

Year 4 Maths Medium Term Plan

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7
Term 1	<p>Number and place value Read and write numbers up to 100,000 in numerals and words.</p> <p>To represent 4 digit numbers (concrete-place value counters).</p> <p>To find 1, 10, 100 or 1000 more than a given number (concrete).</p> <p>To recognise the place value of each digit in a four digit number.</p> <p>Order and compare numbers beyond 1000 up to 100,000.</p>	<p>Addition To add four digit numbers (no regrouping) (written column method) – also add 4 digit no and a 3 digit no.</p> <p>To add with regrouping in the 100s (use place value counters)</p> <p>To add with regrouping in the 100s, 10s and 1s (place value counters)</p> <p>To identify common misconceptions in column addition</p>	<p>Subtraction To subtract up to 4 digit numbers (no regrouping) (written column method – can back up with diennes if needed)</p> <p>To subtract with regrouping (written column method – can back up with place value counters if needed)</p> <p>To subtract with numbers that have zeros (written column method)</p> <p>To identify common misconceptions in column subtraction</p>	<p>Multiplication To multiply three digit numbers by one digit number (using diennes)</p> <p>To multiply by ten using place value grids and dienes</p> <p>To multiply two digit by two digit number (see PA maths exemplification – expanded grid method)</p> <p>Count on in multiples of 4 and 6</p>	<p>Division To use number bonds for factor and products (To solve missing number sentences)</p> <p>To make the link between sharing, arrays and short division. To estimate the answer to a calculation and use the inverse to check.</p> <p>To use known facts to derive facts involving 3 digit numbers (If I know $2 \times 3 = 6$ I can work out that $600 \div 3 = 200$)</p> <p>To use the distributive property strategy to divide ‘friendly’ numbers.</p>	<p>Measurement – Time To convert units of time.</p> <p>To convert time between analogue and digital clocks (12 hour and 24 hour).</p> <p>To solve problems involving converting time.</p>	<p>Review skills taught based on assessment for learning.</p> <p>Ensure place value is secure.</p>
	<p>>To count in multiples of 6,7 and 9.</p> <p>>To count in multiples of 25 and 1000.</p> <p>>To count backwards through zero to negative numbers.</p> <p>>To find 1,10, 100, 1000 more than any given number (with 4 or more digits)</p> <p>>To find 1,10, 100, 1000 less than any given number (with 4 or more digits)</p>	<p>>Rapid recall of all addition facts to 20. (e.g. all pairs of numbers to 15)</p> <p>>Derive quickly related facts: e.g. $9+6=15$, $90+60=150$, $900+600=1500$</p> <p>>Derive quickly number pairs that make 100. $34 + \square = 100$, $\square + 45=100$</p> <p>>Count on from any given number in repeated steps of 1,10,100,1000</p> <p>>Consolidate knowing by heart all addition and subtraction facts to 20. >Know how</p>	<p>>Partition into hundreds, tens and ones to add mentally</p> <p>> Add three numbers mentally. (two digit and one digit)</p> <p>> Add three digit multiples of 10: e.g. $430+360$ or $570+260$</p> <p>>Find the difference by counting up through the next multiple of 10, 100 or 1000. i.e. count from smaller to larger number i.e. $483-386$</p> <p>>Count back in repeated steps of 1, 10, 100, 1000 from any given number.</p>	<p>>To multiply by 10, 100 and 1000</p> <p>>Rapid recall of all numbers multiplied by 10, 100, 1000</p> <p>> Rapid recall of all multiplication and division facts up to 12×12</p> <p>>To understand what happens when multiplying by 1 and 0</p> <p>>To know all related division facts when given a multiplication fact ($8 \times 4 = 32$ therefore $32 \div 4 = 8$ $32 \div 8 = 4$)</p> <p>>To give statements about odd and even numbers (An odd digit</p>	<p>>To know by heart all doubles and halves (double 34 is double 30 + double 4 = $60+8= 68$)</p> <p>>To multiply by 4 (double and double again: $7 \times 4 =$ double 7= 14. Double 14 = 28) >To multiply by 5 (multiply by 10 and halve: $5 \times 9 = 10 \times 9 = 90$ halved = 45)</p> <p>>To multiply together three numbers</p> <p>>To know the divisibility of numbers (ring the numbers that divide exactly by four: 3, 8, 20, 27, 34, 36, 48, 50)</p>	<p>To calculate durations: Lunch takes 40 minutes. It ends at 1:10pm what time does it start? - Jan went swimming on Wednesday 14th January. She went swimming again 4 weeks later. What date was it? - The pool closed on Friday 20th March, It opened again on Friday 10th April. How many weeks was it closed for?</p> <p>>To recite the rhyme– 30 days</p>	

		many steps are taken forwards (+) or backwards (-) when moving on a numberline. >Partition into hundreds tens and ones: $98-43 = 98-40-3 = 55$		cannot be divided exactly by two)	>Recognise that a whole number is divisible by: 100 if the last two digits are 00; 10 if the last digit is 0; 2 if the last digit is 0,2,4,6,8; 4 if the last two digits are divisible by 4; 5 if the last digit is 5 or 0	has September... To know that a leap year has 366 days.	
