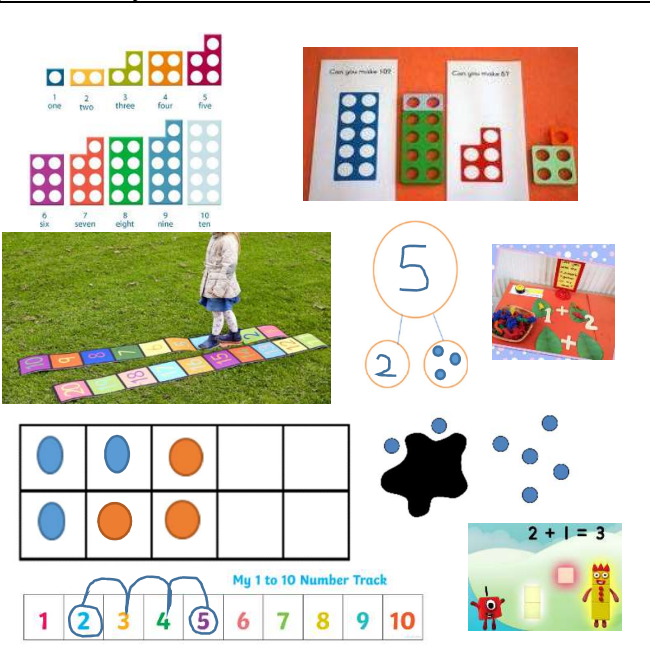
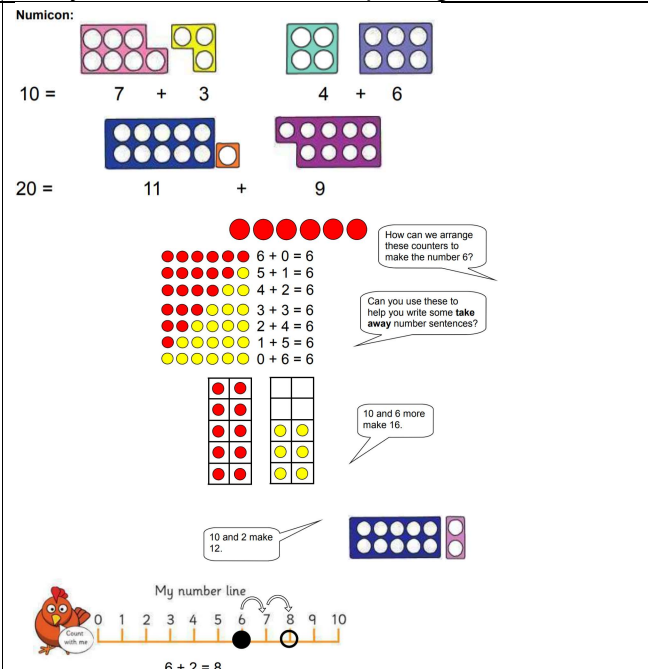
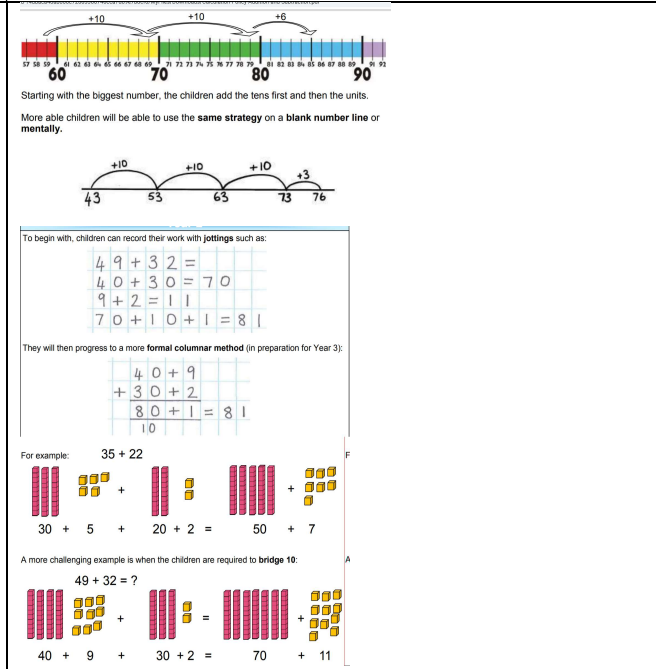
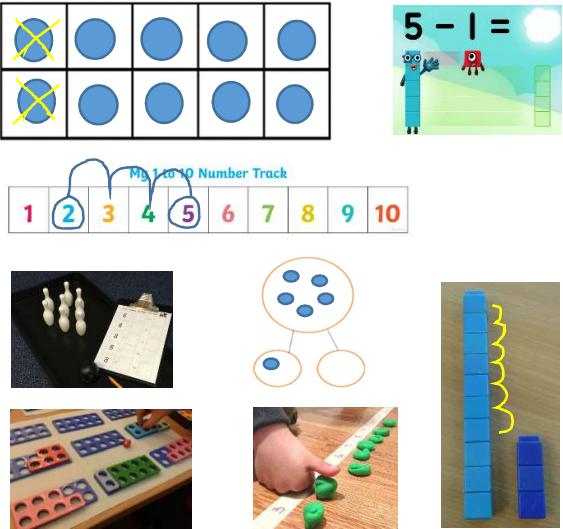
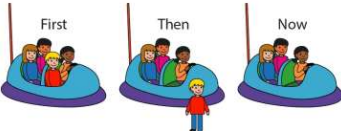
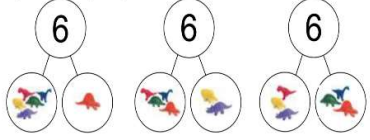

