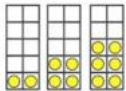



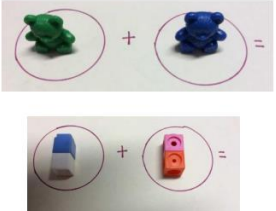

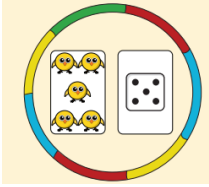

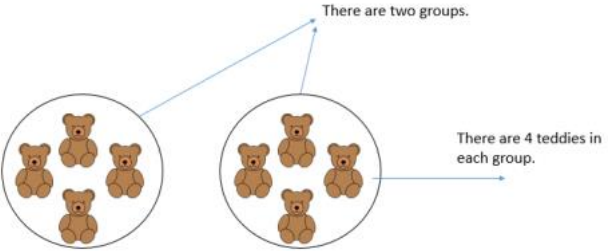
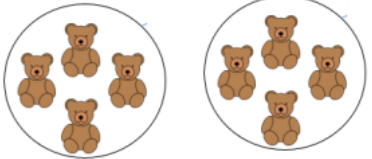
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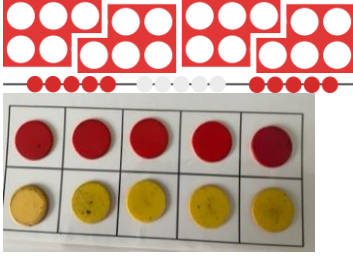
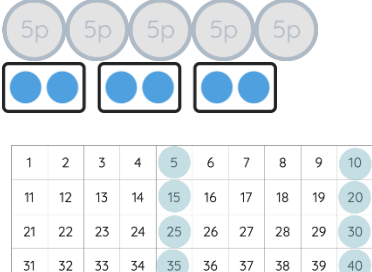

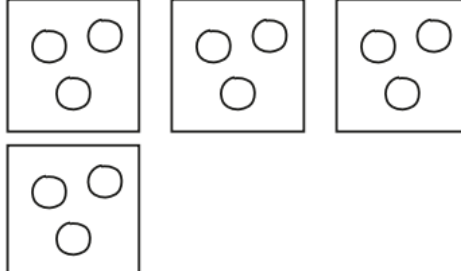
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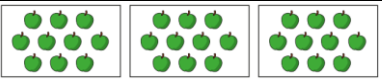


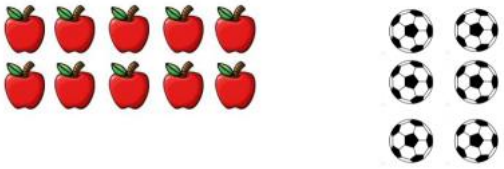
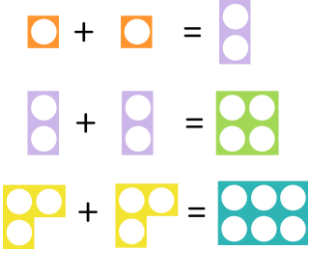
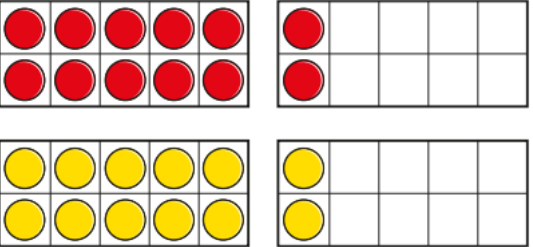
April 2024


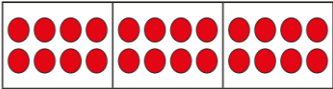



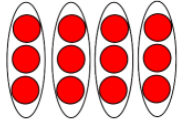
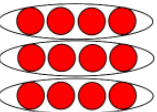
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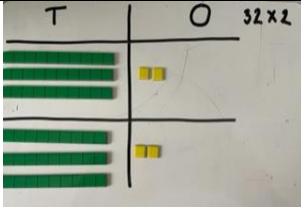
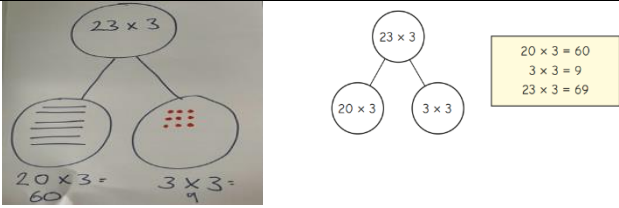

