

Year 2 Maths Medium Term Plan

National Curriculum

<u>Number - Number and Place Value</u> Count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward Recognise the place value of each digit in a two-digit number (tens, ones) Identify, represent and estimate numbers using different representations, including the number line Compare and order numbers from 0 up to 100; use and = signs Read and write numbers to at least 100 in numerals and in words Use place value and number facts to solve problems	<u>Number – Addition and Subtraction</u> Solve problems with addition and subtraction: -using concrete objects and pictorial representations, including those involving numbers, quantities and measures -applying their increasing knowledge of mental and written methods Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100 Add and subtract numbers using concrete objects, pictorial representations, and mentally, including: -a two-digit number and ones -a two-digit number and tens -two two-digit numbers -adding three one-digit numbers Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems	<u>Number – Multiplication and Division</u> Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication ($\times$), division ($\div$) and equals (=) signs Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts	<u>Number – Fractions</u> Recognise, find, name and write fractions $\frac{1}{3}$, $\frac{1}{4}$, $\frac{2}{4}$ and $\frac{3}{4}$ of a length, shape, set of objects or quantity Write simple fractions for example, $\frac{1}{2}$ of 6 = 3 and recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$
<u>Measurement</u> Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature ($^{\circ}\text{C}$); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels Compare and order lengths, mass, volume/capacity and record the results using >, < and = Recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value Find different combinations of coins that equal the same amounts of money Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change Compare and sequence intervals of time Tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to show these times Know the number of minutes in an hour and the number of hours in a day	<u>Geometry – Properties of Shape</u> Identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line Identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces Identify 2-D shapes on the surface of 3-D shapes, [for example, a circle on a cylinder and a triangle on a pyramid] Compare and sort common 2-D and 3-D shapes and everyday objects	<u>Geometry – Position and Direction</u> Order and arrange combinations of mathematical objects in patterns and sequences Use mathematical vocabulary to describe position, direction and movement, including movement in a straight line and distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anticlockwise)	<u>Statistics</u> Interpret and construct simple pictograms, tally charts, block diagrams and simple tables Ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity Ask and answer questions about totalling and comparing categorical data

Term	Counting in steps of...	Times table(s)	Essential Maths (33 steps)
1	10	10	2LS1 – Number and place value: Numbers to 100 – counting, place value, ordering and comparing Step 1: Ten and some more Step 2: Number magnitude to 20 Step 3: Counting to 100 Step 4: Building numbers to 100 Step 5: Equivalence (=) and inequality (< and >) Step 6: Ordering and comparing numbers to 100 using < and > Step 7: Adding odd and even numbers 2LS2 – Number and place value: Place value – making ‘tens and some more’ Step 1: Regrouping ten ones for one ten Step 2 (optional): Regrouping ten pennies for ten pence Step 3: Regrouping one ten for ten ones Step 4 (optional): Regrouping ten pence for ten pennies 2LS3 – Number and place value: Place value and regrouping 2-digit numbers Step 1: Identifying the place value in 2-digit numbers using place value cards and base-10 Step 2: Identifying the place value in 2-digit numbers using a proportional (base-10) and non-proportional (money) model Step 3: Comparing representations of 2-digit numbers Step 4: Making regroupings of the same number in different ways Step 5: Identify missing parts of a regrouped number in a variety of models 2LS4 – Number and place value: Counting on and back in ones and tens from any number Step 1: Highlighting the place value of an identified number Step 2: Counting on and back Step 3: Counting on and back in through benchmarks Step 4 (optional): Deepening the concept of unitisation across linear and grid models 2LS5 – Number and place value: Representing, ordering and comparing numbers to 100 and quantities for measures Step 1: Ordering numbers Step 2: Ordering numbers represented in a variety of ways Step 3: < , > and = symbols Step 4: Order and comparing quantities for measures 2LS6 – Number and place value: Estimation and magnitude Step 1: Placing numbers on a number line in the correct positions Step 2: Using benchmarks to estimate values on a number line Step 3 (optional): Placing numbers proportionally correctly on a blank number line using benchmarks 2LS7 – Addition and subtraction: Numbers to 20 – mental addition and subtraction Step 1 (optional): Using 10 for adding 3 single digit numbers Step 2: Adding more than two single digit numbers using reordering Step 3: Rebalancing when adding 9 or 11 Step 4: Rebalancing when subtracting 9 or 11 Step 5 (optional): Using counting on and back through 10 to compare and calculate the difference Step 6: Use think addition for subtraction

