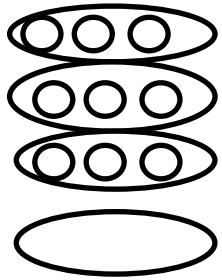
Maths Medium Term Planning – Year 2 – Spring 1

	Year 2 – Spring 1		
Spring 1	**Number and Place Value**		
	Learning Intention	**Implementation**	**Impact**
	To be able to count in steps of 1s to 100 forwards and backwards. (MM)	As part of mental maths the children will practise counting in 1s starting at different numbers forwards and backwards. Write a pattern on the board 4, 5, 6, 8, 9. Can the children spot the mistake?	The children will be able to count to and backwards from 100 starting at any number.
	To be able to count in steps of 2 from 0, forward or backward. (MM)	The children will in their mental maths practise counting up and back in 2s. Focus now more on 40-90. Count back in 2s from 80-40. Odd numbers as well 63 – 15. Write a pattern on the board 42, 44, 46, 48. What are the next two numbers in the sequence? Using a target board can they identify the odd and even numbers?	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. (MM)	As part of mental maths 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. Pose a question: When I count in tens from any number the ones digit stays the same, 'Do you agree? They must explain their reasoning in full.	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. (MM)	As part of their mental maths the children will practise counting in 5s forwards and backwards from 100. Write a pattern on the	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.

		board 5, 10, 15, 20. What are the next two numbers in the sequence? I start counting in 5s, I will say the number 12? True or false?	
	To double and halve numbers up to 20. (MM)	As part of their mental maths the children will work in talk partners to double and halve different numbers up to 20.	The children will understand doubling numbers as the same number again doubled and halving as splitting a quantity into two equal pieces.
	Recall and use addition facts to 20 fluently. (MM)	As part of mental maths the children will roll 6 numbers on a dice. After each roll, they will count how many there is altogether and how much more they need to get to 20 and what the different combinations could be. Flash a number (9). What is its number partner to 10? Then to 20?	The children will be able to recall addition facts to 10 and then to 20.
	To recognise the place value of each digit in a two digit number (tens and ones). (MM)	In their mental maths sessions the children will be given a number e.g. 63 and show how many different ways they can partition it into tens and ones e.g. 60 +3, 50 + 13, 40 + 22, 30 + 33, 20 + 43.	The children will be able to partition numbers into tens and ones in different ways.
	To compare and order numbers from 0 up to 100; use <, > and = signs. (MM)	As part of mental maths flash greater than/less than cards.	The children will understand that the symbol > represents greater than and the symbol < represents less than and the symbol = represents equal to and they will be able to compare numbers to say which number is greater than/less than another number.

	To read and write numbers to at least 100 in numerals.	The children will play guess my number. They will be given clues e.g. the number is a multiple of 2. The number is greater than 50. They must work out the number and explain their reasoning. The children will be given a missing hundred square. Write in the number 68 on one of the squares. Tell your partner what number you are going to write in it. Write up the numbers 7 & 12. What's the same? What is different? One is odd, one is even. They are both less than 20. They are both more than 1.	The children will be able to guess the correct number using their knowledge of multiples of 2s, 5s and 10s.
	Addition & Subtraction		
	Learning intention	**Implementation**	**Impact**
	To add and subtract numbers using concrete objects, pictorial representations and mentally two digit numbers. **To explore the relationship between addition and subtraction (begin to use the inverse operation as a checking strategy.** **To solve problems with addition and subtraction using concrete objects and pictorial representations.**	The children will revise adding and taking away 2 digit numbers. Include some crossing tens in some addition number sentences. As part of mental maths the children will come up with two addition number sentences for 69-35 = 34. The children will be given a range of 2 step word problems. Discuss what you are going to work out first. Are you adding or subtracting? Are you using both add and subtract? Ensure they are reading the questions carefully and not just looking at the numbers and adding them together.	The children will know how to partition two digit numbers into tens and ones and recombine them to add them together. They will know how to take away two digit numbers. They will be able to use adding and taking away as a checking strategy. The children will understand the vocabulary in a question which tells them whether to add or subtract.

		The children will be given some addition and subtraction number sentences with three different answers. Children will use estimation to find which number fits best and circle it. They will need to explain why they have picked that number.	
	To be able to add 10 to a number. (MM)	As part of mental maths the children will use flip books to add and take away 10 to 1 or 2 digit numbers.	The children will understand that when 10 is added or taken away, only the tens column changes, the ones column stays the same.
	Multiplication and Division		
	To recall and use multiplication and division facts for the 2 and 10 multiplication tables, including recognising odd and even numbers. (MM)	During their mental maths session the children will be asked to recall their 2x and 10xtables. On a daily basis the children will answer between 60/80 questions on 10x table sheet in 3 minutes.	The children will be able to recall their 2x and 10x table in any order.
	To calculate mathematical statements for multiplication and write them using the multiplication (x) and equals (=) signs.	The children will revise multiplying using cups and arrays.	The children will be able to complete multiplication sums using cups and arrays.
	To solve problems involving multiplication using materials, arrays, repeated addition and mental methods.	The children will complete some 2 step problems for multiplication.	The children will be able to solve multiplication problems.
	To calculate mathematical statements for division and write them using the division (÷) and equals (=) signs. To use materials and arrays to calculate division sums.	Demonstrate how to divide a group of cups into piles using actual cups and the Maths and Resources table. Show the children how to move all the cups over and then divide them into piles. Then demonstrate that you put those cups into piles of the second number	The children will be able to complete division sums using cups and arrays.