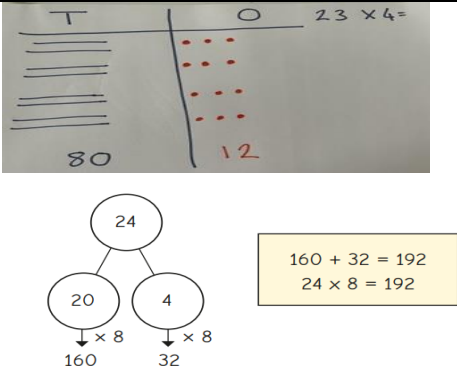
EYFS:			
Vocabulary :	Double Equal Groups Grouping	Manipulatives & scaffolds:	Fingers Five frames Ten frames Double sided counters Numicon Cubes Bead strings Part-whole model
Small step:	Concrete:	Pictorial:	Abstract:
Doubling	<p>The link between addition and multiplication can be introduced through doubling. Domino and dice frames can be used to do this as well as fingers. Representing the even number pair-wise on 10 frames supports the children to make the link between doubling and halving. They can also be used to illustrate the odd and even patterns of numbers</p> 	<p>Children have a go at recording by drawing pictures in groups</p> 	<p>$1 + 1 = 2$ Double 1 equals 2</p> <p>Double ___ is ___</p>

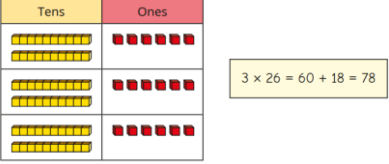
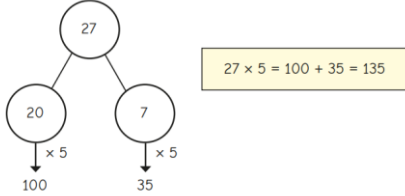
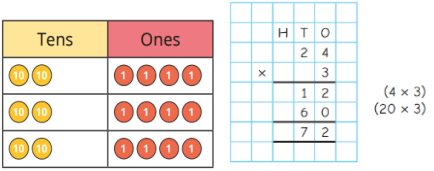

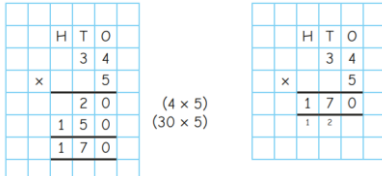
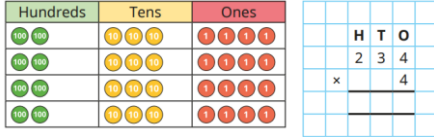
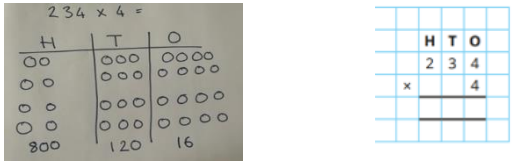
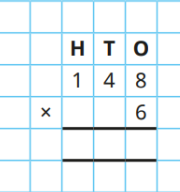
			
Doubles to 10	 <p>There are 3 here and 3 there. Double 3 is 6. 6 is double 3.</p>	 <p>There are 5 here and 5 there. Double 5 is 10. 10 is double 5.</p>	<p>There are ___ here and ___ there. Double ___ is ___ ___ is double ___</p>
Grouping	<p>Children will experience equal groups of objects. Children will be encouraged to count the groups, then count how many objects are in a group – 4 and 4</p> 	 <p>There are two groups. There are 4 teddies in each group.</p>	<p>Stem sentence: There are ___ groups There are ___ in each group</p>
Play with and build doubles	<p>Children find and make doubles. Progress this to showing children a double and asking them to say what number has been doubled, by finding the inverse.</p>		<p>Double ___ is ___ I can see ___ and ___ I can see ___ altogether This is double ___</p>