Term 2	Fractions, decimals and percentages To identify equivalent fractions (using fraction wall) Show equivalent fractions pictorially (using shapes) To compare fractions (using fraction strips/manipulative fraction wall or discs to help). To compare and order fractions with the same denominator.	Fractions, decimals and percentages To use factors and multiples to recognise equivalent fractions. To simplify fractions.	Geometry-properties of shape To compare and classify geometric shapes based on their properties. To classify different triangles. To classify different quadrilaterals. To use a tree diagram to classify shapes.	Statistics To interpret and present data in a bar chart To interpret and present data in a time graph To solve comparison problems using information presented (in a range of tables/graphs). To solve sum problems using the information presented (in a range of tables/graphs). To solve finding the difference problems using the information presented (in a range of tables/graphs).	Measurement-length and mass To measure and calculate the perimeter of rectilinear shapes. To find the area of rectilinear shapes (by counting squares). To estimate, compare and calculate measures (length and mass)	Measurement – volume and capacity To convert units of volume. To estimate, compare and calculate volumes.	Four operations (context: volume, capacity, length, mass)
	>Count from zero in steps of one tenth >Count up and down in hundredths >Recognise that hundredths arise when dividing an object by one hundred and tenths from dividing one by ten	>Divide one digit numbers by 10 and 100 > Divide a two digit numbers by 10 and 100 >Round decimals with one decimal place to the nearest whole number. (and to round to the nearest £) >To multiply whole numbers by ten		>To count 'up' a counting stick in intervals of 2, 3, 5. > To count up a counting stick in intervals of any number. >To count up a counting stick in decimal intervals 0.5, 1.0, 1.5... >To quickly count up scores when voting takes place.	>To know that: 1 kilometre= 1000 metres, 1 metre= 100cm or 1000millimetres, 1 centimetre= 10 millimetres, 1 kilogram= 1000 grams, 1 litre = 1000 millimetres. >To know fractions of measures: 500g is half of 1kg, 75cm is three quarters of 1m.	>To solve problems involving measures: A full jug holds 2 litres. A full glass holds 1/4 of a litre. How many glasses full of water will the jug be?	Revise four operation mental maths skills.

	>To count in fractions forwards and backwards & to count in decimals forwards and backwards			>To interpret data from a pictogram using multiplicative reasoning. (i.e. if each image represents 5 people and there are 4 images then $5 \times 4 = 20$ = 20 people	> To write: 1.6m in cm (160cm), 5 litres in millilitres (5000ml), 8km in m (8000m), 3cm in mm (30 mm) etc. > To suggest areas you would measure in mm^2 , cm^2 , m^2 . >To double a recipe: 125g flour, 50g fat, 75g sugar, 30ml treacle, 1 teaspoon of ground ginger. (to scale by four...)		
