
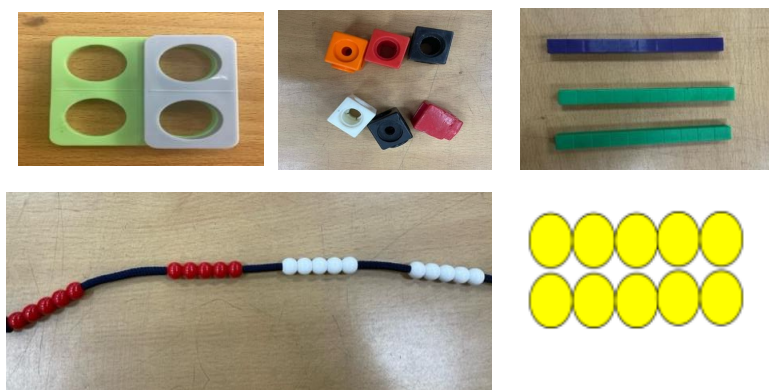
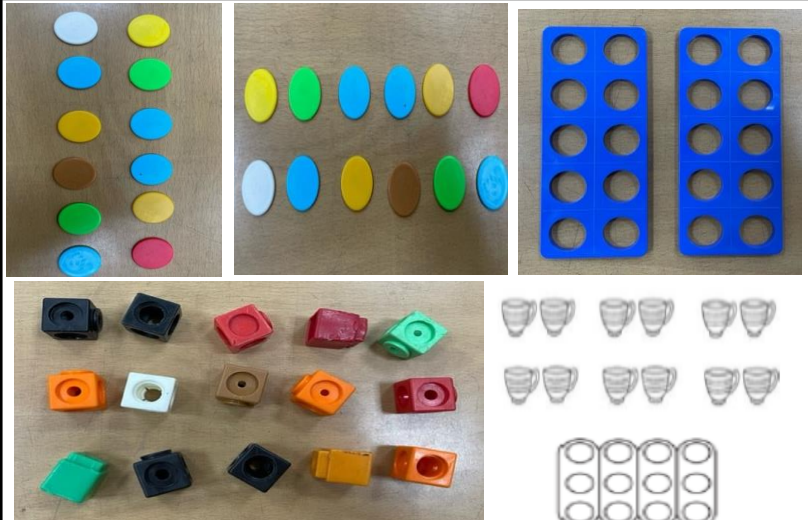

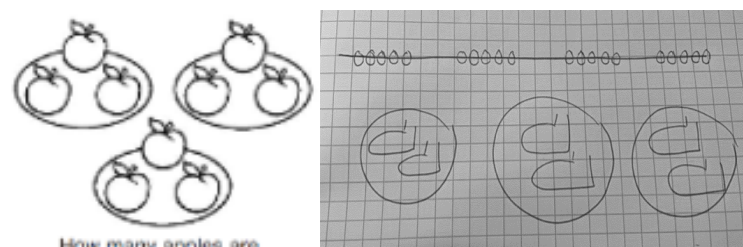
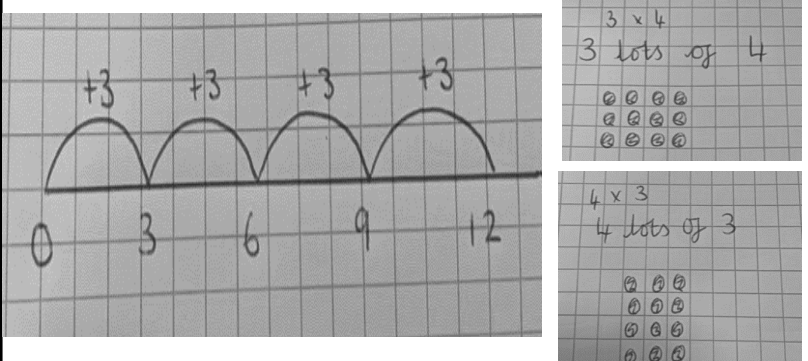
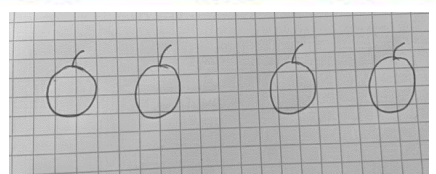


