Unit	Wk	National Curriculum Objective	Small Steps
Unit 1 Place Value- within 1,000,000	1	• read Roman numerals to 1000 (M) and recognise years written in Roman numerals. • read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit	Roman numerals, Numbers to 10,000, Numbers to 100,000, Numbers to 1,000,000, Read and write 5 and 6 digit numbers
	2	• count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000 • count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000 • read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit	Powers of 10, 10/100/1000/10,000/100,000 more or less Partition numbers to 1,000,000
Unit 2 Place Value-within 1,000,000	3	• Read, write, order and compare numbers to at least 1,000,000 and determine the value of each digit • round any number up to 1,000,000 to the nearest 10, 100, 1,000, 10,000 and 100,000	Number line to 1,000,000, Compare and order numbers to 100,000, Compare and order numbers to 1,000,000 Round numbers to the nearest 100,000, Round numbers to the nearest 10,000
	4	• round any number up to 1,000,000 to the nearest 10, 100, 1,000, 10,000 and 100,000	Round numbers to the nearest 10,100,1000
Unit 3 Addition and Subtraction	5	• add and subtract numbers mentally with increasingly large numbers • add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction)	Mental strategies (addition), Mental strategies (subtraction), Add whole numbers with more than 4 digits (2), Subtract whole numbers with more than 4 digits
	6	• add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction) • use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy • estimate and use inverse operations to check answers to a calculation • solve addition and subtraction multi- step problems in contexts, deciding which operations and methods to use and why	Subtract whole numbers with more than 4 digits Round to check answers Inverse operations (+/-) Multistep addition and subtraction problems (2)
	7	• solve addition and subtraction multi- step problems in contexts, deciding which operations and methods to use and why	Solve missing numbers problems, Solve comparison problems
Unit 4 Multiplication and Division	1	• identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers • know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers	Multiples, Common multiples, Factors, Common Factors Prime numbers
	2	• recognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3) • multiply and divide whole numbers and those involving decimals by 10, 100 and 1000	Square numbers, Cube numbers, Multiply by 10,100,1000, Divide by 10, 100,1000, Multiples of 10,100,1000
Unit 5 Fractions	3	• identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths	Equivalent fractions, Equivalent fractions (unit/non unit), Equivalent fractions (families of)

		• recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number [for example,2/5 + 4/5 = 6/5 = 1 1/5]	Improper fractions to mixed numbers, Mixed numbers to improper fractions
	4	• compare and order fractions whos6e denominators are all multiples of the same number	Compare and order fractions greater than 1
Unit 6 Fractions (2)	5	• add and subtract fractions with the same denominator and denominators that are multiples of the same number	Add and subtract fractions, Add fractions within 1, Add fractions totalling more than 1, Add to a mixed number, Add 2 mixed numbers
	6	• add and subtract fractions with the same denominator and denominators that are multiples of the same number	Subtract fractions within 1, Subtract from a mixed number, Subtract from a mixed number (breaking the whole)Subtract 2 mixed numbers, Solve fraction problems, Solve multi-step problems