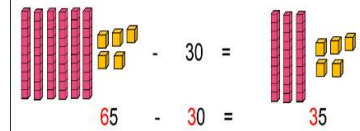
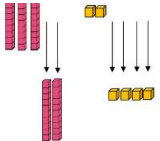
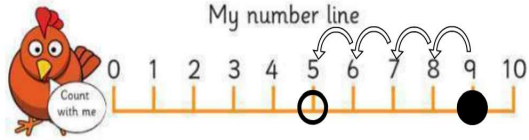


Addition

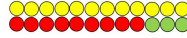
EYFS	Year 1	Year 2
<p>*Counting objects/toys *use concrete representations e.g. numicon to combine two or more groups to establish a total * count on from one number * subitise to 5 and then up to 10 * jump on number tracks * use part-whole modelling * introduce five and tens frames * use standard notation + and = *explore missing number problems in part/whole model * 1 more to 20 * Numberblocks</p>	<p>As EYFS plus: * pictorial representations * count/jump along a number line * use symbols +, = * introduce partitioning into 10s and 1s. * 1 more to 100</p>	<p>As previous years plus: * develop mental strategies such as starting with the largest number * partition into tens and ones * add using concrete objects, pictorial representations and mentally – two digit numbers and ones; two digit numbers and tens; two two-digit numbers and 3 one-digit numbers bridging 10 * begin column method with no carrying *apply number bonds to 10 to adding to 100</p>
<p>Vocabulary add, more, and, make, how many, total, altogether, partition, recombine, how many more to make, how many more than. Equal, is the same as, sets, what can you see</p>	<p>Vocabulary add, more then, and, make, total, altogether, plus, equals, regrouping, part, whole, greater, fewer, addition, tens, ones, how many more than, how many more to make, bonds, put together, doubles</p>	<p>Vocabulary As year 1 plus: sum, partition, inverse</p>
 <p>Resources for EYFS addition include: Numberblocks (1-10), ten frames, a number track from 1 to 10, and various counting objects like buttons and beads.</p>	<p>Numicon:</p>  <p>Resources for Year 1 addition include: Numicon shapes for 10 (7+3) and 20 (11+9), dot patterns for number bonds to 6, and a number line for 6+2=8.</p>	 <p>Resources for Year 2 addition include: A number line from 60 to 90 with jumps of +10 and +6, a columnar method example for 49+32, and a more challenging example for 49+32=?.</p>

