Maths Medium Term Planning – Year 1 – Spring 2
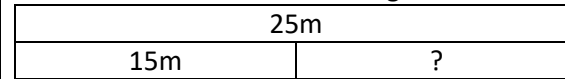
	Year 1 Spring 1		
	Number and Place Value		
	Learning Intention	**Implementation**	**Impact**
Spring 2	**To count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number.**	During mental maths sessions the children will continue to extend counting skills – counting in 1s forwards and backwards to at least 80. They will count using the abacus, number line and counting around the class. They will apply their knowledge to a sequence e.g. 70, 71, 72, _. What number comes next? Sarah is counting backwards from 80 to 75. She says the numbers 80, 79, 78, 77, 75. What mistake has she made?	All children will be able to count forwards and backwards to/from at least 80 and apply this knowledge in sequences.
	To count in multiples of tens.	During mental maths the children will count forwards and backwards in steps of 10 to/from 100. They will apply this to questions e.g. True or false? I start at 0 and count in tens. I will say the number 40.	All children will be able to count forwards and backwards to/from 100 in steps of 10 and apply this knowledge to problems.
	To count in multiples of twos	During mental maths the children will count in multiples of two starting at 0 and starting at 1. They will relate these to odd and even numbers. They will apply their knowledge to a sequence e.g. 12, 14, 16, _. What number comes next? They will apply this to questions e.g. True or false? I start at 0 and count in twos. I will say the number 20?	All children will be able to count forwards and backwards in 2s to at least 30 and apply this knowledge to sequences and problems.
	To count in multiples of fives	During mental maths the children will count in multiples of five starting at 0. They will apply their knowledge to a sequence e.g.15, 20, 25, _. What number comes next? They will apply this to questions e.g. True or false? I start at 0 and count in fives. I will say the number 25?	All children will be able to count forwards and backwards in 5s to at least 70 and apply this knowledge to sequences and problems.

	To read and write numbers from 0 to 80 in numerals.	During mental maths sessions flash cards for reading numbers in numerals and also using number fans to make a number to 80. Also practise writing numerals from 1 to 80. Apply – using the number cards 1, 2, 3, 4 and 5. Use two of the digit cards to make a number greater than 40.	The children will be able to recognise numbers up to 80 and will know how to show them with the tens and ones arranged in the correct way. They will be able to write numbers correctly to 80 in numerals.
	To read and write numbers from 1 to 20 in words.	During mental maths session speed spelling on whiteboards of numbers in words (1 to ten as per phase 1 and 8, 11, 12, 15, 16, 18 as per phase 2 and 13, 14, 17, 19, 20 as per phase 3). Also taken home as spellings. Flash cards for reading numbers in words.	The children will know how to read and write numbers correctly in words as per phase 1, 2 and 3.
	To identify one more, one less, ten more and ten less than a number.	During mental maths session the children will use a number fan/flash cards to find one more, one less, 10 more and 10 less than a number. Also part of minute maths (answering 15 1 more questions and moving onto 15 1 less questions). Also applying e.g. If I have 20 counters and you have one less than me, how many do you have?	The children will understand that one more is the next number along when counting in ones and one less is the number before when counting in ones. They will understand that 10 more increases the tens column by 1 ten and 10 less reduces the tens column by 1 ten. They will be able to apply these to solve problems in different contexts.
	To be able to order numbers to 80.	The children will be given either three or five numbers between 0 to 80 and they will have to put them in order from smallest to largest and vice versa. They will also continue to revise this during mental maths sessions. They will complete mastery activities e.g. If Sam places these 5 numbers in order, starting with the smallest number which number will be in the fourth position?	The children will be able to order 3 numbers within 80 from smallest to largest & vice versa. They will know how to use their knowledge of counting in ones and their knowledge of partitioning into tens and ones to order these.
	To be able to identify odd and even numbers.	During mental maths the children will be shown a target board. They will pick out odd/even numbers and explain why they are odd/even e.g. it is odd because it ends in a 1. They will apply these to questions such as: Which number could be the odd one	They will understand that even numbers have a pair and odd numbers don't. They will be able to identify odd and even numbers by the digit it ends in.

		out? 40, 71, 65. Pupils suggest their own reasoned ideas, for example 40 might be the odd one out because it's not an odd number.	
	To be able to find doubles to 10.	As part of the mental maths session the children will be able to find doubles up to 10. E.g. 10 + 10= 20.	They will understand that doubling a number is the same as adding the same number again.
	To recognise the place value of each digit in a two digit number (tens, ones).	As part of the mental maths session the children will use flip books to work out how many tens and ones there are in a two digit number.	The children will understand that a two digit number is made up of tens and ones. They will relate that 1 ten is 10, 2 tens are 20 etc...
	To use the language of equal to, more than, less than (fewer), most, least.	As part of the mental maths session, the children will be shown two sets of objects – which one has the most? How do you know? How many more does it have (difference)? How could we work it out? (Estimate first).	The children will understand what the vocabulary more than, less than, most and least means and be able to apply this.

