

Maths Medium Term Planning – Year 2 – Autumn 1

Autumn	Year 2 – Autumn 1		
	Number and Place Value		
	Learning Intention	Implementation	Impact
	To be able to count in steps of 2 from 0, forward or backward.	On a 100 square the children will count in 2s and colour in the numbers for even numbers, they will carry on the pattern beyond 100. They will then colour the odd numbers.	Children can recognise the pattern for counting in 2s and understand what odd and even numbers are. They will know how to write a 3 digit number.
	To count in tens from any number, forward or backward. (& MM)	The children will be able to add 10 and count in tens from any number from 0 to 100. E.g. 6, 16, 26. The children will write 0 to 100 counting in 10s.	The children will understand that every time you add a ten to a number, the tens column changes but the ones column remains the same. The children will recognise the pattern e.g. tens column increasing by 1 ten each time and the ones column remaining at 0.
	To recognise the place value of each digit in a two digit number (tens and ones).	The children will be given two digit numbers and will be able to say how many tens and ones are in that number e.g. 48, 31.	The children will understand which digit represents the tens and which represents the ones in a two digit number. They will understand for example that 2 tens are the same as saying 20.
	To identify, represent and estimate numbers using different representations, including the number line.	The children will in their mental maths sessions be asked to estimate for example how many pebbles are in the pot.	The children will understand how to estimate making a sensible guess e.g. there are 20 pebbles and they make sensible estimates by looking at the objects such as 19, rather than making an unrealistic estimate of 100.

Addition & Subtraction							
Learning intention	Implementation	Impact					
To solve problems with addition and subtraction using concrete objects and pictorial representations, including those involving numbers. To explore the relationship between addition and subtraction (begin to use the inverse operation as a checking strategy. To use knowledge of number pairs and partitioning to bridge through tens numbers when adding and subtracting. To practise recalling and using addition facts to ten/twenty. To add and subtract numbers using concrete objects (counting apparatus/diennes), pictorial representations and mentally, including a two digit number and ones and a two-digit number and tens.	The children will use a bar model. What does the bar model mean? What different number sentences can you write with these numbers? <table border="1"><tr><td colspan="2">10</td></tr><tr><td>3</td><td>7</td></tr></table> The children will work with numbers to 50. They will write all the ways to partition the number. E.g. $48 = 40+8$, $30 + 18$, $20+28$, $10+38$. The children will write their addition number bonds to 10 trying to write them systematically. They will then do subtraction number bonds to 10. They will then use these facts to support number bond calculation to 20. The children will add and subtract one and two digit numbers using cups; they will partition the numbers and then recombine to add. Some children will move onto bridging through ten. Focussing on addition write $14 + 13$.	10		3	7	The children will know how to use the bar model to aid addition and subtraction. They will also know how to derive all the addition and subtraction facts e.g. $3 + 7 = 10$, $10 - 7 = 3$. The children will understand that they can partition any two digit number in different ways by using their knowledge of how many tens and ones are in a number. The children will know their addition number bonds to 10 and use this to support subtraction number bonds. They will know how to apply addition and subtraction number bonds to 10 to number bonds to 20. They will be able to see patterns and relationships in numbers. The children will know how to partition numbers and then recombine them to work out how many altogether. The children who have learned how to bridge through ten will know that they have to exchange ten ones to make one ten. The children begin to move from using pictorial representations to adding mentally.	
10							
3	7						

To explore the relationship between addition and subtraction (begin to use the inverse operation as a checking strategy. (MM)

To solve missing number problems.

Partition the numbers by drawing the lines underneath and writing the totals.

e.g. $14 + 13 =$



$32 - 11 =$

$30 - 10 = 20$

$2 - 1 = 1$

$20 + 1 = 21$

$12 + ? = 19$, $29 - ? = 20$. $18 ? 3 = 15$, $20 ? 6 = 14$.

Complete a bar model with a missing number.

25	
7	?

The children will know to apply their number bonds to ten to work out the missing number to 20. They will understand that the ? represents a missing number or missing sign. They will know that where the answer is bigger than the starting number, you must add and where the answer is smaller than the starting number you must take away.

They will know how to use a bar model and understand that $7 + ?$ must equal the total shown on top of 25. They will also know how to derive other addition and subtraction facts from this e.g. $25 - 7 = 18$.

