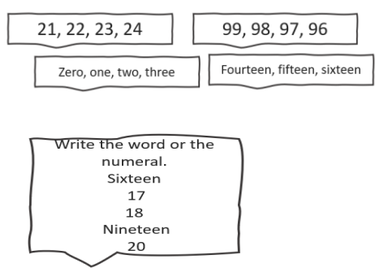
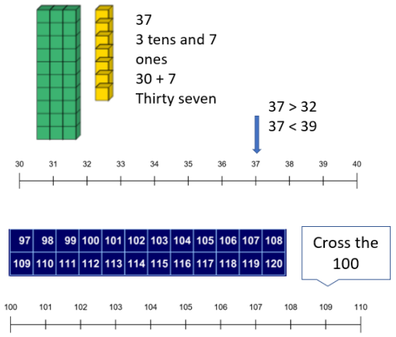
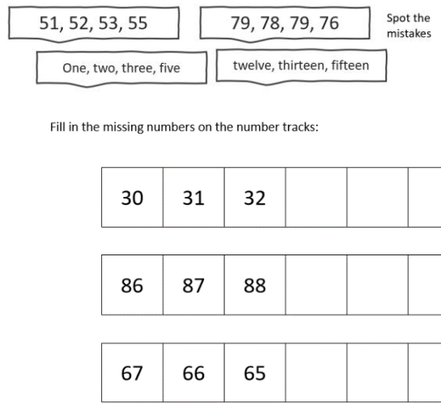
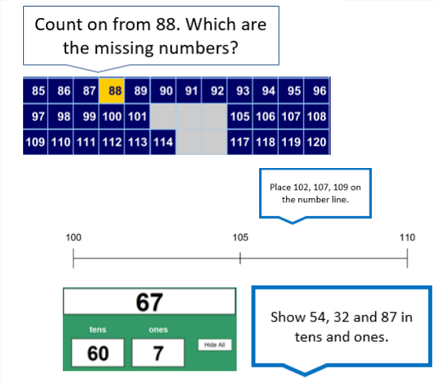
Medium Term Planning: Spring term – Y1/2.

Week.	Mathematical aspect	Non-negotiable end points Year 1.	Non-negotiable end points Year 2.	Curriculum statements – Year 1.	Curriculum Statements. Year 2.
1.	Number and place value: estimating, counting and comparing quantities	Knows the counting patterns from 1 to 100. Knows how to say, read and write numbers correctly.	Knows how to represent numbers in different ways. Compares and orders on a number line. Knows how to cross the 100 boundary.	● To count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number. ● To count, read and write numbers to 100 in numerals, count in multiples of twos, fives and tens. ● When given a number, identify one more and one less. ● To read and write numbers from 1 to 20 in numerals and words.	● To count in steps of 2, 3, and 5 from 0, and count in tens from any number, forward or backward. ● To recognise the place value of each digit in a two-digit number (tens, ones). ● To identify, represent and estimate numbers using different representations, including the number line. ● To compare and order numbers from 0 up to 100; use <, > and = signs. ● To read and write numbers to at least 100 in numerals and in words. ● To use place value and number facts to solve problems.
2.	Addition and subtraction: using recall of addition and subtraction facts and mental calculation strategies	Knows doubles up to 20. Knows that near doubles are 'one more/less than' in one number.	Knows number bonds to and within 20. Fact families for + and -. Knows efficient strategies for adding and subtracting for up to two 2 digit numbers. Knows that addition is inverse to subtraction.	● To represent and use number bonds and related subtraction facts within 20. Doubles and near doubles. ● To add and subtract one-digit and two-digit numbers to 20, including zero. ● To solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems.	● To solve problems with addition and subtraction: ● Using concrete objects and pictorial representations, including those involving numbers, quantities and measures ● Applying their increasing knowledge of mental and written methods. ● To recall and use addition and subtraction facts to 20 fluently and derive and use related facts up to 100. ● To add and subtract using concrete objects, pictorial representations, and mentally, including: a two-digit number and ones; a two-digit number and tens; two two-digit numbers; adding three one-digit numbers. ● To show that addition can be done in any order (commutative) and subtraction cannot. ● To recognise and use the inverse relationship between addition and subtraction and use this to check calculations and missing number problems.