Our Calculation Policy: Multiplication

What I will be learning:	Reception	Year 1	Year 2
NC link	Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally.	Solve one-step problems involving multiplication by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher.	Solve problems involving multiplication using materials, arrays, repeated addition, mental methods, and multiplication facts, including problems in contexts. 2, 5 and 10 times tables should be taught.
Using concrete			
Using pictorial		 <p>How many apples are there altogether?</p>	 <p> 3×4 3 lots of 4 4×3 4 lots of 3 </p>
Using abstract			

What I will be learning:	Year 2	Year 3	Year 4
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NC link	Solve problems involving multiplication using materials, arrays, repeated addition, mental methods, and multiplication facts, including problems in contexts. 2, 5 and 10 times tables should be taught.	Write and calculate mathematical statements for multiplication using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods. 2, 5, 10, 3, 4 and 8 times tables should be taught.	Multiply two-digit and three-digit numbers by a one digit number using the formal written layout. All times tables should be taught.
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Using concrete			
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Using pictorial		<table border="1" style="display: inline-table; margin-right: 20px;"> <tr><td>x</td><td>10</td><td>4</td></tr> <tr><td>3</td><td></td><td></td></tr> </table>	x	10	4	3			
x	10	4							
3									

Using abstract		<p>Pupils should also use number facts to solve more Challenging questions:</p> <p>5 x 11 = 55 5 x 1 = 5 5 x 10 = 50</p> <table border="1" style="display: inline-table; margin-right: 20px;"> <tr><td>x</td><td>10</td><td>4</td></tr> <tr><td>3</td><td>30</td><td>12</td></tr> </table>	x	10	4	3	30	12	<table border="1"> <tr> <td style="text-align: center;"><i>With regrouping</i></td> <td style="text-align: center;"><i>With no regrouping</i></td> </tr> <tr> <td></td> <td></td> </tr> </table> <p>Using known facts and place value for mental multiplication involving multiples of 10 and 100</p> <table style="width: 100%;"> <tr> <td>30 x 7 = 210</td> <td>300 x 7 = 2100</td> </tr> <tr> <td>70 x 3 = 210</td> <td>700 x 3 = 2100</td> </tr> <tr> <td>7 x 30 = 210</td> <td>7 x 300 = 2100</td> </tr> <tr> <td>3 x 70 = 210</td> <td>3 x 700 = 2100</td> </tr> </table>	<i>With regrouping</i>	<i>With no regrouping</i>			30 x 7 = 210	300 x 7 = 2100	70 x 3 = 210	700 x 3 = 2100	7 x 30 = 210	7 x 300 = 2100	3 x 70 = 210	3 x 700 = 2100
x	10	4																			
3	30	12																			
<i>With regrouping</i>	<i>With no regrouping</i>																				
30 x 7 = 210	300 x 7 = 2100																				
70 x 3 = 210	700 x 3 = 2100																				
7 x 30 = 210	7 x 300 = 2100																				
3 x 70 = 210	3 x 700 = 2100																				