Term 3	<p>Number and place value Round any number to the nearest 10, 100 or 1000. (To round appropriately given context see division strand)</p> <p>To identify and count in negative numbers.</p> <p>To estimate and round numbers using measuring instruments.</p>	<p>Addition and subtraction Add and subtract mentally 3 digit +/- H,T and O (Add and subtract numbers mentally, including: -HTU and U -HTU and T -HTU and H)</p> <p>To round off numbers to the nearest 10 / 100 to estimate to check answers to addition and subtraction calculations. Use the inverse to check.</p>	<p>Multiplication and division</p> <p>To divide a three digit number using short division (Regrouping in tens and ones) (could also use place value counters)</p> <p>To divide a three digit number using short division (Regrouping in tens, ones and hundreds)</p> <p>To use associative law to multiply three numbers</p> <p>Count on in multiples of 7,8 and 9</p>	<p>Fractions, decimals and percentages Add and subtract like fractions (fractions with the same denominator).</p> <p>To calculate the fraction of numbers and quantities.</p> <p>Recognise and write decimal equivalents of any number of tenths of hundredths. Recognise and write decimal equivalents to $\frac{1}{4}$, $\frac{1}{2}$ and $\frac{3}{4}$.</p>	<p>Fractions, decimals and percentages. Compare numbers with the same number of decimal places (up to 2 decimal places).</p> <p>Round decimals with one decimal place to the nearest whole number.</p>	<p>Geometry – position and direction To recognise that two right angles make a half turn, three make three quarters and four complete.</p> <p>To describe position on a 2-D grid as co-ordinates.(2,5) To plot specified points</p>	
	<p>>To know what the value of each digit is up to 10,000. To count on from any given number.</p> <p>>To round any two or three digit number to the nearest 10 or 100.</p> <p>>To round measurements in seconds, minutes, hours, metres,</p>	<p>>Derive pairs of multiples of 50 that total 1000: e.g. 250+750</p> <p>>Derive quickly addition doubles from: 1+1 to 50+50 e.g.</p> <p>>Double 46 Multiples of 10 from 10+10 to</p>	<p>>Approximate multiplications ($19 \times 16 = 20 \times 16 = (2 \times 16) \times 10 = 320$) Extend and explain number sequences (48, 41, 34, 27...) continuing beyond zero.</p> <p>>To multiply by 20 (multiply by 10 and double) Work out 8 times table by</p>	<p>>To find quarters and eighths by halving (of 56 is the same as half of 56 = 28 half again is 14, half again is 7 = 7)</p> <p>>Revise prior fraction mental maths skills from Term 2.</p>	<p>>To divide whole numbers by ten (and explain that the digits move one place to the right)</p> <p>>To multiply integers less than 1000 by 100. ($800 \times 100 =$)</p> <p>>To know that finding half is equivalent to</p>	<p>>Practise pointing and chanting negative and positive numbers on a scale, using a 'counting stick' (forwards and backwards).</p> <p>>Hold stick both horizontally and vertically to link to</p>	

	kilometres, litres to the nearest 10 or 100 units. why?)	<p>500+500: e.g. double 280</p> <p>Multiples of 100 from</p> <p>>Add or subtract the nearest multiple of 10, 100 or 1000 and adjust: add 9, 19, 29 or 11, 21, 31 to any number. e.g. $48 + 61 = 48 + 60 + 1$</p> <p>>Subtract the nearest multiple of 10, 100 or 1000 and adjust.</p> <p>>Use the relationship between addition and subtraction (If I know $36 + 19 = 55$ then I also know: $19 + 36 = 55$).</p>	<p>doubling four times table.</p> <p>>Use doubling to work out multiples of 15</p> <p>>Relate division to fractions (of 10 is the same as $10 \div 2$ and of 12 is the same as $12 \div 4$)</p> <p>>To divide a whole number of pounds by 2, 4, 5 or 10 (£29 divided between 4 people = £7 each + $\pounds 1 \div 4 = 25p = \pounds 7.25$ each)</p> <p>>Understand halving as the inverse of doubling. (if double 37 is 74 then half 74 is 37)</p>		<p>dividing by 2. Half 16 is $16 \div 2 = 8$</p> <p>>To know that when sharing a cake/pizza etc between 4 you divide by four and each person receives a quarter.</p>	<p>both the x and the y axes</p> <p>>To count along a counting stick as a scale in intervals of 1. (x-axis)</p> <p>>To count up a counting stick as a scale in intervals of 1 (y axis)</p> <p>>To count around a clock face in quarter turn, half turn, three quarter turn, full turn.</p> <p>> To count around a clock face in 90', 180', 270' and 360'</p> <p>>To have rapid recall of positions of the compass– north, south, east, west</p>	
