Year 2 Numbers and calculating planning (Weekly)   **Term: Spring 1**   **Week 2**

DAY	We Are Learning To (WALT):	MODEL / INTRODUCTION	INDEPENDENT WORK	PLENARY
M	Mental: To be able to count up to and back from 50 in 5s Main: Add and subtract using a hundred square Spr006	Mental: Have children count in 5s from 0 to 50 and back, doing a star jump for each number Main: TA to take children who are unable to find one more / less than another number. If unsure if some children can do this / get confused between more / less, ask them to do a couple of examples quickly to find out. TA to model for children how to find one more / less than a number on a number line Emphasise how when we add **more** we move forward / up the number line, whereas when we find **less** we move back / down the number line Once children are confident with this, model how to find one more / less than a number mentally, by putting the number in their heads (pretend to push it in to your head) and counting on / back one Teacher (with remainder of class) Explain that we will be working on using a hundred square and not getting confused between more / less Revise sayings and actions of: • To add one **more** (put one finger up), we move forward (point to the side) • To find one **less** (put one finger up), we move forward (point to the side) • To add ten **more** (put ten fingers up), we move down a row (point down) • To find ten **less** (put ten fingers up), we move up a row (point up) Revise how to find ten more / less or one more / less than a number on a hundred square using this method, reinforcing the sayings above, emphasising which direction to move and how we add ten by only changing the tens number (At this point you may get middle ability children to begin their independent work) Revise for higher ability children how to use a hundred square to add and subtract multiples of ten and 2-digit numbers To add / subtract multiples of 10 you need to see how many tens there are and move down / up this many rows e.g. to calculate 30 + 40, there are 4 tens in 40 so you need to start on 30 and move down 4 rows to get to 70. To add / subtract 2 digit numbers you need to first move down / up however many tens there are and then forward / backward how many units e.g. to calculate 30 + 56 there are five tens so you move down five rows and there are six units so then you move forward six spaces. Cover examples where you need to cross a 'tens barrier' e.g. 48 + 26 and model how to move back to the beginning of the next row down when you reach the end of a row e.g. when you get to 50, to count on one more you move down and back to 51. Emphasise need to check whether a question is more / less or add / subtract (Higher ability start work) Model for G+T how to add and subtract multiples of 100 by only changing the numbers in the hundreds column, similar to how we add multiples of 10 by only changing the numbers in the tens column Model how to add and subtract 3-digit numbers by adding / subtracting the hundreds, then the tens and then units	Lower ability – find one more / less than a number Middle ability – find one more / less or ten more / less than a number on a hundred square Higher ability – add and subtract 2-digit numbers Gifted and talented – add and subtract 3-digit numbers (with base ten materials if needed) Extension – make up some of their own number sentences to calculate	Revise sayings and actions from introduction. In ability partners give children 2 questions per pair, one for each partner. Children need to talk to their partner, explaining why they are using the method that they are using e.g. moving down 4 rows to add 40 because there are 4 tens in forty.

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Tu	Mental: To know the 2 times table Main: Add and subtract using a number line Spr007	Mental: Show children the 2 times table and spend some time reciting it Main: TA to take children who are unsure how to use concrete objects e.g. cubes, counters to add and subtract TA to revise how to add and subtract using such concrete objects e.g. to calculate 4 + 2 get 4 cubes, get two more and count how many there are / to calculate 4 – 2 get 4 cubes, remove 2 and see how many are left Ask each child to do an example. Children who are confident can get started on their independent work and children who are unsure can go through more examples with TA (If all children can do this already have TA take G+T children) Teacher (with remainder of class) Model how to add and subtract on a number line by starting on the first number, then doing the number of jumps for the second number e.g. to calculate 4 + 2, start on number four and do two jumps. Do another example making deliberate mistakes of missing out numbers when jumping or landing in between numbers. Ask children to explain why these are mistakes. Emphasise: - need to land on a number (not between numbers) - not skip a number - make sure not to count the first number, only count after the first jump (You may wish to have middle ability children start their work at this point) Revise how when you add and subtract multiples of ten, only the tens number changes e.g. in 45 + 20, only the 4 changes, not the 5. Model how we can use a blank number line to calculate with 2-digit numbers, revising strategies from previous days (for subtracting it does not matter if children start at the beginning of the number line and jump forward, or start at the end and jump forward, as long as they are calculating correctly) Encourage children working on addition and subtraction of 2-digit numbers to use larger jumps e.g. to calculate 40 + 23 they may do one jump of 20 and one jump of 20 and one jump of 3, as using larger jumps is quicker if children can do it accurately Repeat above model for adding and subtracting 3-digit numbers	Lower ability – use concrete objects to add and subtract with numbers below 10 Middle ability – use a number line with all numbers on it, to do jumps of 1 Higher ability – use a blank number line to add and subtract 2-digit numbers Gifted and talented – use a blank number line to add and subtract 3-digit numbers Extension – children to make up their own addition and subtraction sentences to calculate on pupil whiteboards	In ability partners give children 2 questions per pair, one for each partner (lower ability children to use cubes and middle ability children to use laminated number lines). Children need to talk to their partner, explaining why they are using the method that they are using e.g. using four jumps of ten to add 40 because there are 4 tens in forty