What I will be learning:	Year 4	Year 5	Year 6										
NC link	<p>Multiply two-digit and three-digit numbers by a one digit number using the formal written layout. All times tables should be taught.</p>	<p>Multiply numbers up to 4 digits by a one – or two-digit number using the formal written method. All times tables should be taught.</p>	<p>Multiply multi-digit numbers up to four digits by a two-digit whole number using the formal written method of long multiplication. Multiply numbers with up to two decimal places by whole numbers. All times tables should be taught.</p>										
Using concrete													
Using pictorial	<p><i>With regrouping With no regrouping</i></p>												
Using abstract	<table border="0" style="margin-left: 20px;"> <tr> <td>Using known facts and place value for mental multiplication involving multiples of 10 and 100</td> <td></td> </tr> <tr> <td>30 x 7 = 210</td> <td>300 x 7 = 2100</td> </tr> <tr> <td>70 x 3 = 210</td> <td>700 x 3 = 2100</td> </tr> <tr> <td>7 x 30 = 210</td> <td>7 x 300 = 2100</td> </tr> <tr> <td>3 x 70 = 210</td> <td>3 x 700 = 2100</td> </tr> </table>	Using known facts and place value for mental multiplication involving multiples of 10 and 100		30 x 7 = 210	300 x 7 = 2100	70 x 3 = 210	700 x 3 = 2100	7 x 30 = 210	7 x 300 = 2100	3 x 70 = 210	3 x 700 = 2100		
Using known facts and place value for mental multiplication involving multiples of 10 and 100													
30 x 7 = 210	300 x 7 = 2100												
70 x 3 = 210	700 x 3 = 2100												
7 x 30 = 210	7 x 300 = 2100												
3 x 70 = 210	3 x 700 = 2100												

Discuss it

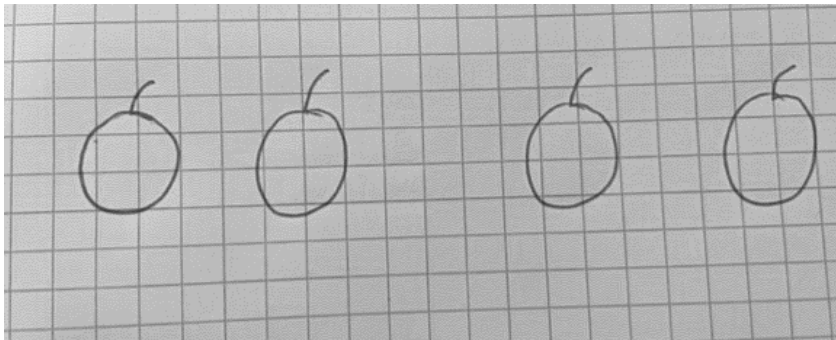
Groups of, lots of, times,
array, altogether, multiply,
count, double

Create it

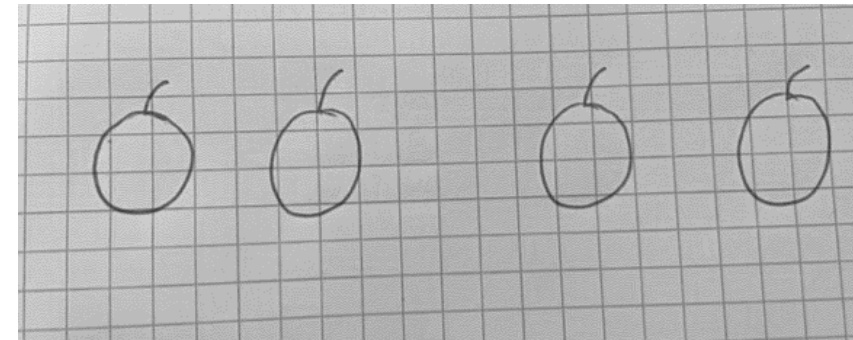


Reception

Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally.



Draw it

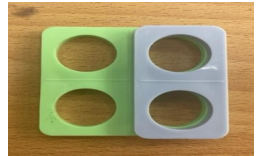
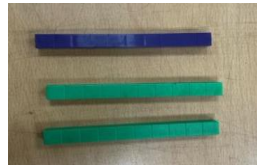