Addition & Subtraction

	Learning intention	Implementation	Impact
	To be able to add and subtract one and two digit numbers.	The children will initially revise adding and subtracting one and two digit numbers within 20, including 0 using a cold task as a starting point. The children will be given a shop to buy different pancake ingredients. They will add up different ingredients to find the total cost of the items. E.g. honey costing 10p and lemon costing 4p. Ⓣ ◯ ◯◯◯ They will apply this to mastery tasks such as: Together Sam and Tom have 19 football stickers. Tom has 8 stickers. How many stickers does Sam have? Write a number sentence you could use to solve the problem e.g. 19-8=11.	The children can add and subtract one and two digit numbers (that do not cross tens) practically, recorded and mentally. They will understand that sums can be written in different ways e.g. 7=3 + 4, 3 + 4 = 7. They will understand that addition can be done in any order (commutative) but subtraction cannot. They will be able to apply this knowledge to word problems and mastery tasks.
	To be able to solve one-step problems that involve addition	The children will solve one step problems involving addition and subtraction. They will be introduced to the bar model:	The children will understand the vocabulary which tells us the operation to carry out

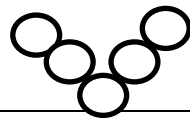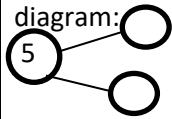|			
	and subtraction, using concrete objects and pictorial representations.	E.g. Amy wants to swim 25 metres. She has already swum 15m. How far is she from the finishing line? | 25m	
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15m	?	 25m-15m = 10. Lucy had a ride at the fair. Her mum asked Lucy to pay less than 20p towards it. Lucy paid exactly three coins towards the ride. How much did Lucy pay her mum? Find different ways to do it.	when solving word problem e.g. more means adding.
		The children will complete problems varying in difficulty and variation from the initial word problem e.g. 1. Charlotte has 2 bags of sweets. She has 14 in one bag and 6 in another. How many sweets does she have altogether? **(Simple),** 2. Charlotte has 2 bags of sweets. She has 14 in one bag and 6 in another. How many sweets does she have altogether? Charlotte's mum gives her a third bag with 10 sweets in. How many sweets does she now have? **(More steps) (I). 3.** There are 13 sweets in total and 2 bags. Can the sweets be shared equally between the bags? Explain how you know **(Explain). 4.** There are 15 sweets altogether and 3 bags. There are 7 sweets in one bag. How many sweets could there be in the other bags? Can you find some of the different ways they could be shared between the bags? **(Finding all possibilities). 5.** Charlotte has 20 sweets in total and 2 bags. In one bag there are 12 sweets. How many are there in the second bag? **(Less straight forward). 6.** What if the number of bags and sweets changed? **(What if).**	The children will be able to complete word problems using variation.
		Magic Vs. Place each of the numbers 1 to 5 in the V shape below so that the two arms of the V have the same total.	The children will be able to draw on previous experience e.g. solving magic squares. They will begin by trial and error and then gradually begin to work consistently when they see a pattern with the middle number.

| | | **To be able to represent and use number bonds and related subtraction facts within 20.** | How many different possibilities are there? What do you notice about all the solutions you find? Can you explain what you see? Can you convince someone that you have all the solutions?

Each day the children will answer 15 or 20 questions within a minute (minute maths) for number bonds initially within 10 and then moving onto within 20.
True or false?
7 + 2 = 4 + 4
3 + 3 = 5 + 1
2 + 4 = 5 + 0

Continue the pattern: 10 + 8 = 18, 11 + 7 = 18.

If you have ten counters numbered 1 to 10, how many can you put into pairs that add to 10? Can you use them all? Say how you got your answer.
Now put the counters in pairs to make 12. Can you use them all? Say how you got your answer.
Then counters to 13, 11.

The Easter bunny has got 12 eggs and she splits them between 3 baskets. How many Easter eggs could be in each basket? How many ways can they find?
(WT – 10 Easter eggs split between two baskets).