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2	2	2	2LS8 – Addition and subtraction: Finding complements of 10 and 100 including measures Step 1: Rehearsing the complements to 10 and comparing them to the complements to 100 Step 2: Continue to rehearse complements to 10 and 100 whilst regrouping flexibly Step 3 (optional): Think addition for subtraction using multiples of 10 within the context of a problem Step 4: Think addition for subtraction using multiples of 10 within measure 2LS9 – Addition and subtraction: Add and subtract numbers mentally using 1 and 2 digit numbers Step 1 (optional): Doubles and near doubles Step 2: Using doubles and near doubles Step 3: Finding the nearest multiple of ten Step 4: Rebalancing for equal sum Step 5 (optional): Using rebalancing in context Step 6: Difference Step 7: Rebalancing to find the equal difference Step 8 (optional): Regrouping to 'think 10' in addition Step 9: Adding a 1-digit number to a 2-digit number using think 10 Step 10: Adding a 2-digit number to a 2-digit number using think 10 Step 11 (optional): Using 'think 10' for subtraction Step 12: Subtracting a 1-digit number from a 2-digit number using think 10 Step 13: Choosing a strategy 2LS10 – Addition and subtraction: Finding part or whole unknown Step 1: Identifying the parts and the whole using Cuisenaire rods in a bar model Step 2: Identifying the parts and whole in a cherry model Step 3: Inverse relationship of addition and subtraction Step 4: Using inverse to find missing numbers Step 5: Using inverse to find missing numbers in problems Step 6 (optional): Missing numbers in a range of contexts, including measures 2LS11 – Measurement: Money – making combinations and finding changes Step 1: Find different combinations of coins that equal the same amounts of money Step 2: Solve calculations involving subtraction of money of the same unit Step 3: Solve simple problems in a practical context involving addition and subtraction of money of the same unit Step 4: Continue to solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change 2LS12 – Measurement: Comparison (difference, more, less, fewer) Step 1: Understand difference when comparing numbers on number lines to other models Step 2: Compare values in the context of measuring mass (g) and use the language of comparison Step 3: Compare values in the context of comparing mass (kg) and use the language of comparison Step 4: Compare values in the context of measuring heights, lengths and widths, using the language of comparison Step 5 (optional): Compare values in a variety of contexts 2LS13 – Measurement: Measures – estimation and measure using different scales Step 1: Estimate on a number line using benchmarks Step 2: Estimate and compare capacities Step 3: Read capacities on different scales Step 4: Read scales on circular dials Step 5 (optional): Solve problems reading scales Diagnostic assessment paper 1: arithmetic Diagnostic assessment paper 2: reasoning