Write it

Discuss it

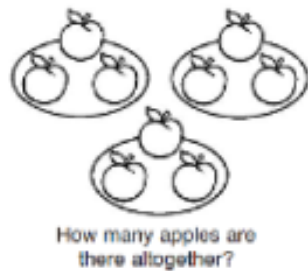
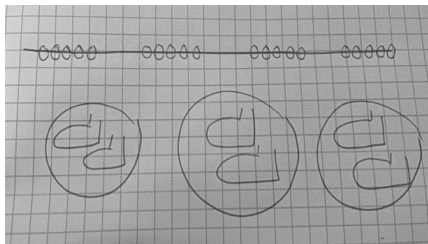
Groups of, lots of, times,
array, altogether, multiply,
count

Create it

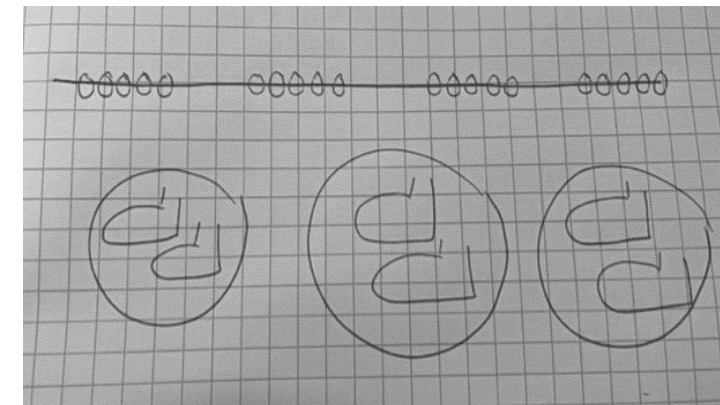


Year 1

Solve one-step problems involving multiplication by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher.



Draw it



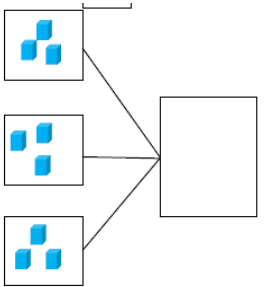
Write it

Discuss it

Groups of, lots of, times, array, altogether, multiply, count, multiplied by, repeated addition, column, row, commutative, sets of, equal groups, times as big as, once, twice, three times



Create it



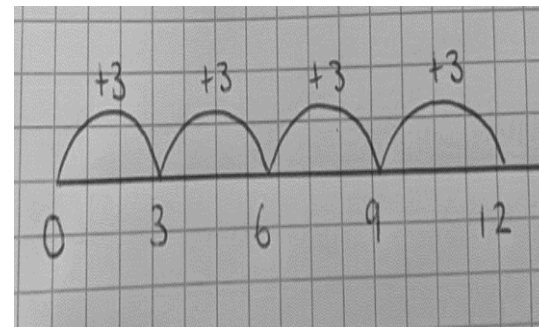
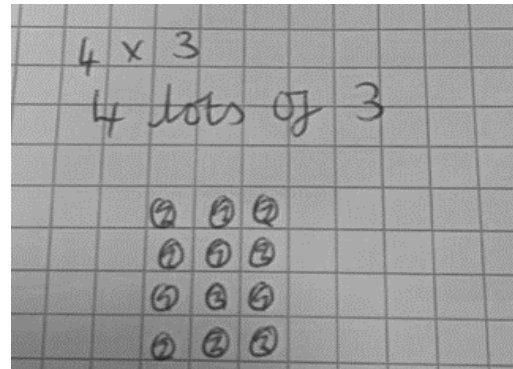
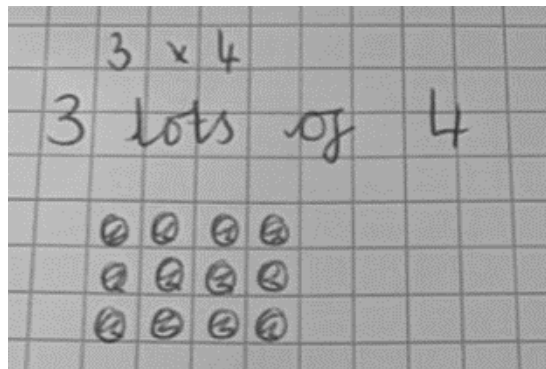
Year 2