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W	Mental: To know the 5 times table Main: Add and subtract mentally Spr008	Mental: Show children the 5 times table and spend some time reciting it Main: TA to take children who are still insecure on adding and subtracting with their fingers with numbers below 10. If unsure ask children to quickly do a couple of questions to check Model how to add and subtract numbers using your fingers, revising strategies from previous lessons Emphasise the need to start counting from the next number e.g. to calculate 6 + 3, count from 7, so 7, 8, 9, and not count from 6, so 6, 7, 8 (If all children able to add and subtract with their fingers up to 10, TA to take G+T) Teacher (with remainder of class) Model how to add and subtract numbers using your fingers with one number by placing the first number in your head and using your fingers to count on / back by the second number Emphasise the need to start counting from the next number e.g. to calculate 6 + 3, count from 7, so 7, 8, 9, and not count from 6, so 6, 7, 8 (Middle ability children begin work) Briefly revise how to add and subtract with a hundred square and a number line. Tell children that they will not be using these today, but that if they imagine them in their minds it will help them. Revise how to add and subtract multiples of ten by only changing the tens digit e.g. 45 + 20, only the 4 in the tens column changes. Revise how to add and subtract 2-digit numbers by adding and subtracting the tens first and then the units e.g. 45 + 23 you add the two tens first to get 65 and then add the units to get 68 Remind children to visualise number lines and hundred squares as they work to help them Revise for G+T children how to add or subtract the hundreds first, then the tens, then the units, emphasising how if you are adding or subtracting hundreds, only the hundreds column changes	Lower ability – adding and subtracting with fingers (with totals up to 10). Children who work slowly to work on sheet rather than in books Middle ability – adding and subtracting with fingers (with totals up to 100) Higher ability – adding and subtracting 2-digit numbers mentally Gifted and talented – adding and subtracting 3-digit numbers mentally Extension – children to make up their own addition and subtraction sentences to calculate on pupil whiteboards (If children are really struggling to work without number lines / hundred squares, provide them, but only as last resort as aim of them is to give children mental images / strategies to work with, rather than becoming reliant / dependent on them)	In ability partners give children 2 questions per pair, one for each partner. Children need to talk to their partner, explaining how they are working out the calculation

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Th	Mental: To know inverses of the 2 times table Main: Understand addition and subtraction as inverses Spr009	Mental: Show children inverses of 2 times tables e.g. 2 ÷ 2 = 1 and spend some time reciting them Main: Briefly revise how to add and subtract on number line. What do children notice about the direction that you move? Briefly revise how to add and subtract multiples of ten on a hundred square. What do children notice about the direction that you move? Explain how addition and subtraction are inverse (opposite) This means that we can use addition to check subtraction and vice versa. Model how to do this with some subtractions that are incorrect e.g. to check 6 - 4 = 3, we can do 4 + 2 = 6 and see that we made a mistake with the subtraction Explain how we can also write two different addition and two different subtraction number sentences using the same numbers, just by swapping the order of the numbers around e.g. 8 – 5 = 3, 8- 3 = 5, 5 + 3 = 8 and 3 + 5 = 8 Emphasise need to check number sentences are correct, not just swap around the numbers in any way Model swapping the numbers around incorrectly e.g. 8 – 5 = 3, 8- 3 = 5, 5 + 3 = 8 and 3 + 8 = 5 (To help you can tell children that addition sentences will always end in the largest number, whereas subtraction sentences always end in the smallest number, although this is not true once children work with negative numbers)	Lower ability – write **one** addition and **one** subtraction sentence as inverses e.g. 8 – 5 = 3 and 5 + 3 = 8 Middle ability – write **two** addition and **two** subtraction sentence as inverses e.g. 8 – 5 = 3, 8- 3 = 5, 5 + 3 = 8 and 3 + 5 = 8 Higher ability – as middle ability, but with multiples of 10 G+T – as middle ability, but with multiples of 100 Extension – make up their own number sentences	Each child to give a partner a number sentence to write an inverse sentence / s to go with. Partners discuss if agree about number sentences that each of them has written

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F	Mental: To know inverse of the 5 times table Main: Use inverses to solve problems Spr010	Mental: Show children inverses of 5 times tables e.g. 5 ÷ 5 = 1 and spend some time reciting them Main: Revise how we learnt yesterday that addition and subtraction were inverse (opposite) This means that we can use addition to check subtraction and vice versa. Model how to do this with some subtractions that are incorrect e.g. to check 6 - 4 = 3, we can do 4 + 2 = 6 and see that we made a mistake with the subtraction It also means that we can use addition to find the missing number in a subtraction number sentence e.g. 7 - __ = 5, we can say 5 + __ = 7 Similarly we can use subtraction to work out the missing number in an addition number sentence e.g. 6 + __ = 9, we can say 9 - __ = 6 We can also use addition to check subtraction and vice versa in the same ways	Lower ability – children to calculate the missing number in addition and subtraction sentences with **numbers up to 10** (children who work slowly to work on worksheet) Middle ability – children to calculate the missing number in addition and subtraction sentences with **1-digit** numbers up to 100 Higher ability – children to calculate the missing number in addition and subtraction sentences with **2-digit** numbers up to 100 Extension – make up their own addition and subtraction number sentences with a missing number for a partner to complete on pupil whiteboards	Each child to give a partner a addition or subtraction number sentence to find the missing number for. Show each other what they think the missing number is. Partners discuss if agree about missing number