Year 5 MTP-Spring Term

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Unit 7 Multiplication and Division (2)	1	• multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers	Multiply up to 4 digits by 1 digits, Multiply 2 digits (area model), Multiply 2 digits by 2 digits, Multiply 3 digits by 2 digits, Multiply 4 digits by 2 digits
	2	• divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context	Divide 4 digits by 1 digit (2), Divide with remainders, Efficient division, Solve problems with multiplication and division
Unit 8 Fractions (3)	3	• multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams	Multiply unit fractions by an integer, Multiply a non-unit fractions by an integer, Multiply mixed numbers by integers (2) Fraction of an amount
	4	• multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams	Finding the whole, Using fractions as operators,
Unit 9 Decimals	5	• read, write, order and compare numbers with up to three decimal places • • read and write decimal numbers as fractions [for example, 071 = 71/100]	Write decimals less than 1 up to 2 decimal places, Write decimals more than 1 up to 2 decimal places, Equivalent fractions and decimals (tenths), Equivalent fractions/decimals (hundredths), Equivalent fractions and decimals
Unit 9 Continued	1	• recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents • read, write, order and compare numbers with up to three decimal places	Thousandths as fractions, Thousandths as decimals, Thousandths on a pv grid, Order and compare decimals (same number of dp) Order and compare any decimals up to 3 dp
	2	• round decimals with two decimal places to the nearest whole number and to one decimal place • recognise the per cent symbol (%) and understand that per cent relates to 'number of parts per hundred', and write percentages as a fraction with denominator 100, and as a decimal	Round to the nearest whole number, Round to 1 decimal place, Understand %, % as fractions and decimals, Equivalent FDP,
Unit 10 Measure (Area and Perimeter)	3	• measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres • calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm2) and square metres (m2) and estimate the area of irregular shapes	Perimeter of rectangles, Perimeter of rectilinear shapes (2), Perimeter of polygons, Area of rectangles
	4	• calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm2) and square metres (m2) and estimate the area of irregular shapes	Area of rectangles, Area of compound shapes, Estimate area
Unit 11 Graphs and tables	5	• solve comparison, sum and difference problems using information presented in a line graph • complete, read and interpret information in tables, including timetables	Draw line graphs, Read and interpret line graphs (2), Read and interpret tables, Two way tables
	6	• complete, read and interpret information in tables, including timetables	Timetables-reading

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Unit 12 Geometry Property of shapes	1	• now angles are measured in degrees: estimate and compare acute, obtuse and reflex angles • draw given angles, and measure them in degrees (o) • identify: -angles at a point and one whole turn (total 360o) -angles at a point on a straight line and 1/2 a turn (total 180o) -other multiples of 90o	Understand and use degrees, Measure acute angles, Measure angles up to 180°, Draw lines and angles accurately, Calculate angles around a point
	2	• identify: -angles at a point and one whole turn (total 360o) -angles at a point on a straight line and 1/2 a turn (total 180o) -other multiples of 90o • use the properties of rectangles to deduce related facts and find missing lengths and angles • distinguish between regular and irregular polygons based on reasoning about equal sides and angles • identify horizontal and vertical lines and pairs of perpendicular and parallel lines (Year 3)	Calculate angels on a straight line, Lengths and angles in shapes, Regular and irregular polygons, Parallel lines, Perpendicular lines
	3	• identify horizontal and vertical lines and pairs of perpendicular and parallel lines (Year 3) • identify 3D shapes, including cubes and other cuboids, from 2D representations	Investigate lines, 3D shapes
Unit 13 Geometry Position/Direction	4	• Describe positions on a 2D grid as coordinates in the first quadrant (Year 4) • identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed • identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed	Read and plot coordinates, Problem solving with coordinates Translate shapes, Translate points, Lines of symmetry
	5	• identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed	Reflection in horizontal and vertical lines
Unit 14 Decimals	6	• solve problems involving number up to three decimal places	Add and subtract decimals within 1 (2), Complements to 1, Add and subtract decimals (bridging), Add decimals (same number of dp)
Unit 14 Cont	1	• solve problems involving number up to three decimal places	Subtract decimals (same number of dp) Add decimals (different dp), Subtract decimals (different dp), Problem solving with decimals (2)
	2	• read, write, order and compare numbers with up to three decimal places • recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents	Decimal sequences, Multiply by 10, Multiply by 10,100,1000, Divide by 10, Divide by 10,100,1000

Unit 15 PV- Negative numbers	3	• interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero	Understanding negative numbers, Count through zero, Compare and order negative numbers, Find the difference
Unit 16 Measure-converting Units	4	• convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre) • understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints	Kilograms and kilometres, Millimetres and millilitres, Convert units of length, Imperial units of length, Imperial units of mass
	5	• understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints • solve problems involving converting between units of time • use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling	Imperial units of capacity, Convert units of time, Timetables (calculating) Problem solving (units of measure) (2)
Unit 17 Volume& Capacity	6	• estimate volume [for example, using 1 cm3 blocks to build cuboids (including cubes)] and capacity [for example, using water]	Cubic centimetres, Compare volume, Estimate volume