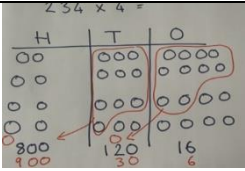
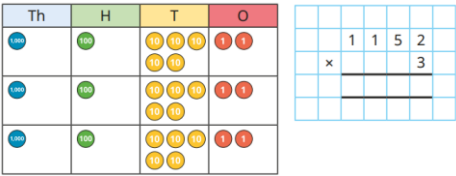
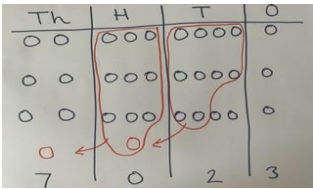
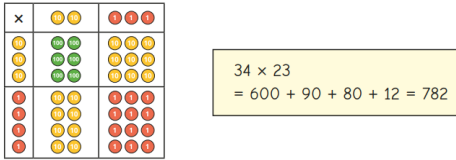
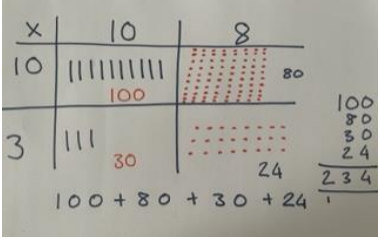
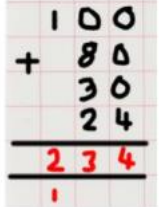
	<p>Ask children to spin a 1 to 5 spinner. Double the number the spinner lands on by building towers or drawing spots on blank dominoes.</p> <p>What number did you land on? What is the double?</p> 	<p>I can see 4 and 4 Double 4 is 8</p>	
<p>Y1</p> <p>Vocabulary :</p>	<p>equal, unequal, group, odd, even, array, multiple, multiplication, multiplied by, division, dividing, grouping, groups of</p>	<p>Manipulatives & scaffolds:</p>	<p>Ten frames Double sided counters Numicon Cubes Bead strings Number line Bar model</p>
<p>Small step:</p>	<p>Concrete:</p>	<p>Pictorial:</p>	<p>Abstract:</p>
<p>Counting in multiples – 2s, 5, 10s</p>			<p>Say/write sequences: 2, 4, 6, 8... 10, 20, 30, 40... 5, 10, 15, 20, 25, 30...</p>
<p>Recognise equal groups</p>	 <p>There are _____ equal groups of _____ pencils.</p>		<p>There are ____ equal groups of ____</p>

<p>Add equal groups</p>	 <p>$10 + 10 + 10 = 30$</p>	<p>There are ___ equal groups of ___</p> <p>$5 + 5 + 5 = 15$</p> 	<p>$5 + 5 + 5 = 15$</p>
<p>Make arrays</p>	 <p>There are ___ rows. There are ___ in a row. There are ___ in total. There are ___ columns. There are ___ in a column. There are ___ altogether.</p>	 <p>There are ___ rows. There are ___ in a row. There are ___ in total. There are ___ columns. There are ___ in a column. There are ___ altogether.</p>	<p>$2 + 2 + 2 = 6$ $3 + 3 = 6$ There are 6 altogether</p>
<p>Make doubles</p>		 <p>Double 6 is ___</p> <p>Double 12 is ___</p>	<p>Double 6 is ___</p>
<p>Y2</p>			
<p>Vocabulary :</p>	<p>equal, unequal, group, odd, even, array, multiple, multiplication, multiplied by, division, dividing, grouping, groups of, times, repeated addition, row, column, commutative</p>	<p>Manipulatives & scaffolds:</p>	<p>Ten frames Double sided counters Numicon Cubes Bead strings Number line Bar model</p>

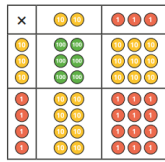
Small step:	Concrete:	Pictorial:	Abstract:
Multiplication symbol	 <p> $5 + 5 + 5 + 5 + 5 + 5 =$ There are 6 lots of 5 $5 \times 6 = 30$ </p>	 <p> There are ____ equal groups with ____ in each group. $_____ + _____ + _____ = 24$ $_____ \times _____ = 24$ </p>	$_____ + _____ + _____ = _____$ $_____ \times _____ = _____$
Multiplication sentences	 <p> $3 + 3 + 3 + 3 = 12$ __ lots of 3 = 12 __ multiplied by __ = 12 __ x __ = 12 </p>	 <p> $5 + 5 + 5 = 15$ $3 + 3 + 3 + 3 + 3 = 15$ $5 \times 3 = 15$ $3 \times 5 = 15$ </p>	$5 + 5 + 5 + 5 = 20$ $4 \times 5 = 20$ $5 \times 4 = 20$
Use arrays	 <p> $5 \times 3 = 15$ $3 \times 5 = 15$ </p>	 <p>$4 \times 3 = 12$</p>  <p>$3 \times 4 = 12$</p>	$__ \times __ = 20$ $__ \times __ = 20$
Y3:			
Vocabulary:	equal, unequal, group, odd, even, array, multiple, multiplication, multiplied by, division, dividing,	Manipulatives and scaffolds:	Base 10/Dienes Place value charts Part whole models

