Medium Term Plans for Mathematics (aligned with the 2014 National Curriculum) -Year Two (Autumn Term)

Oral mental starters (ongoing, throughout the term:

- Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number
- Count forwards from 0 and backwards in twos, fives and tens to the 10th multiple
- Recall multiplication and division facts for the 2 and 10 times table
- Given a number identify the number that is 1 more or less within 100
- Say the number that comes between two numbers within 100
- Given a number begin to a identify the number that is 10 more or less than any number within 100 (refer to the hundred square)
- Begin to count on and back in 10s from any one or two digit number
- Recall and use all pairs of numbers with a total of 20; give addition and subtraction facts for the pair of numbers
- Begin to derive pairs of multiples of 10 with totals up to 100
- Recall the doubles of all numbers to 20 (10 + 10); derive halves of even numbers within 20
- Make estimates of quantities within 20 (and beyond)
- Consolidate days of the week, months of the year (use daily routines to support this)
- Read the time to the hour, the half hour and the quarter hour (past and to) using an analogue clock

NB Also see the **Mental Maths Policy** for further guidance

Areas of Study	No of days	Statutory requirements and non-statutory guidance	Suggested Key Vocabulary
Number Number and place value	5	Read and write numbers to 100 in numerals and **begin** to write them in words Given a number, say/ identify the number that is one more or less within 100 Say the number that comes between two numbers within 100 **Begin** to identify the number that is **ten more/ less** than a given number within 100 Recognise the place value of each digit in a two-digit number **using practical apparatus** e.g. straws, cubes, ten sticks and units, Unifix, arrow/ place value cards Partition two-digit numbers into tens and ones/units e.g. 34 = 30 + 4 Use knowledge of place value to order two-digit numbers and position them on a number line and/or a hundred square	Number, numerals Zero, one, two……to one hundred Ten more, ten less Between, before, after Place value Digit, tens, ones/units Order

Number Addition	5	Use the vocabulary and symbols (+ and =) related to addition Add numbers mentally and by using concrete objects, number tracks, marked number lines and /or 100 square - **two-digit numbers add a one digit number** within 50 (and beyond) Begin to use an **empty number line** to add a one -digit number to a two-digit number within 50 (and beyond) e.g. 23 + 6 = 29, 37 + 5 = 42 **(See Calculation Policy)** Solve **one step word problems**, which involve addition, using concrete objects and pictorial representations and number lines/ hundred square to support	Addition +, add, plus, more, put together, altogether, total, Count on =, equals, is the same as Empty number line Problem, answer/solution Calculate
Number Subtraction	5	Use the vocabulary and symbols (– and =) related to subtraction Subtract numbers mentally and by using concrete objects, number tracks, marked number lines and/or 100 square - **two-digit numbers subtract a one digit number** within 50 (and beyond) Begin to use an **empty number line** to subtract a one digit number from a two-digit number within 50 and beyond e.g. 28 – 7 = 21, 45 – 6 = 39 **(See Calculation Policy)** Solve **one step** problems, which involve subtraction, using concrete objects and pictorial representations and number lines/ hundred square to support Recognise and use the **inverse** relationships between addition and subtraction and use this to solve missing number problems using addition and subtraction facts within 20 e.g. 4 + ☐ = 12; 12 - ☐ = 4; ☐ + 18 = 20; 20 - ☐ = 18	Subtraction - , take away, subtract, minus How many are left? Count back Empty number line Problem, answer/solution Calculate, missing number Inverse

Geometry Properties of shape (2D)	5	Identify and describe the properties of 2D shapes (see vocabulary), including the number of sides and corners; recognise 2D shapes in different orientations Sort common 2D shapes (see vocabulary) e.g. using simple Venn diagrams or sorting circles Compare common 2D shapes (see vocabulary) e.g. respond to questions, 'What's the same about these two shapes?' 'What's different about these two shapes?' **Begin** to identify line symmetry (in a vertical line) in 2D shapes **in practical contexts** e.g. by folding shapes	All vocabulary from previous year (rectangle, square, circle and triangle) Extend with: pentagon, hexagon Side, corner Venn diagram, sort Symmetry, symmetrical, line of symmetry
Number Multiplication	5	Count forwards from 0 in twos, fives and tens to the 10th multiple Represent multiplication as repeated addition and as arrays using known multiples e.g. 2s, 5s and 10s **(See Calculation Policy)** Recall and use multiplication facts for the 2 and 10 multiplication tables Begin to recall and use some multiplication facts for 5x table Calculate mathematical statements within multiplication tables and write them using the x and = signs Calculate the value of an unknown in a number sentence e.g. 5 x ☐ = 10 Solve **one step** word problems, which involve multiplication, using practical resources, arrays, informal written methods (including pictures) and related vocabulary and signs Recognise odd and even numbers and relate to multiples/groups of two **(use practical resources to support)**	Lots of, groups of, repeated addition, times, multiply, multiplied by, multiplication x, array, row, column Count forwards Arrays Multiple Problem, answer/solution Odd/even numbers