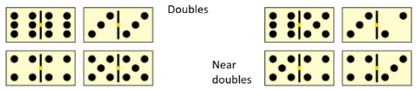
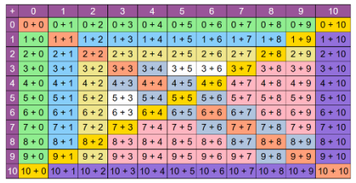
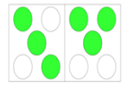
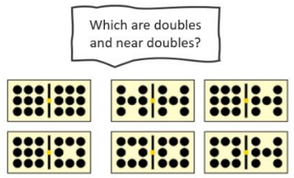
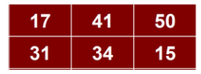
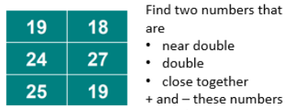
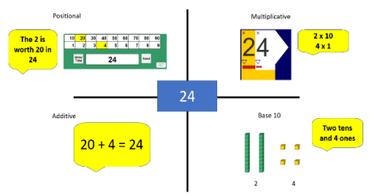
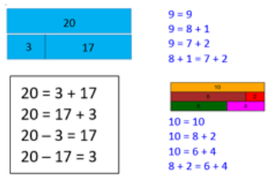
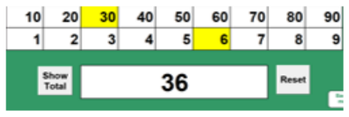
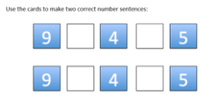
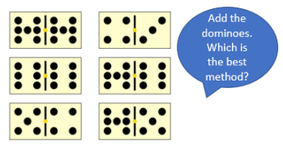
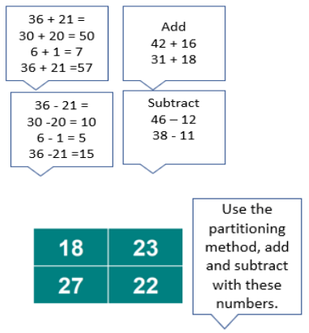


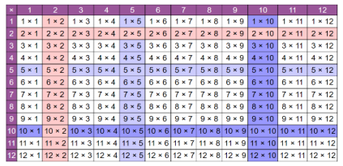
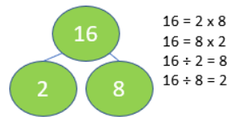
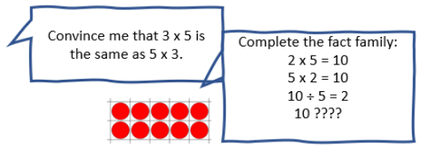
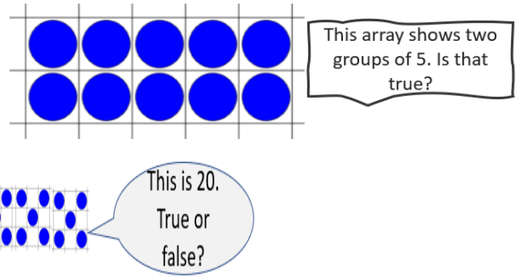
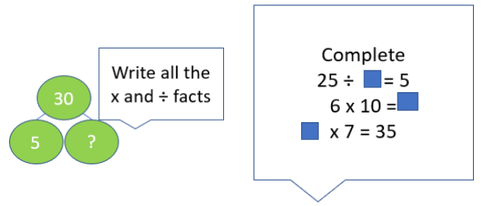






Medium Term Planning: Spring term – Y1/2.