	grouping, groups of, times, repeated addition, row, column, commutative, factor, product		
Small step:	Concrete:	Pictorial:	Abstract:
Multiply a 2-digit number by a 1-digit number (no exchange)	 <p>3 tens x 2 = __ tens 2 ones x 2 = __ ones __ + __ = 32 x 2 =</p>		42×3 = __ tens \times 3 + __ ones \times 3 = __ + __ = __
Multiply a 2-digit number by a 1-digit number (with exchange)	 <p>2 tens \times 4 = __ tens 3 ones \times 4 = __ ones 24 \times 3 = __ + __ 24 \times 3 =</p>		24×8 = $20 \times 8 + 4 \times 8$ = __ + __ = __
Y4			
Vocabulary:	equal, unequal, group, odd, even, array, multiple, multiplication, multiplied by, division, dividing,	Manipulatives & scaffolds:	Base 10/Dienes Place value charts Place value counters Part whole models

	grouping, groups of, times, repeated addition, row, column, commutative, factor, product		
Small step:	Concrete:	Pictorial:	Abstract:
Informal methods			$36 \times 4 = 160 + 35 = 195$
Multiply a 2-digit number by a 1-digit number			
Multiply a 3-digit number by a 1-digit number			

																												
Y5																												
Vocabulary:	equal, unequal, group, odd, even, array, multiple, multiplication, multiplied by, division, dividing, grouping, groups of, times, repeated addition, row, column, commutative, factor, product	Manipulatives & scaffolds:	Base 10/Dienes Place value charts Place value counters Part whole models																									
Small step:	Concrete:	Pictorial:	Abstract:																									
Multiply a 4-digit number by a 1-digit number		$2341 \times 3 =$ 	<table border="1" data-bbox="1525 794 1809 1066"> <thead> <tr> <th></th> <th>Th</th> <th>H</th> <th>T</th> <th>O</th> </tr> </thead> <tbody> <tr> <td></td> <td>1</td> <td>8</td> <td>2</td> <td>6</td> </tr> <tr> <td>x</td> <td></td> <td></td> <td></td> <td>3</td> </tr> <tr> <td></td> <td>5</td> <td>4</td> <td>7</td> <td>8</td> </tr> <tr> <td></td> <td>2</td> <td></td> <td>1</td> <td></td> </tr> </tbody> </table>		Th	H	T	O		1	8	2	6	x				3		5	4	7	8		2		1	
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	1	8	2	6																								
x				3																								
	5	4	7	8																								
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Multiply a 2-digit number by a 2-digit number (area model)	 $34 \times 23 = 600 + 90 + 80 + 12 = 782$	 $100 + 80 + 30 + 24 = 234$	$18 \times 13 = 234$ <table border="1" data-bbox="1525 1145 1823 1299"> <thead> <tr> <th>X</th> <th>10</th> <th>8</th> </tr> </thead> <tbody> <tr> <td>10</td> <td>100</td> <td>80</td> </tr> <tr> <td>3</td> <td>30</td> <td>24</td> </tr> </tbody> </table> 	X	10	8	10	100	80	3	30	24																
X	10	8																										
10	100	80																										
3	30	24																										

Multiply a 2-digit number by a 2-digit number



$$34 \times 23 = 600 + 90 + 80 + 12 = 782$$

×	10	3
30	300	90
2	20	6

$$300 + 90 + 20 + 6 = 416$$

			2	3	
×			1	4	
			9	2	
			2	3	0

$$(23 \times 4)$$

$$(23 \times 10)$$

Multiply a 3-digit number by a 2-digit number

When children begin to multiply larger numbers, written methods become more efficient; concrete and pictorial methods are less effective and take too much time