The children will understand how to use their number bonds to generate new facts to 100.

	To begin to use known addition and subtraction facts to 20 to generate new known facts to 100. (MM)	Write $1 + 4 = 5$, if we know this we can answer 1 ten + 4 tens = 5 tens ($10 + 40 = 50$).	
	Multiplication and Division		
	To recall and use multiplication and division facts for the 10x multiplication tables, including recognising odd and even numbers.	During their mental maths session the children will be asked to recall their 10x tables.	The children will be able to recall their 10x table in any order.
	Fractions		
	Recognise, find, name and write fractions $\frac{1}{2}$ and $\frac{1}{4}$. (MM)	As part of mental maths sessions. Write up $\frac{1}{2}$ - what does it mean? What does $\frac{1}{4}$ mean? If I had 16 magnets and I put them in $\frac{1}{2}$ how do I work it out? The children will identify half of a number and double of a number. Extend to halving and doubling word problems.	The children will understand that when you divide into $\frac{1}{2}$ you split into two equal pieces and when you divide into $\frac{1}{4}$ s you split into 4 equal pieces. The children will understand that doubling is adding the same amount again and halving is dividing into two equal parts.
	Measurement		
	Learning Intention	Implementation	Impact
	To solve simple problems in a practical context, involving addition and subtraction of money of the same unit. To compare and sequence intervals of time. (MM)	Each child is given £20. They will have a list of items and their price to spend their money on. What can they buy with their money?	The children will understand how to use addition to add up different prices. They will also understand that it must add up to £20. The children will be able to tell the time using an analogue clock to o'clock, half past, quarter past and quarter to.

	To recognise and use symbols for pounds (£) and pence (p) and combine amounts to make a particular value. (MM)	During the mental maths sessions the children will tell the time to o'clock, half past, quarter past and quarter to. Put all the coins in order on the board. What are their values? How much money do you have if you add them altogether?	The children will understand the value of the coins and be able to use their knowledge of adding and counting in 2s, 5s and 10s to add up coins.
	Geometry and properties of Shapes		
	Learning intention	Implementation	Impact
	To identify and describe the properties of 2D shapes, including the number of sides. To identify and describe the properties of 3D shapes, including the number of edges vertices and faces.	The children will play a guess my shape game by choosing a card and putting it on their head. Their partner then describes the properties of the shapes to them.	The children will understand mathematical vocabulary such as 2dimensional, 3 dimensional, sides, shapes, vertices and edges. They know the names of shapes dependent on the properties described.
	Statistics		
	Learning Intention	Implementation	Impact
	To interpret and construct block diagrams. To interpret and construct simple pictograms and tally charts	The children will represent data given in a bar chart and answer questions on this. The children will create their own pictogram selecting fruit using a computer programme. Once constructed they will answer questions about their pictogram. As a class make a tally of everyone's favourite fruit.	The children will know how to construct a bar graph and also interpret data from this. They will understand mathematical vocabulary such most and least popular. The different between. They children will understand that a tally is arranged by counting in 5s. They will know to use their knowledge of counting in 5s to add up a tally. They will know how to construct a pictogram and answer questions on it and generate their own questions.

Mastering number	Subitising	Cardinality, ordinality and counting	Composition	Comparison	Addition and subtraction/ Number facts
	- develop conceptual subitising skills as they become more familiar with patterns made by numbers within 10 and understand their composition - use perceptual and conceptual subitising when using a rekenrek.	- explore the linear number system within 10, looking at a range of representations - compare number tracks and number lines and explore the use of 'midpoints' to enable them to identify the location of other numbers.	- focus on the composition of numbers within 10, with a particular emphasis on the composition of numbers 6, 7, 8 and 9 as '5 and a bit', as well as exploring the composition of numbers 5 and 6 in-depth - explore the composition of odd and even numbers, identifying that even numbers are made of 2s and odd numbers have 'an extra 1' – they will link this to the 'shape' of these numbers.		- link their growing understanding of the composition of numbers within 10 to the related additive facts, including adding 2 to an odd or even number - practise recalling facts in a variety of ways, including through solving simple picture problems and completing equations with a missing sum or addend,
	Independence Resilience Respect Team-work Creativity Aspirational.				