The children (WT) will concentrate on securing their number bonds to 5. They will have a question: How many different ways can you put 5 cows in 2 fields. The children will have plastic animals and 2 fields to work this out practically. They should record the number bonds they find on the outside of the fields. Continue with partitioning into 5s to secure number bonds to 5. | The children will know their addition and subtraction number bonds to 10 and will be able to use these to work out addition and subtraction number bonds within 20.

The children will understand that two or more numbers can be added together to make different totals within 20.

The children will know how to use their knowledge of number bonds and addition to solve mathematical problems. |

The children can do this practically and then record in a cherry diagram:

Continue with securing number bonds to 5 e.g. Sam has 1 car, Bill has 4 cars. How many altogether? Move onto completing the table:

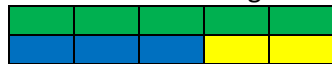| Sam	Tom	Altogether
3	2	?
1	4	?
2	3	?
5	0	?

Choose from these four cards: 2, 4, 8, 3. Make these totals: 9, 10, 11, 12, 13, 14 and 15. What other totals can you make from these cards?

Make each line add up to 16:-
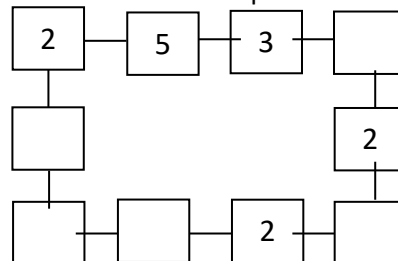
Now make each line add up to 20.

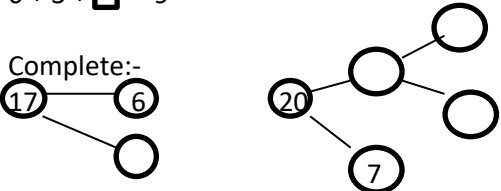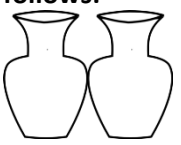The children will be given a bar model as follows:-

Can they write the four number sentences for the picture?

They will also understand the relationship between addition and subtraction number bonds e.g. If we know 3 + 7 = 10. We also know 7 + 3 = 10 (commutative).

To be able to use a number line for addition and subtraction – counting on for

The children will solve addition and subtraction missing number problems using a number line initially and then mentally applying their number bonds within 10/20.

The children will know how to use a number line solve missing number addition and subtraction problems. They will understand

	addition and counting back for subtraction and to solve missing number problems.	Complete: $10 + \square = 10.$ $20 - \square = 20.$ What do you notice? Find the missing numbers: $3 + \square + 3 = 9$ $6 + 3 + \square = 9$ Complete:- (17) (6) (20) 7 Now create a similar diagram. Can you extend the diagram?	that the numbers get smaller when subtracting and the numbers increase when adding. The children will understand what operation to carry out by looking at the symbols. They will understand the relevance of the "=" sign where both sides of the sum must balance.

	Multiplication and Division		
	Learning Intention	**Implementation**	**Impact**
	To solve one-step problems involving multiplication and division by calculating the answer using concrete objects, pictorial representations and arrays with support of the teacher.	**I can see 10 wheels. How many bicycles?** **Toy aeroplanes have 5 wheels. How many wheels would you need to make different numbers of aeroplanes?** **The children will solve word problems using 2s, 5s and 10s. There are 5 flowers in a vase. I can see 2 vases. How many flowers are there altogether? Picture model of vases given as follows:-** **5 + 5 = 10** **The children will complete the repeated addition sum underneath.** **Mastery:** Billy has 30 bulbs. He wants to plant them so that each row has 10 bulbs exactly. Can he do this? Explain how you know.	**The children will be able to solve multiplication problems by using pictorial representations and understand how this can be shown as repeated addition.**