			1	2	3	
×			2	3		
			3	6	9	
			2	4	6	0

$$(123 \times 3)$$

$$(123 \times 20)$$

			2	8	4	
×			3	7		
			1	9	8	8
			8	5	2	0

$$(\text{---} \times \text{---})$$

$$(\text{---} \times \text{---})$$

Multiply a 4-digit number by a 2-digit number

				3	2	4	2	
×					2	6		
				1	9	4	5	2
				6	4	8	4	0

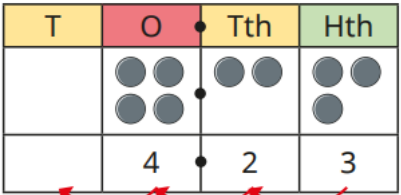
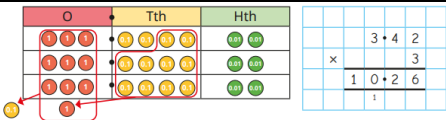
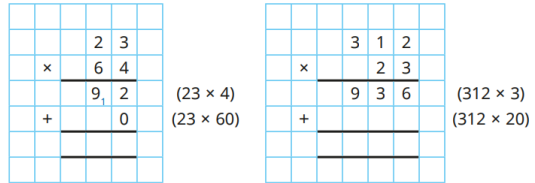
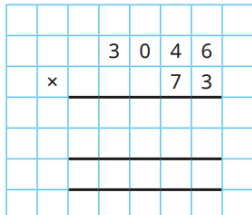
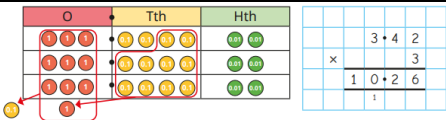
$$(3,242 \times \text{---})$$

$$(3,242 \times \text{---})$$

				3	4	7	2
×					6	4	

$$(\text{---} \times \text{---})$$

$$(\text{---} \times \text{---})$$

<p>Multiply decimals – missing values</p>	<p>$4.23 \times \underline{\quad} = 42.3$</p> 	<p>$4.82 \times \underline{\quad} = 482$</p> <table border="1" data-bbox="869 240 1312 432"> <tr><td>1,000</td><td>2,000</td><td>3,000</td><td>4,000</td><td>5,000</td><td>6,000</td><td>7,000</td><td>8,000</td><td>9,000</td></tr> <tr><td>100</td><td>200</td><td>300</td><td>400</td><td>500</td><td>600</td><td>700</td><td>800</td><td>900</td></tr> <tr><td>10</td><td>20</td><td>30</td><td>40</td><td>50</td><td>60</td><td>70</td><td>80</td><td>90</td></tr> <tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td></tr> <tr><td>0.1</td><td>0.2</td><td>0.3</td><td>0.4</td><td>0.5</td><td>0.6</td><td>0.7</td><td>0.8</td><td>0.9</td></tr> <tr><td>0.01</td><td>0.02</td><td>0.03</td><td>0.04</td><td>0.05</td><td>0.06</td><td>0.07</td><td>0.08</td><td>0.09</td></tr> <tr><td>0.001</td><td>0.002</td><td>0.003</td><td>0.004</td><td>0.005</td><td>0.006</td><td>0.007</td><td>0.008</td><td>0.009</td></tr> </table>	1,000	2,000	3,000	4,000	5,000	6,000	7,000	8,000	9,000	100	200	300	400	500	600	700	800	900	10	20	30	40	50	60	70	80	90	1	2	3	4	5	6	7	8	9	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09	0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009	<p>$3.4 \times \underline{\quad} = 34$</p> <p>$\underline{\quad} \times 5.62 = 5,620$</p> <p>$1,000 \times \underline{\quad} = 345$</p>
1,000	2,000	3,000	4,000	5,000	6,000	7,000	8,000	9,000																																																										
100	200	300	400	500	600	700	800	900																																																										
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0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9																																																										
0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09																																																										
0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009																																																										
<p>Y6</p>	<p>Vocabulary: equal, unequal, group, odd, even, array, multiple, multiplication, multiplied by, division, dividing, grouping, groups of, times, repeated addition, row, column, commutative, factor, product</p>	<p>Manipulatives & scaffolds:</p>	<p>Base 10/Dienes Place value charts Place value counters Part whole models</p>																																																															
<p>Small step:</p>	<p>Concrete:</p>	<p>Pictorial:</p>	<p>Abstract:</p>																																																															
<p>Multiply up to a 4-digit number by a 2-digit number</p>																																																																		
<p>Multiply decimals by integers</p>		<p>$3.24 \times 3 =$</p>	