Solve problems involving multiplication using materials, arrays, repeated addition, mental methods, and multiplication facts, including problems in contexts. 2, 5 and 10 times tables should be taught.

$$5+5+5+5+5+5+5+5+5+5 = \square$$

$$5 \times 2 = 10$$

$$5 \times 4 = 20$$



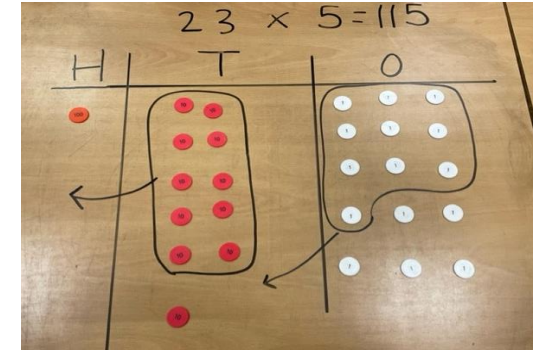
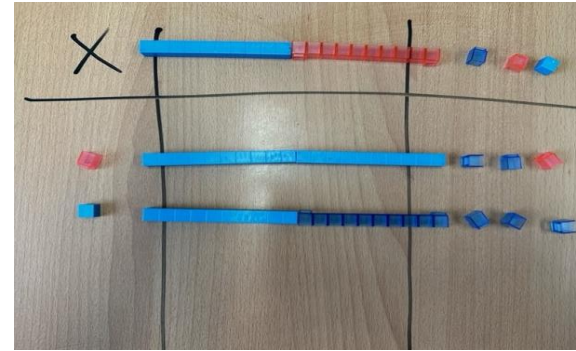
Draw it

Write it

Discuss it

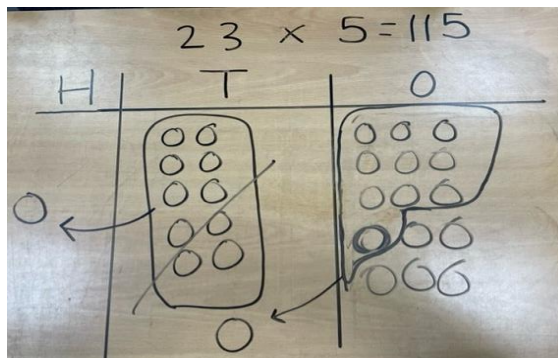
commutative, sets of, equal groups, times as big as, once, twice, three times, partition, grid method, multiple, product, tens, ones, value

Create it



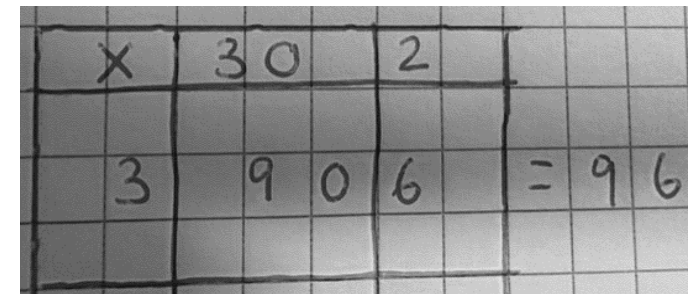
Year 3

Write and calculate mathematical statements for multiplication using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods. 2, 5, 10, 3, 4 and 8 times tables to be taught.