Subtraction

EYFS	Year 1	Year 2
<ul style="list-style-type: none"> * Subtracting using objects/toys * recognise subtraction as 'taking away' and 'jumping back' on number tracks * compare two numbers to find difference eg as 'towers' or 5 /10 frames * Numberblocks * compare sets of concrete objects * use number tracks and standard notation of – and = * use part/whole model to record subtraction * explore missing number problems * 1 less to 20 	<ul style="list-style-type: none"> * take away/count back on a number line * tens frames * recall of subtractions facts within 10 * count on to find the difference on a number line * begin to recognise addition and subtraction as related operations * 1 less to 100 	<ul style="list-style-type: none"> * recall of subtractions facts within 20 * use known number facts eg $10 - 2 = 8$ and $100 - 20 = 80$ * use inverse relationships between addition and subtraction * draw and use own number lines to count back and find the difference * partition second number to subtract and recombine * subtract using concrete objects, pictorial representations and mentally – two digit numbers and ones; two digit numbers and tens; two two-digit numbers and 3 one-digit numbers bridging 10 subtraction along a number line * begin to record subtractions in columns with no regrouping
<p>Vocabulary take away, leave, how many are left, how many fewer than, less than</p>	<p>Vocabulary take away, leave, how many are left, how many fewer than, difference between, <i>how much more is...</i>, <i>subtract</i>, <i>minus</i>, <i>equals</i>, <i>less than</i>, <i>distance between</i></p>	<p>Vocabulary As year 1 plus: subtraction</p>
	<p><i>First</i>, there were four children in the car. <i>Then</i>, one child got out. <i>Now</i>, there are three children in the car. Chairs could be arranged to support acting out this story.</p> <p>Pictorial:</p>  <p>Part Part Whole The 'Part Part Whole' model allows children to visualise the concept that numbers are made up of 2 or more parts (i.e. other numbers)</p>  <p> $5 + 1 = 6$ $4 + 2 = 6$ $3 + 3 = 6$ $6 - 1 = 5$ $6 - 2 = 4$ $6 - 3 = 3$ $6 - 5 = 1$ $6 - 4 = 2$ </p>	<p>$31 - 23 = 8$</p>  <p>Base 10:</p>  <p>$65 - 30 = 35$</p>  <p>$56 - 24 = 32$</p>