Fractions		
Learning Intention	**Implementation**	**Impact**
To recognise, find and name a half as one of two equal parts of an object, shape or quantity.	The children will revise finding half a shape, quantity or object as part of the mental maths session. As part of mental maths session the children will answer questions such as: There are 18 children in a class. Sam says half of the class is 10. Do you agree? Explain your reasoning.	The children will know and understand that a shape, object or quantity is split in half when it is equally split into 2 pieces. They can apply halves to solve problems.
To recognise, find and name a quarter as one of four equal parts of an object, shape or quantity.	The children will revise finding a quarter of a shape, quantity or object as part of the mental maths session. Use unifix to support.	The children will know and understand that a shape, object or quantity is split into quarters when it is equally split into 4 pieces. They can apply quarters to solve problems.
Measurement		
Learning Intention	**Implementation**	**Impact**
To tell the time to the hour and half past the hour. **Time: earlier, later.**	As part of the mental maths session children will set clocks to o'clock and half past times. They will then move onto setting clocks to one hour later and one hour earlier.	All children can tell the time to o'clock and half past and find one hour later and one hour earlier and draw the hands on the clock for this.
I can draw the hands on the clock for o'clock times.	The children will draw the hands on the clock for o'clock and half past on blank clocks. Talk about the minute hand being longer and always pointing to the twelve for o'clock and the hour hand being shorter. Move onto drawing hands on the clock for one hour earlier/later.	The children will know how to tell the time for one hour later applying the principle of one more and one hour earlier applying the principle one less. They will be able to do this for o'clock and half past times. They will be able to apply this to word problems.
I can answer questions relating to time.	Sam leaves for school at 8 o'clock. Jay leaves half an hour later than Sam. Circle the clock which shows when Jay leaves for school.	The children will understand how we measure length, height, mass and capacity e.g. which equipment is used and what unit of measurement is used.

To measure and begin to record the following: **Lengths and heights.** **To compare, describe and solve practical problems for:** **Lengths and heights (e.g. Tall/short) long/short, longer.** **Mass or weight (e.g. heavy/light, heavier than, lighter than.** **Capacity/volume**	As part of the mental maths session the children will compare length/height/mass – How do you know that this (object) is heavier/lighter/longer/shorter/taller than this one? What is the unit of measurement for each? Have pictures of a measuring jug, ruler and scales. Which would you use to measure the length of an object etc..?	The children will recognise different denominations of money and they will be able to add up different amounts of money. The children will understand what the different terms mean e.g. before, after etc... and also apply these to different contexts – e.g. what number comes before/after? The children will know the order of the days of the week and months of the year. They will also know how many days are in a week and how many months are in a year.
To recognise and know the value of different denominations of coins and notes.	As part of mental maths session the children will identify 1p, 2p, 5p, 10p, 20p, 50p, £1, £2. Also questions such as how many 1ps make..? Also add up different amounts of coins using knowledge of counting in 2s, 5s and 10s.	
To recognise and use language relating to dates, including days of the week, weeks, months and years.	During mental maths session the children recite days of the week and months of the year. Including questions such as how many days in a week, months in a year? Circle the times which are shorter than 1 week: 1 year 1 day 1 minute 1 hour 1 month.	
To sequence events in chronological order using language such as: before, after, next, first, today,	During mental maths sessions children asked questions e.g. What day comes before, after. What day is it today, tomorrow, yesterday? When do we do phonics e.g. morning? Also say good morning and afternoon for register.	

	yesterday, tomorrow, morning, afternoon and evening.	Complete the sentence using the words below: Wednesday Sunday Monday Friday. Tuesday comes after _____ and before_____. What is the longest amount of time? a week a year a month	

Geometry – Properties of shapes

	Learning Intention	Implementation	Impact
	To recognise and name common 2D shapes (rectangles, squares, circles, triangles, hexagons and pentagons) and 3D shapes (cuboids, cubes, pyramids and spheres, cones, square based pyramid and triangular based pyramids).	During mental maths sessions children work in talk partners and name2D and 3D shapes and describe properties to each other. Also play shape shop and guess my shape.	The children will be able to name all 2D and 3D shapes and their properties.

Geometry – Position & Direction.

	Learning Intention	Implementation	Impact
	To describe position, direction and movement, including whole, half, quarter and three-quarter turns.	As part of the mental maths session the children will practically move on the spot to do whole turns, half turns, quarter and three quarter turns. They will include using the vocabulary left turn (anti-clockwise), right turn (clockwise).	The children will be able to apply their knowledge of fractions and telling the time (half past, quarter past) to move in the correct direction and into the correct position.
	Independence **Resilience** **Respect** **Team-work** **Creativity** **Aspirational.**		

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 to 10, looking at a range of representations, including a number line. - Explore the use of 'midpoints' to enable them to identify the location of other numbers.	- Review the composition of odd and even numbers, linking this to doubles and near doubles. - Explore the composition of the numbers 11-20, seeing representations which show the structure of these numbers as 'ten and a bit'.		-Continue to develop their recall of bonds within 10, through the use of exercises which do NOT involve written equations, such as 4 + 3 =? -Identify doubles and near doubles through visual representations of odd and even numbers.
	Independence **Resilience** **Respect** **Team-work** **Creativity** **Aspirational.**				