Draw it

\times	10	4
3	 30	 12



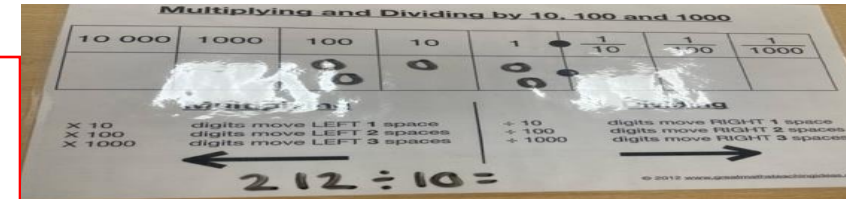
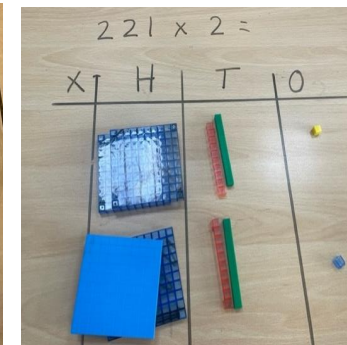
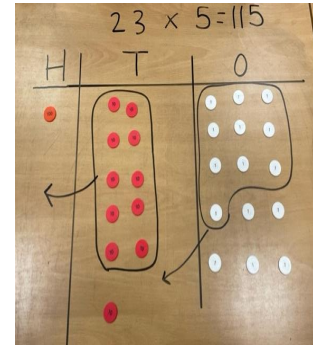
\times	10	4
3	30	12

Write it

Discuss it

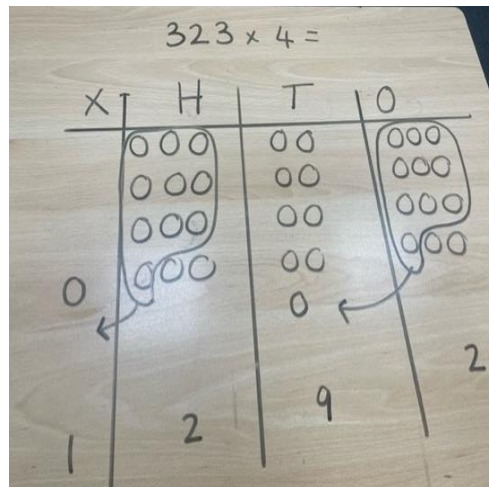
Groups of, lots of, times, array, altogether, multiply, count, multiplied by, repeated addition, column, row, commutative, sets of, equal groups, times as big as, once, twice, three times, partition, grid method, multiple, product, tens, ones, value, inverse

Create it

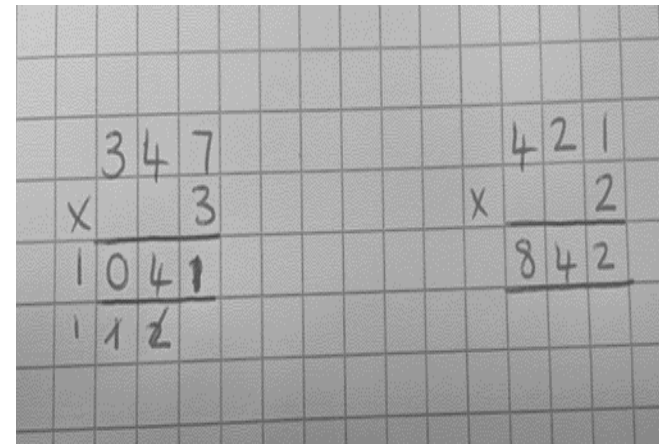


Year 4

Multiply two-digit and three-digit numbers by a one digit number using the formal written layout. All times tables should be taught.



Draw it



Using known facts and place value for mental multiplication involving multiples of 10 and 100