 	 18 = 9 + 9 18 = 10 + 8 18 – 7 = 11 Write 3 facts for each number.	 How many ways can you show double 3? 5 + 5 + 0 = 10 0 + 6 + 6 = 12 Convince me that any number doubled + 0 will be the same outcome as doubling. 	25 + 25 = 50 *double* 24 + 25 = 49 *near double* 28 + 20 = 48 *+10,+10* 25 - 20 = 5 *difference* 50 - 25 = 25 *halving* 28 - 12 = 16 *- 10, - 6* *3 + 27 = 30, 27 + 3 = 30* *70 – 11 = 70 – 10 - 1* Add and subtract 10 3 17 from each number. Which is the best method for each calculation?   Find two numbers that are • near double • double • close together + and – these numbers using the best method.
3.	Addition and subtraction: using partitioning and counting on strategies including measures	Knows that addition subtraction are inverse operations. Knows fact families to10 then 20.	Knows the properties of place value. Uses number knowledge to add and subtract.	● To read, write and interpret mathematical statements involving addition (+), subtraction (–) and equals (=) signs; ● To represent and use number bonds and related subtraction facts within 20; *(from Year 2)* ● To add and subtract one-digit and two-digit numbers to 20, including zero;	● To recognise the place value of each digit in a 2-digit number (tens, ones). ● To use place value and number facts to solve problems. ● Applying their increasing knowledge of mental and written methods. ● To show that addition can be done in any order (commutative) and subtraction cannot. ● To recognise and use the inverse relationship between addition and subtraction and use this to check calculations and missing number problems.
  	 Additive and base ten properties	Better, best 16 + 3 = 16 +1 + 1 + 1 16 + 3 = 10 + 6 + 3 8 + 7 = 8 + 2 + 5 8 + 7 = 8 + 8 - 1 Odd one out 5 + 7 = 9 + 10 = 13 + 7 =  	
4.	Multiplication and division: repeated addition, arrays, grouping and using times tables facts	Knows how to make connections between arrays, number patterns, and counting in twos, fives and tens.	Knows the operations of multiplication (repeated addition) and division (equal groups of).	● To solve one-step problems involving multiplication and division, calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher.	● To recall and use multiplication and division facts for the 2,5 and 10 multiplication tables, including recognising odd and even numbers. ● To calculate mathematical statements for multiplication and division within the multiplication tables and write them using multiplication, division and equals signs.

		Knows that doubles are two groups of the same number. Knows that equal groups can be represented as an array.	Knows the 2s, 5s and 10s times tables and can find related facts. Knows that multiplication is inverse to division.		● To recognise and use the inverse relationship between multiplication and division in calculations. ● To show that multiplication of two numbers can be done in any order (commutative) and division for one number by another cannot. ● To solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods and multiplication and division facts, including problems in contexts.
  16 = 2 x 8 16 = 8 x 2 16 ÷ 2 = 8 16 ÷ 8 = 2					 Write all the inverse facts.
5.	Geometry: properties of shape, symmetry	Knows that rectangles, triangles, cuboids and pyramids are not always similar to each other.	Know the mathematical names and properties of 2d and 3d shapes. Knows symmetry is reflection in a vertical line.	● To recognise and name common 2D and 3D shapes, including: ● 2D shapes (rectangles (including squares), circles and triangles) ● 3D shapes (cuboids (including cubes), pyramids and spheres).	● To identify and describe the properties of 2D shapes, including the number of sides and symmetry in a vertical line. ● To identify and describe the properties of 3D shapes including the number of edges, vertices and faces. ● To identify 2D shapes on the surface of 3D shapes, for example circle on a cylinder and a triangle on a pyramid. ● To compare and sort common 2D and 3D shapes and everyday objects.

Medium Term Planning: Spring term – Y1/2.

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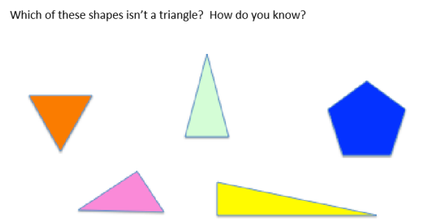
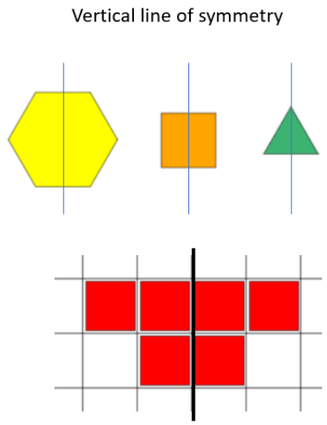
<td colspan="4"> 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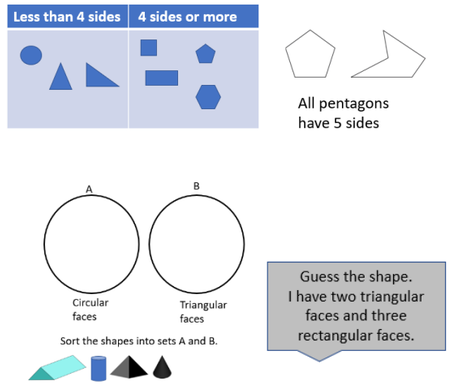
<td> 
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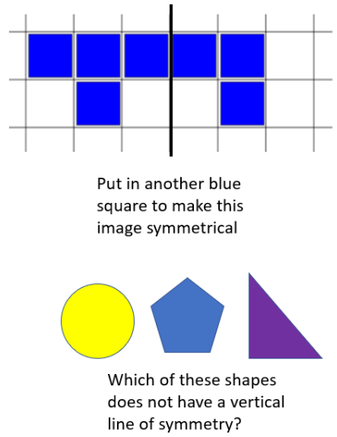
<td> 
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<td>6.</td>
<td>Measurement: length, mass, capacity</td>
<td>Knows the correct measuring equipment for length, mass and capacity.</td>
<td>Knows the relationships between units of measure for length, mass and capacity.</td>
<td>To measure and begin to record the following:
● lengths and heights
● mass/weight
● capacity and volume</td>
<td>● To choose and use appropriate standard units to estimate and measure length/ height in any direction; mass; temperature; volume and capacity to the nearest appropriate unit using rulers, scales, thermometers and measuring vessels.
● To compare and order lengths, mass, volume/capacity and record the results using
>, < and =.</td>
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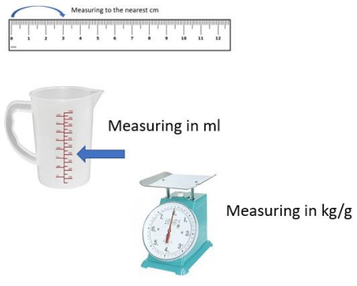
<td colspan="4"> 