Term	Counting in steps of...	Times table(s)	Essential Maths (28 steps)
3	2	2	2LS14 – Statistics: Statistics – totalling and comparing amounts in block graphs, pictograms, tables and tally charts Step 1: Tables for sorting Step 2: Information tables Step 3: Gathering data using tally charts Step 4: Representing data in block graphs Step 5: Pictograms 2LS15 – Addition and subtraction: Written addition method Step 1: Choosing the appropriate mental strategy when adding a two-digit number and ones Step 2: Adding two-digit numbers and tens using concrete resources and pictorial representations Step 3: Adding two 2-digit numbers using a written method with no regrouping Step 4: Adding two 2-digit numbers using a written method with regrouping of ones 2LS16 – Addition and subtraction: Commutativity in addition but not in subtraction (OPTIONAL SEQUENCE – RECOMMENDED FOR USE AS PART OF FLUENCY SESSIONS) Step 1 (optional): Reviewing the parts and the whole using Cuisenaire rods in a bar model Step 2 (optional): Prove that addition is commutative Step 3 (optional): Prove that commutativity is not possible when subtracting 2LS17 – Addition and subtraction: Written subtraction method Step 1: Subtracting a 1-digit number from a 2-digit number – counting back using think 10 and regrouping the subtrahend Step 2: Subtracting a 1-digit number from a 2-digit number – regrouping the minuend Step 3: Subtracting tens from a 2-digit number Step 4: Subtracting a 2-digit number from a 2-digit number with no regrouping Step 5: Subtracting a 2-digit number from a 2-digit number with regrouping 2LS18 – Addition and subtraction: Problem solving with addition and subtraction in a range of contexts Step 1: The language of problem solving Step 2: Finding the unknown in a worded problem Step 3: Choosing a strategy Step 4: Strategies for solving missing number problems Step 5: Further problem solving within statistics 2LS19 – Measurement: Time – telling the time to o'clock, half past, quarter past and quarter to Step 1: Turns – quarter turn, half turn, three-quarter turn and full turn Step 2: Telling the time – o'clock, quarter past, half past, quarter to Step 3: Telling the time to 5 minute intervals 2LS20 – Measurement: Time – estimating, ordering and comparing time (amalgamate step 1 and 2) Step 1: Estimating intervals of time Step 2: Ordering intervals of time Step 3: Comparing intervals of time

Term	Counting in steps of...	Times table(s)	Essential Maths (27 steps, 2 diagnostic papers)
4	5	5	2LS21 – Multiplication and division: Double and halve one and two digit numbers and amounts of money Step 1: Doubling two-digit numbers Step 2: Halving multiples of ten Step 3: Halving two-digit numbers Step 4: Doubling and halving in the context of money 2LS22 – Multiplication and division: Times tables pattern and strategy: 2s, 5s and 10s (counting in 3s) Step 1: Patterns and strategies for the 2 times table Step 2: Patterns and strategies for the 5 and 10 times tables Step 3: Counting in 3s 2LS23 – Multiplication and division: Multiplication – multiples and repeated addition Step 1: Linking repeated addition and multiples Step 2: Multiples and multiplication Step 3: Exploring arrays 2LS24 – Multiplication and division: Multiplication – numbers of groups, group size and product Step 1: The language of multiplication Step 2: The commutativity of multiplication Step 3: Strategies to calculate multiplication facts – regrouping to multiply 2LS25 – Multiplication and division: Multiplication problem solving Step 1: Bar modelling for multiplication problems Step 2: Multiplication of measures Step 3: Multiplication and money (£ and p) Step 4: Mixed worded problems 2LS26 – Multiplication and division: Division – sharing and grouping Step 1: Division by sharing Step 2: Division by grouping Step 3: Division by grouping using arrays Step 4: Linking division and multiplication Step 5: Using multiplication facts to divide 2LS27 – Multiplication and division: Division – sharing and grouping problems including remainders Step 1 (optional): Patterns and rules of divisibility Step 2: Division with remainders – sharing Step 3: Division with remainders – grouping Step 4: Problems using division in context Step 5: Solving problems using division in context Diagnostic assessment paper 1: arithmetic Diagnostic assessment paper 2: reasoning

