Maths Medium Term Planning – Year 2 – Autumn 2

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Number and Place Value		
Learning Intention	**Implementation**	**Impact**
To be able to count in steps of 2 from 0, forward or backward.	The children will in their mental maths practise counting up and back in 2s. Write a pattern on the board 2, 4, 6, 8. What are the next two numbers in the sequence?	Children can recognise the pattern for counting in 2s and understand what odd and even numbers are. They can say the next number in a sequence.
To count in tens from any number, forward or backward.	The children will be able to add/take away 10 and count in tens forwards and backwards from any number from 0 to 100. E.g. 6, 16, 26.	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.
To count in steps of 5 from any number, forward or backward.	As part of their mental maths the children will practise counting in 5s forwards and backwards from 100. Write a pattern on the board 5, 10, 15, 20. What are the next two numbers in the sequence?	Children can recognise the pattern for counting in 5s e.g. numbers ending in 0, 5, 0. They can say the next number in a sequence.
To read and write numbers to at least 100 in numerals.	As part of mental maths the children will be given a number on the 100 square e.g. 68, they must fill in the numbers next to it and above and below it (e.g. 1 more, 1 less, 10 more and 10 less).	Using a 100 square the children will be able to recall one more, one less, 10 more and 10 less than a number.
To recognise the place value of each digit in a two digit number (tens and ones).	As part of mental maths children will be given two digit numbers and will be able to say how many tens and ones are in that number e.g. 63. They will also be able to partition the number in different ways e.g. 60 + 3 = 63, 50 + 13 = 63, 40 + 22 =.	The children will understand which digit represents the tens and which represents the ones in a two digit number. They will be able to use this knowledge to partition numbers in different ways.

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To compare and order numbers from 0 up to 100; use <, > and = signs.	As part of their mental maths the children will roll 2 dice. What is the highest 2 digit number they make? Why did you put the numbers in those places? Put the symbols on the board < > =, what do they mean? Put two numbers on the board, which symbols can we use?	The children will understand that the number with the greater number of tens is the highest number and the number with the lowest number of tens is the lowest number. The children will understand what the symbols < > = mean and be able to use them when comparing numbers up to 100.
Addition & Subtraction		
Learning intention	**Implementation**	**Impact**
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 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 e.g. 18 + 14 = using cups to work out.	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.
To add one digit numbers.	The children will have a set of ten cards, each showing one of the digits from 0 to 9, which will be divided up between five envelopes so that there are two cards in each envelope. The sum of the two numbers inside it is written on each envelope e.g. 7, 8, 13, 14, 3. What two numbers could be inside each envelope?	The children will be able to use their knowledge of adding one digit numbers to solve a problem. They will build up resilience by trying to find all the different ways to solve the problem.
To partition numbers into tens and ones in different ways.	As part of mental maths the children will partition the number 57 into tens and ones in different ways e.g. 50 + 7, 40 + 17, 30 + 27, 20 + 37, 10 + 47= .	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.

	To recall and use addition and subtraction facts to 20 fluently and apply to missing number problems.	The children will complete addition missing number problems where the number is missing in the first or second position. What different combinations can you find to make this question correct? 2 ☐ + ☐ = 2 8	The children will understand that addition can be done in any order (commutative). They will be able to solve missing number problems by counting on, on a number line and moving on to applying addition number bond facts to 20 to solve missing number problems.
	To explore the relationship between addition and subtraction (begin to use the inverse operation as a checking strategy.	The children will have a selection of 4 numbers on a snowflake. Using these 4 numbers they have to write as many number sentences as they can. E.g. 17, 4, 12, 8. 17 + 8 = 25, 17 + 4 = 21, 17 + 12 = 29, 17 – 4 = 13.	The children will be able to perform the correct operation by understanding the + and – sign. They will also be able to use the inverse operation to check calculations.
	To begin to use known addition and subtraction facts to 20 to generate new know facts to 100.	The children will be given a selection of ingredients for a Christmas pudding that all weigh different amounts (all under 100g). The children have to find different combinations of ingredients which add up to exactly 80g.	The children will be able to use their knowledge of number bonds to 10 and 20, to generate new know facts to 100.
	Multiplication and Division		
	To recall and use multiplication and division facts for the 10 multiplication table, including recognising odd and even numbers.	During their mental maths session the children will be asked to recall their 10xtables.	The children will be able to recall their 10x table in any order.
	To solve problems involving multiplication and division, using materials, arrays, repeated addition and mental methods.	The children will be given a mini shop and they will answer questions about the shop e.g. If I buy 2 pieces of pizza costing 7p each. How much will they cost altogether? 2 x 7p = 14p.	The children will be able to recall their 2xtable and apply these to problems.
	To calculate mathematical statements for		The children will be able to draw arrays to

	multiplication within the multiplication tables and then write them using the multiplication (x) and equals (=) signs.	The children will solve multiplication sums.	work out multiplication sums. They will be increasingly able to recall facts mentally.
	Fractions		
	Recognise, find, name and write fractions 1/2, 1/3, 3/4, and ¼.	As part of mental maths the children will use fraction fans to show ¼, ½ and 3/4. They will find ways of making ½ e.g. ¼ + ¼ = ½. The children will complete a fraction sheet, shading in shapes that match the given fraction e.g. shade in 1/3 of a circle that is split into 3. They will then complete the sheet with pictures already shaded and will write the fraction. The children will identify half of a number and double of a number.	The children will understand that when you divide into ½ you split into two equal pieces and when you divide into 1/4s you split into 4 equal pieces. They will know equivalent fractions to ½ The children will understand that when you divide into 1/3 you split into three 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 tell the time to the nearest half an hour.	The children will write the time underneath the clocks.	The children know how to tell the time to the nearest half an hour.
	To tell the time to the nearest ¼ of an hour.	As part of mental maths the children will tell the time to the nearest ¼ of an hour.	The children know how to tell the time to the nearest ¼ of an hour.
	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**	The children will be given clues for "What am I?" shape question e.g. I am a 2D shape; I have 4 sides that are the same length. What am I? They have to work out the shape from	The children will understand mathematical vocabulary such as 2dimensional, 3 dimensional, sides, shapes, vertices and edges. They know the names of shapes dependent on

	vertices and faces.	the clues. As part of mental maths show them a cylinder, cone and cube. How are they the same? How are they different?	the properties described. The children will be able to compare shapes using mathematical vocabulary.	
	Statistics			
	Learning Intention	**Implementation**	**Impact**	
	To interpret and answer questions on block diagrams.	The children will answer questions about a graph looking at the differences between questions carefully.	The children will know how to interpret data on a bar graph and answer questions about it. They will understand mathematical vocabulary such most and least popular. The different between.	

Mastering Number	**Subitising**	**Cardinality, ordinality and counting**	**Composition**	**Comparison**	**Addition and subtraction/ Number facts**
	• continue to practise conceptually subitising numbers they have already explored the composition of.	• review the linear number system as they compare numbers.	• continue to explore the composition of the numbers 7–9 in-depth, linking this to their understanding of odd and even numbers	• compare numbers within 10, linking this to their understanding of the linear number system • use the inequality symbols to create expressions, e.g. 7 > 2, and use the language of 'greater than' and 'less than' • draw on their knowledge of number bonds to answer questions in the form: True or false? 5 + 3 > 7	• continue to practise recalling additive facts for numbers within 10, using a range of equations, games and picture problems.
	Independence **Resilience** **Respect** **Team-work** **Creativity** **Aspirational.**				