<table>
<tr><td>Measurement</td><td></td><td></td></tr>
<tr><td>Length</td><td>100cm</td><td>1m</td></tr>
<tr><td>Mass</td><td>1000g</td><td>1kg</td></tr>
<tr><td>Capacity</td><td>1000ml</td><td>1 L</td></tr>
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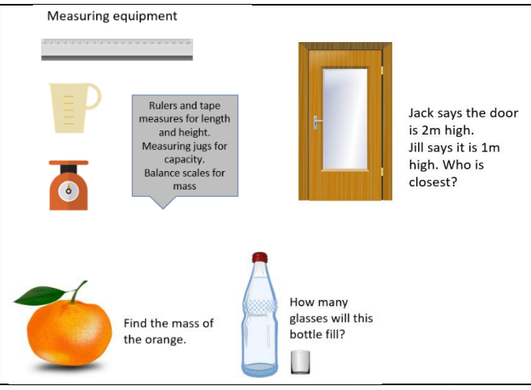
<td> 
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<td>Complete the table
<table>
<tr><td>Measurement</td><td></td><td></td><td>Equipment</td></tr>
<tr><td>Length</td><td>? cm</td><td>1m</td><td>ruler</td></tr>
<tr><td>Mass</td><td>1000g</td><td>1kg</td><td>?</td></tr>
<tr><td>Capacity</td><td>1000ml</td><td>?</td><td>Measuring jug</td></tr>
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<td>7.</td>
<td>Fractions: finding fractions of quantities, shapes and sets of objects, equivalence</td>
<td>Knows that halves are two equal parts of a whole. Knows that quarters are 4 equal parts of a whole.</td>
<td>Knows simple equivalence in halves and quarters. Knows thirds are three equal parts of a whole.</td>
<td>● 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.</td>
<td>● To recognise, find, name and write fractions 1/3, 1/4, 2/4 and 3/4.
● To write simple fractions for example, 1/2 of 6 = 3 and recognise the equivalence of two quarters and one half.</td>
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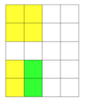
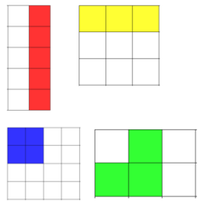
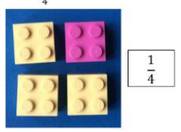
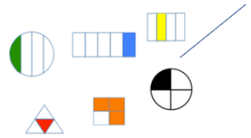
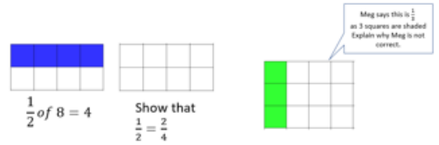
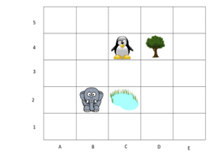
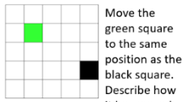
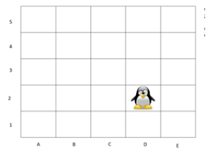
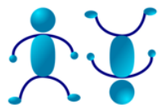
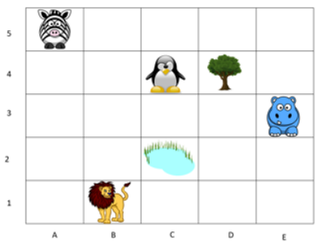
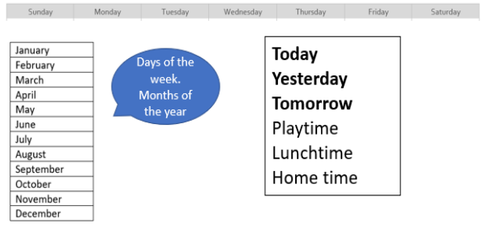
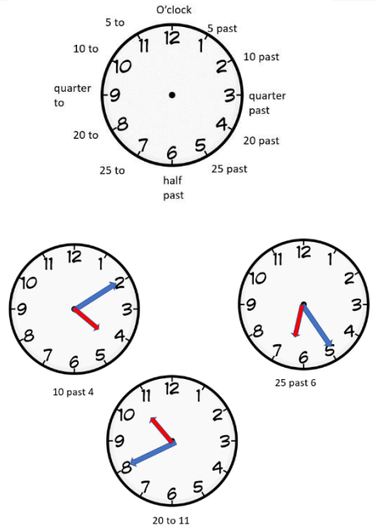
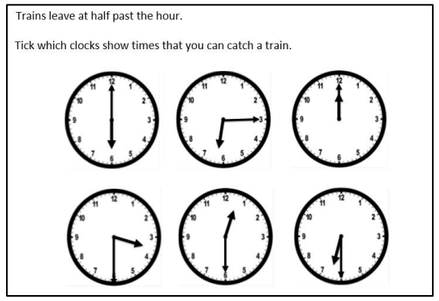
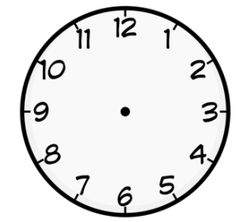
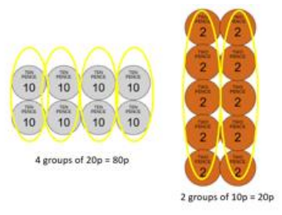
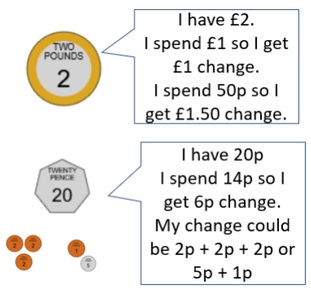
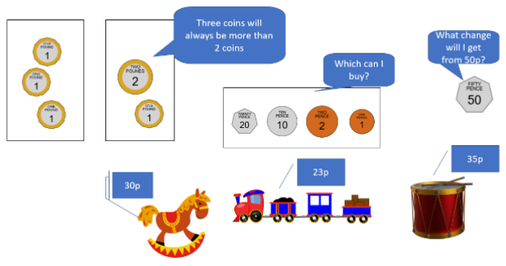
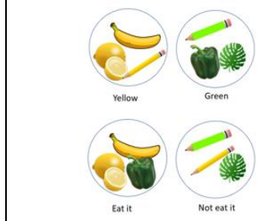
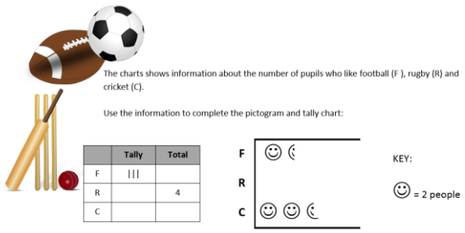
Medium Term Planning: Spring term – Y1/2.