		e.g. 12 ÷ 3 = and put 12 into piles of 3. Show the children how to set out the cups e.g. put 12 cups into piles of three, then circle all the piles of 3, then put up how many piles you have. 	
	To solve problems involving division, using materials and arrays.	The children will solve word problems containing sharing words and divided into.	The children will be able to solve division problems.
	To solve division problems where there is a remainder.	The children will be shown the sum 12÷5 =. Show that we cannot divide this equally. This is because we know that 10÷5 = 2 and you cannot divide 12 by 5 evenly. Explain that they can use a remainder. We record this as 12÷5= 2r2.	The children will understand that some numbers do not divide equally and this can be shown as a remainder.
	To calculate mathematical statements for multiplication and division and write them using the multiplication (x), division (÷) and equals (=) signs.	Show children 3 numbers e.g. 4, 3, 12. Draw the signs (x and ÷). What are the 4 number sentences they can make? The children will have triangles with the numbers around the outside and the signs in the middle. Underneath they will write the 4 number sentences.	The children will understand the relationship between division and subtraction and be able to write the four number sentences.
	Fractions		

	Recognise, find, name and write fractions 1/2, 1/3, 3/4, and ¼. (MM) **To be able to add and subtract numbers with fractions.** **To be able to solve word problems containing doubles and halves.**	As part of mental maths the children will use fraction fans to show ¼, ½ and 3/4. The children will draw a line. They will record where 0 is and 1 is on the line. Children then work out where ½ is. Where do you put ¼? Now where do you put ¾? Show them cards. Ask what ½ and ½ makes. A whole. Same value, different appearance. Ask children to make 1 ½. Now they are going to add ½. What could they do to work out the answer? Move onto introducing subtraction. The children answer questions independently. GDs should now be doing this mentally. WT & EX will use cards to support understanding. The children will solve word problems where they have to work out the answer using their mental knowledge of halving and doubling. GD will solve 2 step problems.	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. The children will understand what fractions add up to make a whole one. The children can answer word problems relating to halving and doubling. They will understand that they can use their doubling knowledge to help answer halving problems and vice versa.
	Measurement		
	Learning Intention	**Implementation**	**Impact**
	To recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value.	The children will be given an amount of money (£2.29) and they have to make this using just £1coins, 10p coins and 1p coins. Can they find a different answer? As part of mental maths the children will be given an amount of coins on the board. How much more do they need to add to get to £1?	The children will recognise different coins. They will use their knowledge of number bonds to add different amounts of coins together. They will be able to work systematically to find all the different combinations.

	To tell the time to the nearest half an hour.	The children will tell the time to ¼ and ½ hour intervals. Extend to 10 minute intervals and 5 minute intervals (GD).	The children know how to tell the time to the nearest half an hour and quarter of an hour.
	Geometry and properties of Shapes		
	Learning intention	**Implementation**	**Impact**
	To compare and sort common 3D shapes and everyday objects.	As part of mental maths show the children a cylinder, cone and cube. How are they the same? How are they different? Can we sort them according to their properties? E.g. A cylinder and a cone have circular faces. A cube has square faces.	The children will be able to recognise, compare and sort shapes according to their properties.
	To identify and describe the properties of 3D shapes, including the number of edges vertices and faces. (MM)	As part of mental maths – Guess my shape – I am a 3D shape. What could I be? I have 4 vertices. What could I be? All my faces are the same shape. What am I? *Triangular based pyramid.*	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.
	To identify a shape pattern and say the next one in the sequence.	Put up shape pattern on the board. What are the next 3 shapes in the pattern?	The children will be able to identify a pattern and say the next shapes in the sequence.
	Statistics		
	Learning Intention	**Implementation**	**Impact**
	To interpret and answer questions on block diagrams.	The children will have a picture full of different amounts of various Australian animals. On a bar graph children will colour in how many of each animal they have been able to find. Following that they will answer questions about what they have found.	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.
	Independence Resilience Respect Team-work Creativity Aspiration.		

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, including 'teen' numbers when they have reviewed the composition of 11–19.		• review the composition of 11 to 19 as 'ten and a bit' and explore ways to represent this.		• focus on number bonds within 10 presented in the part-part-whole structure, including identifying a missing 'part' and relating this to subtraction equations • review strategies for adding 1 and 2 to odd and even numbers to subtraction facts presented in different ways • apply their knowledge of the composition of 11–19 to calculations in which 10 is a part • apply their knowledge of composition to facts involving 3 addends.
	Independence Resilience Respect Team-work Creativity Aspirational.				