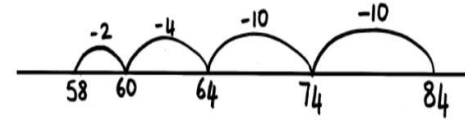
$$9 - 4 = 5$$



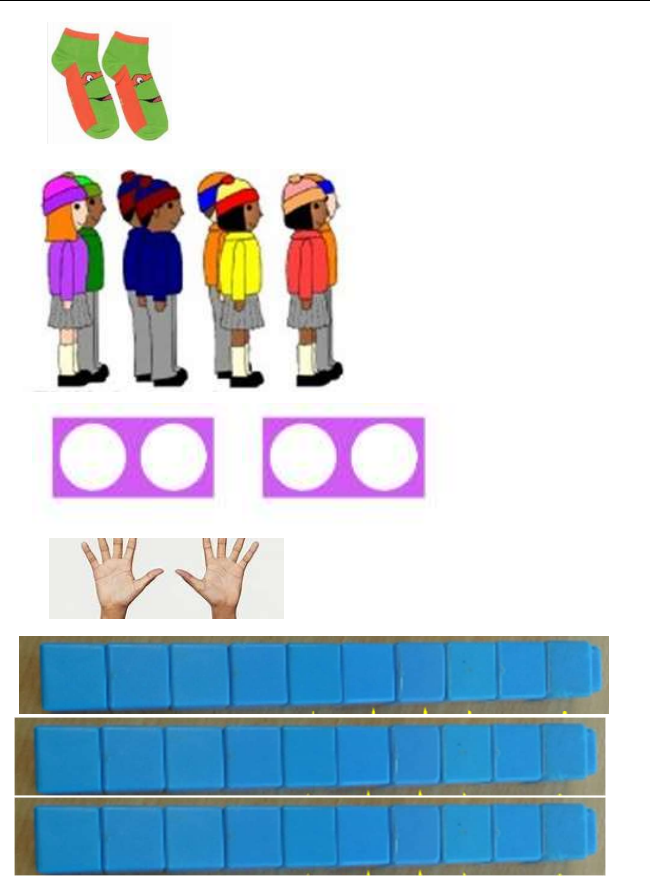
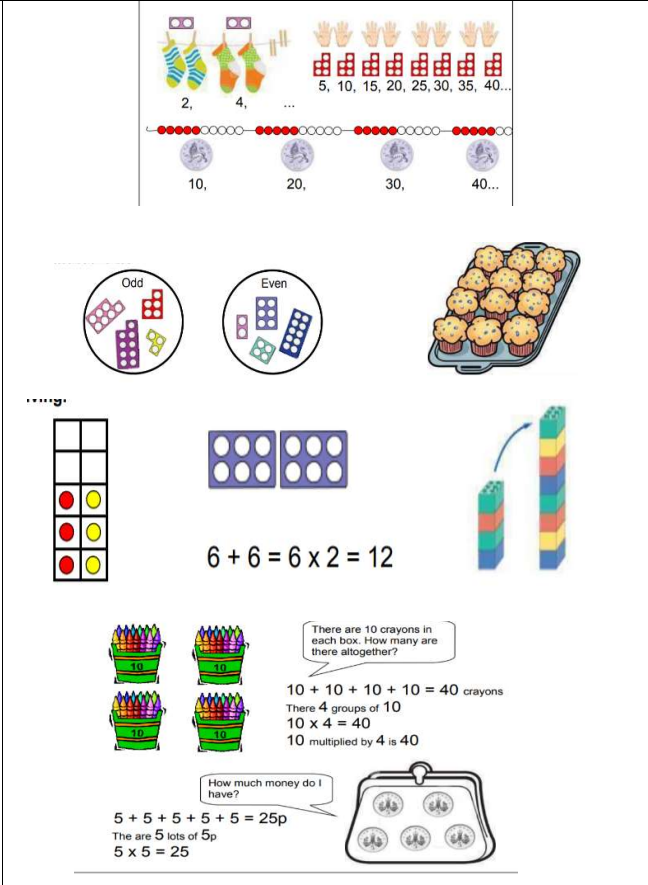
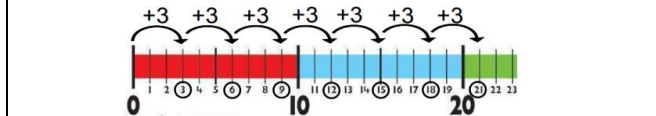


The difference between 12 and 9 is 3.
or $12 - 9 = 3$

5	6	-	2	4	=	
5	6	-	2	0	=	3 6
3	6	-	4	=	3 2	

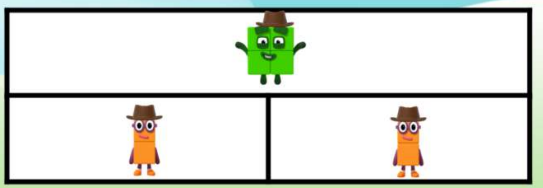
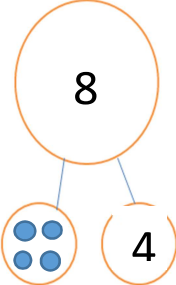


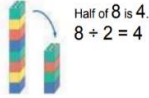
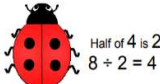


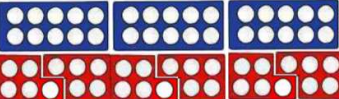

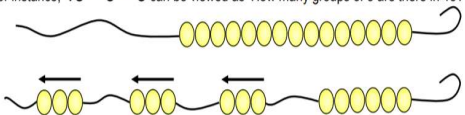

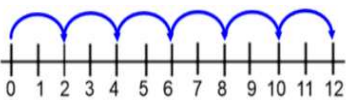
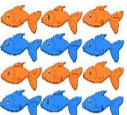
5	0	+	6	
-	2	0	+	4
3	0	+	2	= 3 2



