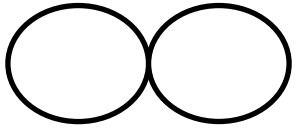
Maths Medium Term Planning – Year 1 – Spring 1

	Year 1 Spring 1		
Spring	**Number and Place Value**		
	Learning Intention	**Implementation**	**Impact**
	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 70. They will count using the abacus, number line and counting around the class. They will apply their knowledge to a sequence e.g. 14, 15, 16, _. What number comes next? Sarah is counting backwards from 70 to 65. She says the numbers 70, 69, 68, 67, 65. What mistake has she made?	All children will be able to count forwards and backwards to/from at least 70 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 50.	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. 2, 4, 6, _. 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 12?	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. 5, 10, 15, _. 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 15?	All children will be able to count forwards and backwards in 5s to at least 50 and apply this knowledge to sequences and problems.
	To read and write numbers from 0 to 60 in numerals.	During mental maths sessions flash cards for reading numbers in numerals and also using number fans to make a number to 70. Also practise writing numerals from 1 to 30. Extending to 60. Apply – using the number cards 1, 2, 3, 4 and 5. Use two of the digit cards to make a number greater than 30.	The children will be able to recognise numbers up to 70 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 60 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). 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 and 2.
	To identify one more and one less than a number.	During mental maths moving from a practical number track to using number fans/flash cards. Also part of minute maths (answering 15 1 more questions and moving onto 15 1 less questions). Also applying e.g. If I have 15 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 be able to apply this to solve problems in different contexts.
	To be able to order numbers to 60.	During mental maths session the children will practise ordering numbers within 60. They will apply this to mass by putting objects in order of weight.	

	To understand what each digit represents in numbers to 20 and represent these numbers with structured resources. Begin to recognise the significance of 'ten' in the number system. To know doubles to 10.	The children will begin to partition numbers up to 20 into tens and ones. They will arrange 13 counters on a number line and then transfer 10 counters to their numicon tens frame and see how many are left over. E.g. 10 + 3 = 13. Use arrow cards to aid understanding. The children will learn how to draw tens and ones as cups e.g 11 = As part of mental maths the children will tell a talk partner doubles to 10. E.g. double 5 is 10.	The children will be able to order 3 numbers within 60 from smallest to largest and vice versa. They will understand that our number system works in groups of tens. They will understand that where you cannot make a group of ten these are known as the ones left over. They will be able to apply their knowledge of partitioning to problem solving. The children will understand that doubling a number is adding the same amount again e.g. double 5 is the same as 5 + 5 = 10.
	Addition & Subtraction		
	Learning intention	**Implementation**	**Impact**
	To be able to add and subtract one digit numbers.	The children will revise adding and subtracting one digit numbers where the answer is within 20 using cups. Moving onto applying this to number bonds in a mental capacity. They will apply this to adding money amounts up to 10p. Magic squares – The children will be given 9 numbers (from 1 to 9) and they will organise them into a 3 x 3 grid so that the rows and columns add up to the same number. 15 is the magic number. Encourage the children to persevere and think about what numbers they are placing where in the grid. Discuss their thinking with them	The children can add and subtract one digit numbers 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.

	To be able to add and subtract two digit numbers.	Revise adding 1 and 2 digit numbers 10 + 14 = 14 T T ○ ○○○ 19 – 13 = 6 Look at the dartboards which have one and 2 digit number scores on and answer questions. How many do Bob and Ann score altogether? They will apply this to adding money amounts up to 20p from a toy shop and solving word problems.	The children will be able to add 2 digit numbers together that do not cross tens and subtract two digit numbers from each other. The children will know how to use a number line solve missing number addition and subtraction problems.
	To be able to use a number line for addition and subtraction – counting on for addition and counting back for subtraction and to solve missing number problems. To be able to partition numbers to 10 in different ways. To be able to represent and use number bonds and related subtraction facts within 20. To be able to solve addition and subtraction missing number problems.	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. E.g. 3 + 4 +□= 10 As part of mental maths the children will continue to learn their addition and subtraction number bonds to 10 and relate this to solving number bonds to 20 e.g. if I know that 4 + 6 = 10 then I know that 14 + 6 = 20. They will continue to use missing number flash cards and fact family house (3, 4, 7) to derive addition and subtraction facts (3 + 4 = 7, 4 + 3 = 7, 7 – 4 = 3 and 7 – 3 = 4). Daily they will complete 15 number bond questions in a minute depending on which number bond they are working on (minute maths).	They will understand that the numbers get smaller when subtracting and the numbers increase when adding. The children will understand which numbers can be added together to make 10 and how to use these to derive addition facts to 20. They will understand the relationship between addition and subtraction number bonds e.g. if we know 2 + 4 = 6, we also know 4 + 2 = 6 and 6 – 4 -= 2. They will also understand that addition is commutative. The children will understand that the missing number is what they need to add to the other number on the same side of the equals sign to arrive at the answer e.g. 3 +? = 10 NOT adding 3 + 10 = 13.