$$30 \times 7 = 210$$

$$300 \times 7 = 2100$$

$$70 \times 3 = 210$$

$$700 \times 3 = 2100$$

$$7 \times 30 = 210$$

$$7 \times 300 = 2100$$

$$3 \times 70 = 210$$

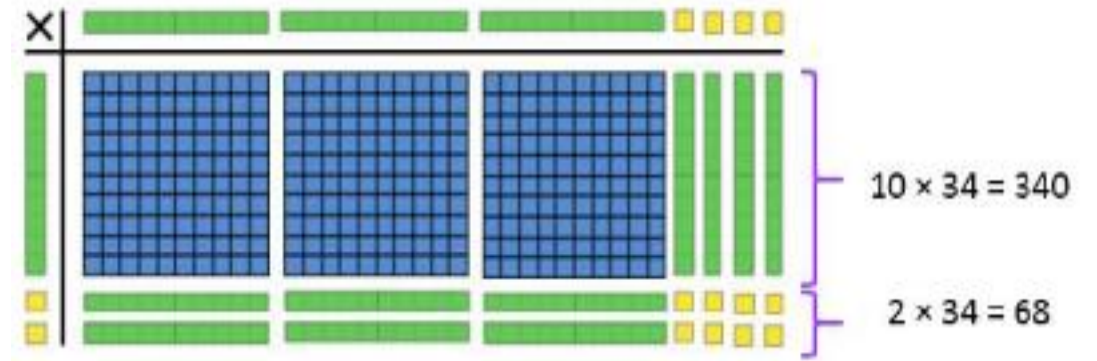
$$3 \times 700 = 2100$$

Write it

Discuss it

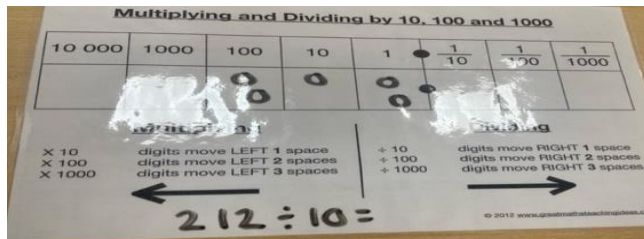
Commutative, sets of, equal groups, times as big as, once, twice, three times, partition, grid method, multiple, product, tens, ones, value, inverse

Create it

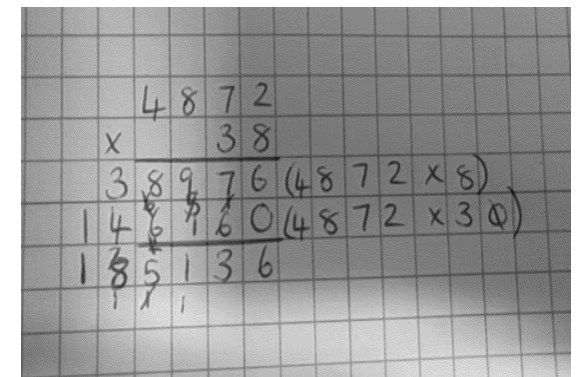
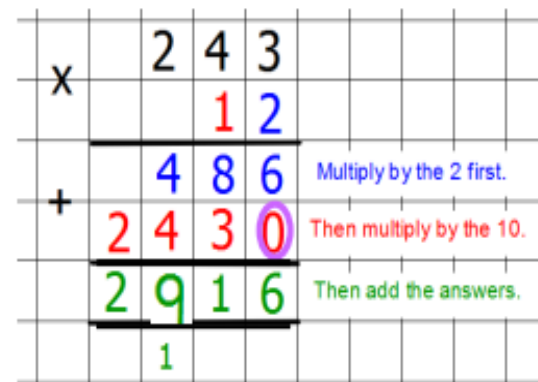


Year 5

Multiply numbers up to 4 digits by a one – or two-digit number using the formal written method. All times tables should be taught.



Draw it

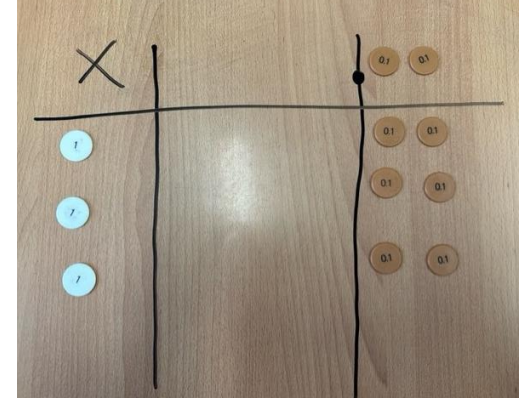
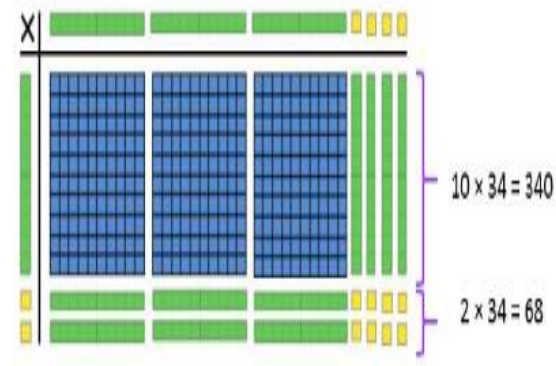