Term	Counting in steps of...	Times table(s)	Essential Maths (25 steps)
5	5	5	2LS28 – Fractions: Fractions – finding halves, quarters and thirds of amounts Step 1: Splitting a whole into equal groups (halves, thirds and quarters) with Cuisenaire rods Step 2: Finding half of an amount linked to division and sharing a whole into two equal groups (2LS21) Step 3: Finding $\frac{1}{3}$ and $\frac{1}{4}$ of amounts linked to sharing 2LS29 – Fractions: Fractions – finding halves, quarters and thirds of shapes Step 1: Recognising shapes split equally into halves, quarters and thirds Step 2: Finding $\frac{1}{2}$, $\frac{1}{4}$ and $\frac{1}{3}$ of 2-D shapes Step 3: Finding fractions of amounts within the context of shape Step 4 (optional): Finding what fraction of a shape is given 2LS30 – Fractions: Fractions – finding three-quarters of shapes and amounts Step 1: Finding $\frac{3}{4}$ of a shape Step 2: Finding $\frac{3}{4}$ of an amount Step 3: Finding $\frac{3}{4}$ in the context of finding amounts within shapes 2LS31 – Fractions: Fractions – equivalence Step 1: Exploring $\frac{1}{2}$, $\frac{2}{4}$ equivalence in shapes Step 2: Exploring $\frac{1}{2}$, $\frac{2}{4}$ equivalence using Cuisenaire rods Step 3: Comparing $\frac{1}{2}$, $\frac{2}{4}$ equivalence on a number line Step 4: Equivalence: $\frac{1}{2}$, $\frac{2}{4}$ of amounts within shapes Step 5: Equivalence: $\frac{1}{2}$, $\frac{2}{4}$ of amounts 2LS32 – Fractions: Fractions of continuous quantities Step 1: Counting fractions in context Step 2: Counting in fractions using a number line Step 3: Fractions of length Step 4: Fractions of capacity Step 5: Fractions of time 2LS33 – Measurement: Time – telling the time to the nearest five minutes Step 1: Telling the time – o'clock and half past Step 2: Telling the time – quarter past the hour Step 3: Telling the time – quarter to the hour Step 4: Telling the time to the nearest 5 minutes Step 5: Intervals of time

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6	3	2, 5, 10	2LS34 – All four operations, including fractions: Problem solving for all operations (including fractions) Step 1: Choosing an efficient strategy – addition and subtraction Step 2: Choosing an efficient strategy – multiplication and division Step 3: Identifying the unknown Step 4: Drawing to solve problems Step 5: Pictorial representation and part part whole – fractions of amounts Step 6: Making connections between the numbers $\frac{1}{2}$, $\frac{1}{4}$ or $\frac{1}{3}$; the fraction words; fractions of amounts and fractions of shapes Step 7: Finding $\frac{3}{4}$ in the context of worded problems 2LS35 – All four operations, including fractions: Multiplication and division – equality and balance Step 1: Equality in multiplication Step 2: Keeping the balance Step 3: Comparing calculations Step 4: Using division to identify equality in multiplication 2LS36 – Geometry: Geometry – properties of 2D and 3D shape, classifying and sorting Step 1: Naming 2-D shapes and their properties Step 2: Naming 3-D shapes and their properties Step 3 (optional): Identifying and classifying shapes by their properties 2LS37 – Geometry: Geometry – symmetry Step 1: Linking symmetry to halving Step 2: Identifying and sorting shapes - symmetry Step 3 (optional): Drawing symmetrical patterns and shapes 2LS38 – Addition, subtraction multiplication and division: Mental calculation review Step 1: Reasoning about addition Step 2: Identifying the unknown Step 3: Checking using the inverse Step 4: Simplifying repeated addition using multiplication 2LS39 – Geometry: Geometry – sequencing Step 1: Linear sequences Step 2: Patterns with shapes 2LS40 – Geometry: Geometry – rotation and right angles Step 1: $\frac{1}{4}$, $\frac{1}{2}$ and $\frac{3}{4}$ turns clockwise and anti-clockwise Step 2: $\frac{1}{4}$ turn = a right angle Step 3: Providing and following directions 2LS41 – Number and place value, addition and subtraction: Place value and written calculation review Step 1: Problem solving with addition Step 2: Checking for mistakes in written addition and subtraction Step 3 (optional): Counting in tens and hundreds to 1000 Step 4 (optional): ‘Hundreds and some more’ Step 5 (optional): 3-digit numbers – part whole Diagnostic assessment paper 1: arithmetic Diagnostic assessment paper 2: reasoning