<table>
<tr><td></td><td></td><td></td><td>All children will know their addition and subtraction number bonds to 10. They will apply their knowledge of number bonds to problem solving.</td></tr>
<tr><td></td><td colspan="3">Multiplication and Division</td></tr>
<tr><td></td><td>Learning Intention</td><td>Implementation</td><td>Impact</td></tr>
<tr><td></td><td>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. To understand division as grouping.</td><td>The children will begin by grouping objects into groups of 2. This means that we are going to share the objects equally into each group. Model a word problem e.g. put the grapes into groups of 2. How many groups can you make? The children will have laminated circle templates.
 
Now group 10 grapes into groups of 5.

Solve problems such as Nicola shared her beads equally with her friend. They both now have 9 beads. How many beads did Nicola have before she started sharing them with her friend?
Sam and Tom share the fruit equally. There are 4 apples, 4 oranges, 2 pears and 2 bananas. How many of each fruit do they receive?
<table><tr><td></td><td>Apples</td><td>Oranges</td><td>Bananas</td><td>pears</td></tr><tr><td>Sam</td><td></td><td></td><td></td><td></td></tr><tr><td>Tom</td><td></td><td></td><td></td><td></td></tr></table></td><td>The children will be able to group objects into groups of 2 and 5 and understand sharing/division as grouping.</td></tr>
</table>

	Fractions		
	Learning Intention	**Implementation**	**Impact**
	To recognise, find and name a half as one of two equal parts of an object, shape or quantity. To recognise, find and name a quarter as one of four equal parts of an object, shape or quantity.	The children will revise finding half a shape, quantity or object. The children will revise finding a quarter of a shape, quantity or object. Use unifix to support.	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. 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 measure and begin to record the following: Heights. To compare, describe and solve practical problems for: Heights (e.g.tall/short).	The children will learn that we measure from 0 on a ruler and they will measure the heights of different houses. They will put them in order from shortest to tallest.	The children will understand how to measure different heights in centimetres and where to start their ruler when measuring and that it must run parallel to the line being measured. They will understand the vocabulary taller and shorter.
	To tell the time to the hour and half past the hour.	The children will set clocks to o'clock and half past times and also read o'clock and half past times. As main activity record the times underneath the clocks. Mastery – The children will be given some clocks where the minute hand has broken off. Use the hour hand to work out what time it is.	All children can tell the time to o'clock and half past.
	Time: earlier, later.	The children will practise setting plastic clocks to one hour later and one hour later for o'clock times. They will then record times on an activity sheet. They will complete word problems in relation to this. e.g. Bob put a cake in the oven at 3 o'clock. It takes an hour to cook. What time did he take it out of the oven?	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.
	Mass or weight (e.g. heavy/light, heavier than, lighter than.	The children will be given three items, they must first estimate and then weigh the items to see how heavy or light they are.	The children will understand what mass is and will know how to measure how heavy or light and object is.
	Capacity/volume (full/empty, more than, less than, quarter).	The children will apply their knowledge of halves and quarters to measuring capacity e.g. half full, quarter full. The children will shade	

		in containers lying in different directions. Show what half full looks like prior to this using an actual bottle to show what happens to the liquid when it is placed on its side. Can they also shade a quarter full.	They will know how to apply their fraction knowledge of half and quarters to shade in different capacities.
	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.	The children can identify different coins and add up different amounts of money.
	To sequence events in chronological order using language such as: before, after, next, first, today, yesterday, tomorrow, morning, afternoon and evening.	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.	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?
	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?	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.
	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 name 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.

Mastering Number	Subitising	Cardinality, ordinality and counting	Composition	Comparison	Addition and subtraction/
	• continue to practise conceptually subitising numbers they have already explored the composition of.		• review the composition of numbers within 10, linking these to part-part-whole representations • practise recalling missing parts for numbers within 10.	• compare numbers within 10, linking this to their understanding of the linear system • use the inequality symbol to create expressions, e.g. 7 > 2, and use the language of 'greater than' and 'less than' • reason about inequalities, drawing on their knowledge of the composition of numbers, e.g. Is this true or false? 3 and 2 is less than 4.	• develop their recall of number bonds within 10, through the use of exercises which use written numerals but not the symbols +, – , or =.

Independence Resilience Respect Team-work Creativity Aspirational