 $\frac{1}{2} = \frac{2}{4}$  $\frac{1}{2}$ of $6 = 3$  $\frac{1}{2}$ of $8 = 4$ $\frac{2}{4}$ of $8 = 4$ Write the fraction that is shaded.  How many ways can you show $\frac{1}{4}$?  $\frac{1}{4}$				 Tick the pictures that show $\frac{1}{4}$	 $\frac{1}{2}$ of $8 = 4$ Show that $\frac{1}{2} = \frac{2}{4}$ Meg says this is $\frac{1}{4}$ as 3 squares are shaded Explain why Meg is not correct.
8.	Geometry: position and direction	Knows shapes in different orientations and sizes,	Knows how to describe position and movement using clockwise, anti-clockwise, left and right.	● To describe position, directions and movements, including half, quarter and three- quarter turns.	● To use mathematical vocabulary to describe position, direction and movement, including distinguishing between rotation as a turn and in terms of right angles for quarter, half and three quarter turns (clockwise and anti-clockwise) and movement in a straight line.
 The penguin is in C4. The elephant is in B2.  Move the green square to the same position as the black square. Describe how it has moved.  The penguin is now in D2. He moved 1 place to the right and down 2 spaces.				 Name the shapes and where they are to the man. Describe how the stick man has changed position. 	 Move the zebra to the tree. Move the hippo to the pool. Describe how they have moved.
9.	Measurement: time	Knows the days of the week and the months of the year. Knows how to read the time to the hour and half hour	Knows how to read the time to the 5 minute interval.	● To sequence events in chronological order using language [for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening]; ● To recognise and use language relating to dates, including days of the week, weeks, months and years. ● To tell the time to the hour and half past the hour and draw the hands on a clock face to show these times.	● To tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to show these times.