Write it

Discuss it

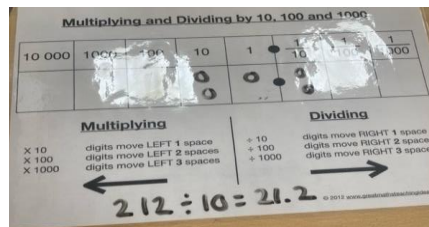
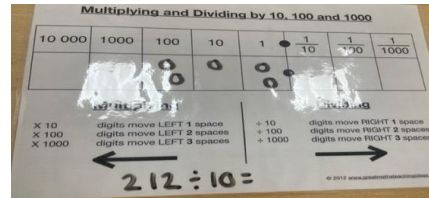
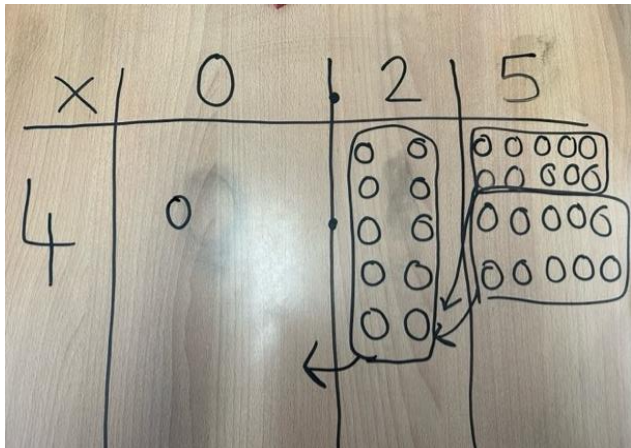
Groups of, lots of, times, array, altogether, multiply, count, multiplied by, repeated addition, column, row, commutative, sets of, equal groups, times as big as, once, twice, three times, partition, grid method, multiple, product, tens, ones, value, inverse, square, factor, integer, decimal, short/long multiplication, carry, tenths, hundredths, decimals

Create it



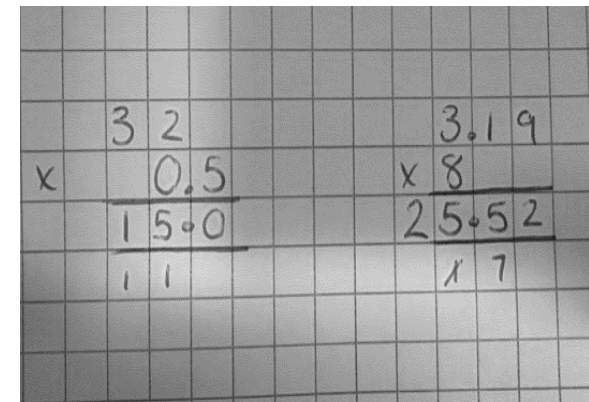
Year 6

Multiply multi-digit numbers up to four digits by a two-digit whole number using the formal written method of long multiplication.
 Multiply numbers with up to two decimal places by whole numbers.
 All times tables should be taught.



Draw it

x	3	4	5	1				
			2	3				
+	1	0	3	5	3			Multiply by the 3 first.
	6	9	0	2	0			Then multiply by the 20.
	7	9	3	7	3			Then add the answers.



Write it