Multiplication

EYFS	Year 1	Year 2
<ul style="list-style-type: none"> * concrete and pictorial representations to begin to recognise repetitive addition of groups of the same size * begin counting in steps of 2, 5, or 10, orally and grouping in sets of 2, 5 and 10 	<ul style="list-style-type: none"> * use concrete objects, pictorial representations and arrays with the support of the teacher * use mental recall of doubles * recognise repetitive addition of groups of the same size; counting in steps of 2, 5 or 10, recording on a number line 	<ul style="list-style-type: none"> * use mental recall of doubles to support x2; * recognise repetitive addition of groups of the same size * understand and use arrays *introduce concept of commutativity * recall and use multiplication facts for 2, 3, 5 and 10, recording on a number line
<p>Vocabulary double, groups of, sets of, lots of, total</p>	<p>Vocabulary double, groups of, sets of, lots of, array</p>	<p>Vocabulary double, groups of, times, multiply, multiple, lots of, sets of, repeated addition</p>
	 <p>There are 10 crayons in each box. How many are there altogether? $10 + 10 + 10 + 10 = 40$ crayons There 4 groups of 10 $10 \times 4 = 40$ 10 multiplied by 4 is 40</p> <p>How much money do I have? $5 + 5 + 5 + 5 + 5 = 25$p There are 5 lots of 5p $5 \times 5 = 25$</p>	<p>Double 16 = Double 10 + Double 6</p> $\begin{aligned} & \begin{array}{ c c } \hline \cdot & \cdot \\ \hline \cdot & \cdot \\ \hline \end{array} = \begin{array}{ c c } \hline \cdot & \cdot \\ \hline \cdot & \cdot \\ \hline \end{array} + \begin{array}{ c c } \hline \cdot & \cdot \\ \hline \cdot & \cdot \\ \hline \end{array} \\ & = 20 + 12 \\ & = 20 + 10 + 2 \\ & = 30 + 2 \\ & = 32 \end{aligned}$ <p>3 groups of 4 = $3 \times 4 = 12$ 4 groups of 3 = $4 \times 3 = 12$ 12 divided into 4 groups = $12 \div 4 = 3$ 12 divided into 3 groups = $12 \div 3 = 4$</p> <p>$7 \times 2 = \square$ $\square \times 2 = 14$ $7 \times \square = 14$ $\square \times \square = 14$</p>  <p>© Learning Curve Primary Ltd 2008</p>  <p>A clock face can help support counting in 5s, whilst money (2p, 5p, 10p, 20p, 50p) can be a great way to practise counting in other intervals.</p>  <p>Knowledge of the 2 times table will enable the children to count up in 20s as well.</p> <p>20 40 60 80</p>

Division

EYFS	Year 1	Year 2
<ul style="list-style-type: none"> * begin to recognise sharing equally with concrete and pictorial representations * group concrete materials * recognise equal as 'fair' sets. 	<ul style="list-style-type: none"> * halve and quarter numbers * recognise sharing equally using concrete and pictorial, also repetitive addition or subtraction of groups of the same size ie grouping, arrays as groups * making equal groups from a set * develop conceptual understanding of size of groups compared to how many groups 	<ul style="list-style-type: none"> * recognise division as sharing equally, repetitive addition or grouping of the same size ie grouping on a number line * use standard notation of \div and $=$
<p>Vocabulary groups, share, left over, half, fair, share fairly, sets of, how many will each person have</p>	<p>Vocabulary groups, share, left over, half, each, equal, not equal</p>	<p>Vocabulary groups, share, left over, divide, divided by, equal groups of, inverse</p>
   	  <p>Children should be shown that halving and dividing by 2 are the same.</p> <p>Can you shade in one quarter of these shapes?</p>    <p>How many 5s are there in 30?</p>  <p>Four children share 12 toy cards equally. How many do they get each?</p>	<p>For instance, $15 \div 3 = 5$ can be viewed as 'How many groups of 3 are there in 15?'</p>     <p>3 groups of 4 = $3 \times 4 = 12$ 4 groups of 3 = $4 \times 3 = 12$ 12 divided into 4 groups = $12 \div 4 = 3$ 12 divided into 3 groups = $12 \div 3 = 4$</p> <p>Eventually, children should be able to answer questions like: "If $12 \times 2 = 24$, what is $24 \div 2$?"</p>