Measurement Length	5	Use metre (m) and centimetre (cm) as standard units of length and height e.g. find objects that are longer/ shorter than a metre, that are about 10 centimetres etc Begin to choose and use appropriate standard units to estimate and measure length/ height (m/cm) to the nearest appropriate unit, using rulers and metre sticks Compare and order lengths using comparative language Follow a line of enquiry relating to length e.g. Is this true or false? All Year 2 children's feet measure more than 18 cm. How will you find out?	Estimate, compare, measure metre (m), centimetre (cm) Metre stick, ruler Longer than, shorter than, taller than Longest, tallest, shortest
Statistics Data handling	5	Collect data using a simple table and use the results to construct simple pictograms e.g. What is the favourite pet of children in our class? Answer simple questions about their pictogram by counting the number of objects in each category Collect data using a simple table and use the results to construct simple block diagrams e.g. What is the favourite fruit of children in our class? Answer simple questions by counting the number of objects in each category	Block diagram, pictogram Table, list Data Collect (data)
Number Division	5	Count forwards from 0 and backwards in twos, fives and tens to the 10^{th} multiple Represent division as sharing, grouping and arrays **(See Calculation Policy)** Recall and use division facts for the 2 and 10 multiplication tables Begin to recall and use division facts for the 5x table Calculate mathematical statements for division and write them using the ÷ and = signs Solve **one step** word problems, which involve division, using practical resources, informal written methods (including pictures) and related vocabulary and signs	Share, groups of, divide, divided by, shared equally ÷, = Array Problem, answer, solution Calculate

Number Fractions	5	Recognise, name and write fractions 1/2 and 1/4 using words and introduce **fraction notation** Find 1/2 and 1/4 of familiar shapes or set of objects **using practical resources** (Link unit fractions to equal sharing and grouping) Solve **one-step** problems, which involve fractions, using concrete objects and pictorial representations to support e.g. I have 12 cherries and I give half of them to my friend. How many cherries do I give her? There are 12 biscuits in a packet. I eat 1/4 of them. How many biscuits do I eat?	Fraction Half, quarter 1/2, 1/4 Problem, answer/solution
Measurement Time	5	Consolidate reading time to the hour and the half hour using an **analogue clock** Read the time to the **quarter hour (past and to)** using an analogue clock; draw hands on a clock face to show these times Use units of time (minutes & hours) and know the relationships between them; know that there are 60 minutes in an hour (one hour =60 minutes) Understand units of time e.g. What takes about one minute to do? What takes about one hour to do? What takes about half an hour (30 minutes) to do? Consolidate days of the week and months of the year	O'clock, half past, quarter past, quarter to Analogue clock Minutes/hours Days of week (Monday, Tuesday…) Months of year (January, February…)
Measurement Money	5	Consolidate recognising different coins (including £1) and understand their value **and notes** (£5, £10, £20) using the symbols (£) and pence (p) Solve problems involving combinations of coins e.g. How many different ways can you make 6p using combinations of coins; which coins could you use to pay for a banana that costs 30p? Solve **one- step** word problems involving addition, subtraction, halving & doubling in contexts of money (to 20p, 50p or £1) including giving change	Coins Pence (p), penny Pound (£) Buy, spend, change, pay, costs How much? Calculate, calculation Problem, answer/solution How did you work it out?

Geometry Properties of shapes (2D and 3D)	5	Identify line symmetry in 2D shapes (possible link to a Christmas theme) Consolidate names of common 3-D shapes Describe the properties of 3D shapes and use the words edges, faces and vertices Identify 2D shapes on the surface of 3D shapes Relate 3D shapes to everyday objects (possible link to a Christmas theme) Sort common 3D shapes e.g. by the number or shape of faces	Symmetry, symmetrical, line of symmetry All vocabulary from previous year (cylinder, cone, cube, cuboid, pyramid) and introduce: prism, edges, faces, vertices Sort

Additional weeks

To be used for:

- assessment, consolidation and responding to AfL
- additional using and applying activities
- Christmas maths activities