Term 4	<p>Statistics</p> <p>To understand and use a range of scales.</p> <p>To understand the recording of change over time.</p> <p>To record change over time in a range of graphs.</p> <p>To record data into Venn and Carroll diagrams.</p>	<p>Measurement – money</p> <p>To calculate money in pounds and pence using four operations.</p>	<p>Four operations</p> <p>Mental strategies: Derive quickly related facts</p> <p>Add and subtract pairs of multiples</p> <p>Add 3 numbers mentally</p> <p>Know by heart all doubles and halves</p>	<p>Measurement – time</p> <p>To convert time between analogue and digital clocks (12 hour and 24 hour).</p> <p>To solve problems involving converting time.</p> <p>To calculate time durations that pass through the hour.</p>	<p>Measurement – time</p> <p>To convert units of time.</p> <p>To convert time between analogue and digital clocks (12 hour and 24 hour).</p> <p>To solve problems involving converting time.</p> <p>To calculate time durations that pass through the hour.</p>	<p>Geometry – properties of shape</p> <p>To identify acute and obtuse angles.</p> <p>To compare and order angles up to two right angles, by size.</p>	
	<p>>To count 'up' a counting stick in intervals of 2, 3, 5.</p> <p>> To count up a counting stick in intervals of any number.</p>	<p>>To express a relationship in words: How to find the number of days in any number of weeks.</p>	<p>Revise four operation mental maths skills.</p>	<p>See prior mental maths statements for this skill.</p>	<p>See prior mental maths statements for this skill.</p>	<p>>To know the names of 2D shapes.</p> <p>>To complement work on congruence, triangles, &</p>	

	<p>>To count up a counting stick in decimal intervals 0.5, 1.0, 1.5...</p> <p>>To quickly count up scores when voting takes place.</p> <p>>To interpret data from a pictogram using multiplicative reasoning. (i.e. if each image represents 5 people and there are 4 images then $5 \times 4 = 20 = 20$ people)</p>	<p>>How to find change from £1 after buying two items.</p> <p>>How to describe the short way to work out the perimeter of a rectangle.</p> <p>>To solve problems involving money: A game costs £4. Peter saves 40p a week.</p> <p>>How many weeks will it take to save?</p> <p>>To convert pounds into pence and vice versa:</p> <p>>How many pence in a pound?</p> <p>>To calculate fractions: Harry spent $\frac{1}{4}$ of his saving on a book. What did the book cost if he spent £4, £5, £10, £20</p>				<p>mathematical language</p> <p>>How many different triangles can you draw (make if you have a geoboard) on a 3x3 grid?</p>	
Term 5	<p>Number and place value</p> <p>To understand the history of different numeration systems.</p> <p>To read and understand Roman numerals up to 100.</p> <p>To understand the place value of decimals and fractions (see learning objectives in these strands).</p> <p>Recognise and describe number sequences, describing the rule for continuing to a given term e.g. 2.5, 2.75, 3 ...</p>	<p>Addition and subtraction</p> <p>To add and subtract decimals up to 2 decimal places.</p> <p>Solve one step addition word problems with decimals.</p> <p>To use the bar model to solve 2 step word problems involving addition and subtraction.</p>	<p>Multiplication and division</p> <p>To multiply 2-digit by 2-digit (written column method)</p> <p>To use the distributive law: $32 \times 3 = (30 \times 3) + (2 \times 3) = 90 + 6 = 96$</p> <p>To solve 2 step word problems involving division.</p> <p>To solve problems using scaling</p>	<p>Multiplication and division</p> <p>To solve 2-step problems involving multiplication.</p> <p>To recognise factors of a number.</p> <p>To identify square numbers up to 100.</p> <p>To know prime numbers up to 20.</p> <p>To multiply decimals.</p>	<p>Fractions, decimals and percentages</p> <p>To connect fractions, decimals and measures (using a number line)</p> <p>To use the bar model to help solve problems involving fractions.</p>	<p>Geometry – position and direction</p> <p>Describe movements between positions as translations (left, right, up, down)</p> <p>To draw a polygon. (Plot specified points and draw sides to complete a given polygon)</p> <p>To draw a pair of axes.</p> <p>To use coordinate plotting ICT tools.</p>	