Medium Term Planning: Spring term – Y1/2.

 				 Show these time on the clock face • 5 past 7 • 25 to 3 • 5 to 8  The time is now half past 4. What time will it be in 10 minutes?
10.	Measurement; money	Knows the coins and notes by their value, size and colour. Knows how to add and subtract with money using the value of the coins. Knows how to multiply and divide with money using the value of the coins.	Knows how to find change in the context of money.	● To recognise and know the value of different denominations of coins and notes. ● To solve problems in the context of money. ● To solve one-step problems involving multiplication and division, calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher.	● To solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change
 					
11.	Statistics: solving problems that involve collecting data in tallies, tables and pictograms	Knows how to use criteria to sort objects and make sets.	Knows how data is represented and read.	● To present and interpret data in block diagrams using practical equipment. ● To ask and answer simple questions by counting the number of objects in each category. ● To ask and answer questions by comparing categorical data.	● To interpret and construct simple pictograms, tally charts, block diagrams and simple tables. ● To ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity. ● To ask and answer questions about totalling and compare categorical data.

Medium Term Planning: Spring term – Y1/2.

					
12.	Calculation: using mental & written calculation strategies	Knows the operation required and calculates using counting and known facts, including bridging the 10. Knows the most efficient method. Counting back is 'take away' and counting on is 'find the difference'.	Knows the operation to use and chooses the efficient method. Knows facts to 100 using multiples of 10.	● To solve one-step problems that involve addition using concrete objects and pictorial representations, and missing number problems. ● To read, write and interpret mathematical statements involving addition (+), subtraction (–) and equals (=) signs. ● To represent and use number bonds and related subtraction facts within 20. To add and subtract one-digit and two-digit numbers to 20, including zero. ● To solve one-step problems involving multiplication and division, calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher.	To recall and use addition and subtraction facts to 20 fluently and derive and use related facts up to 100. ● To add and subtract using concrete objects, pictorial representations, and mentally, including: a two-digit number and ones; a 2-digit number and tens; two 2-digit numbers; adding three one-digit numbers. To show that addition can be done in any order (commutative) and subtraction cannot. ● To recognise and use the inverse relationship between addition and subtraction and use this to check calculations and missing number problems. To calculate mathematical statements for multiplication and division within the multiplication tables and write them using multiplication, division and equals signs. ● To recognise and use the inverse relationship between multiplication and division in calculations.

Medium Term Planning: Spring term – Y1/2.

5 + 6 + 5 =
7 + 8 + 3 =

50 + 50 = 100
60 + 40 = 100
70 + 30 = 100

Calculate
2 x 9 =
20 ÷ 5 =
54 + 7 =
76 – 23 =

The rope is 15m long. Jim cuts off 7m. How much of the rope is left?

The flower is 12cm tall. It grows 4cm more. How tall is the flower now?

16	
9	?

16 seeds are planted. 9 grew. How many did not?

The sunflower is 20cm high. The rose is half as tall. How tall is the rose?

Choose to count on or count back

17 – 3 =
17 – 15 =
13 – 8 =
13 – 11 =

Here are some number cards

15	11	8	7	4	11

Use the cards to complete the number facts

☐ + ☐ = ☐

☐ – ☐ = ☐

16	66	17
58	5	50
83	9	100

Choose numbers to add mentally.
Choose numbers to subtract with a method.

80
50

What should be added to these numbers to total 100?

If I know that 2 + 5 = 7, I know that 20 + 50 = 70.
Is this true?