	<p>>Estimate calculations by approximating.</p> <p>>To notice a pattern when counting from zero in 2s, 4s then 8s (4s are double 2s, 8s are double 4s)</p> <p>>To recognise odd and even numbers up to 10,000 and make general statements about them. (if you add odd numbers the answer is even.</p>	<p>Find what to add to a three digit number to make the next higher multiple of 100. e.g. $246 + \square = 300$</p> <p>>Add numbers to 1 decimal place to make the next whole number. $3.4 + \square = 4.0$</p> <p>>Revise any other mental maths skills</p> <p>>Subtract 2 digit multiples of 10</p> <p>>Subtract a pair of multiples of 100, crossing 1000</p> <p>> Subtract a multiple of ten from a 2 or 3 digit number without crossing hundreds</p> <p>>Subtract a single digit from a multiple of 10 or 100.</p> <p>>Subtract a single digit from a 3 or 4 digit number crossing tens</p> <p>>Find a small difference between a pair of numbers lying either side of a multiple of 1000</p>	<p>>Work out the six times table by adding 2 times table facts and 4 times table facts.</p> <p>>To multiply a number by 9 or 11, multiply it by 10 and add/subtract the number ($14 \times 9 = 140 - 14 = 126$ and $14 \times 11 = 140 + 14 = 154$)</p> <p>>To know the three corresponding number facts when given a multiplication number sentence.</p> <p>>To use related facts to half (i.e. half of 28 = half of 20 is 10 and half of 8 is 4 = $10 + 4 = 14$)</p> <p>>Recognise and use factor pairs.</p>	<p>>To use multiplication facts to find: one tenth of 100, 30, 500 etc one fifth of 15, 10, 35 etc one tenths, one quarter, one fifth of £1 or 1m.</p> <p>Revise prior mental maths fraction skills.</p>	Revise prior mental maths fraction skills.	<p>>To have rapid recall of positions of the compass, N, NE, E, SE, S, SW, W, NW Refer to the 'symmetrical' quality of the numbers with 0 as the middle value.</p> <p>>Describe and find the position of a square on a grid of squares with the rows and columns labelled.</p> <p>>Play noughts and crosses telling partner where to place on grid.</p> <p>> Tell a story including the words north, ascend, clockwise, left, horizontal.</p> <p>> To visualise and explain route from home to schools.</p> <p>>To recognise horizontal and vertical lines in the classroom environment.</p>	
Term 6	<p>Measurement – volume and capacity</p> <p>To convert units of volume.</p> <p>To estimate, compare and calculate volumes.</p>	<p>Four operations (context: volume and capacity)</p> <p>Solve two step volume word problems to add and subtract.</p> <p>Understands how to balance number sentences e.g. $4 + 7 = 1 + ?$</p> <p>Understand the use of brackets in simple calculations</p>	<p>Measure – Length and mass</p> <p>To estimate, compare and calculate length and mass.</p>	<p>Four operations (context: length and mass)</p> <p>Use bar model to help solve 2 step division word problems</p> <p>Calculate and measure the perimeter of rectilinear figure in cm and mm</p> <p>Find the area of rectilinear shapes by counting squares</p>	<p>Geometry – properties of shapes</p> <p>To compare length and angles to decide if a polygon is regular or irregular.</p> <p>To identify lines of symmetry in 2-D shapes presented in different orientations.</p> <p>To create a simple symmetric figure.</p>	<p>Statistics</p> <p>To record data into Venn and Carroll diagrams.</p>	Transition

	See prior mental maths statements for this skill.	See prior mental maths statements for this skill.	<p>>To double a recipe: 125g flour, 50g fat, 75g sugar, 30ml treacle, 1 teaspoon of ground ginger. (to scale by four...)</p> <p>To know that: 1 kilometre= 1000 metres, 1 metre= 100cm or 1000millimetres, 1 centimetre= 10 millimetres, 1 kilogram= 1000 grams, 1 litre = 1000 millimetres.</p> <p>>To know fractions of measures: 500g is half of 1kg, 75cm is three quarters of 1m.</p> <p>> To write: 1.6m in cm (160cm), 5 litres in millilitres (5000ml), 8km in m (8000m), 3cm in mm (30 mm) etc.</p> <p>> To suggest areas you would measure in mm^2, cm^2, m^2.</p>	See prior mental maths statements for this skill.	<p>>To complement work on congruence, triangles, & mathematical language</p> <p>>How many different triangles can you draw (make if you have a geoboard) on a 3x3 grid?</p>	>To sort numbers rapidly into Carroll diagrams	
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Throughout (and when children are ready): To use the bar model to represent word problems, Problem solving (4 types)