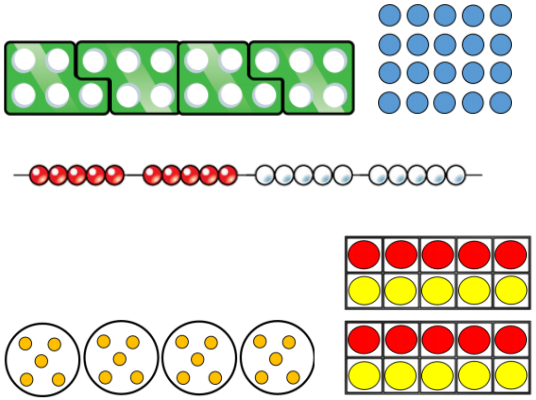
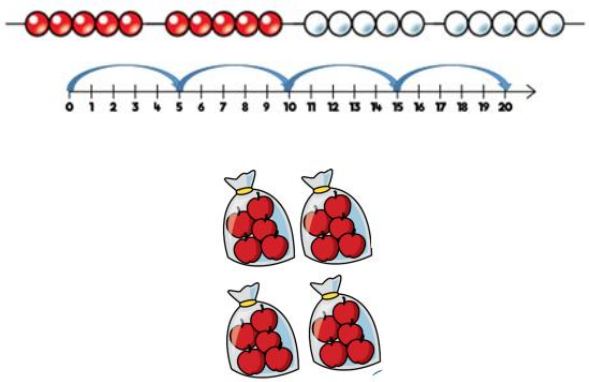
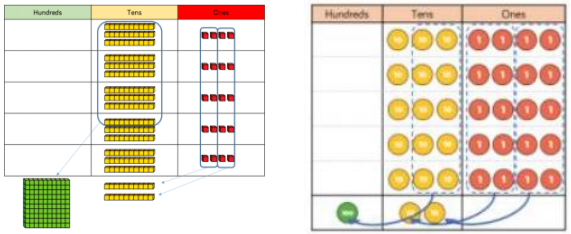
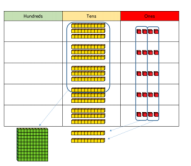
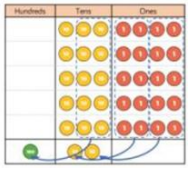
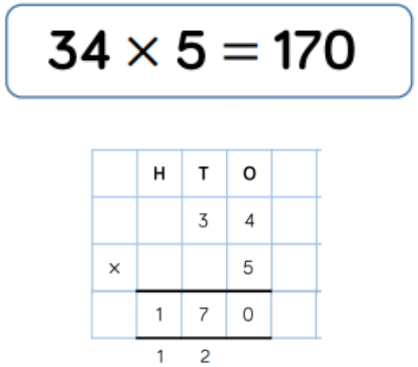
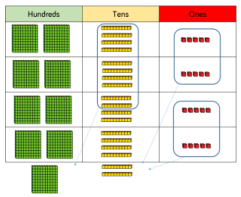
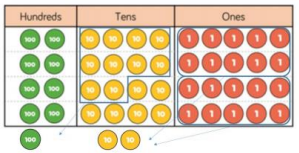
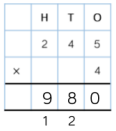
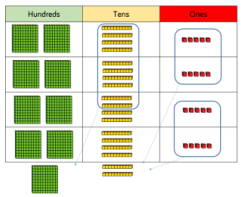
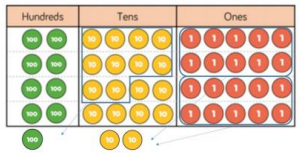
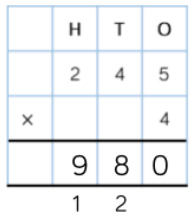
Year 1/2 - Multiplication	Solve 1-step problems using multiplication	
Concrete	**Pictorial**	**Abstract**
		One bag holds 5 apples. How many apples do 4 bags hold? $5 + 5 + 5 + 5 = 20$ $4 \times 5 = 20$ $5 \times 4 = 20$
Key skills and concepts	When solving 1-step problems using multiplication: • Children represent multiplication as repeated addition in many different ways • In **Year 1** use concrete & pictorial representations to solve problems. Children are **not expected to record multiplication formally.** • In **Year 2** children are introduced to the multiplication symbol	

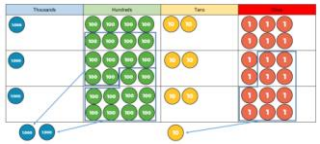
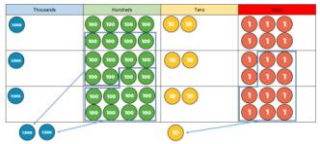
<table>
<tr><th colspan="2">Year 3/4 - Multiplication</th><th colspan="2">Multiply 2-digit numbers by 1-digit numbers</th></tr>
<tr><th>Concrete</th><th colspan="2">Pictorial</th><th>Abstract</th></tr>
<tr>
<td> 

The calculation is shown alongside the use of concrete resources</td>
<td colspan="2"> 


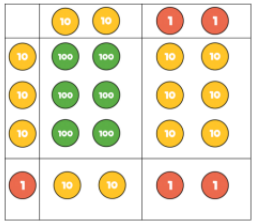
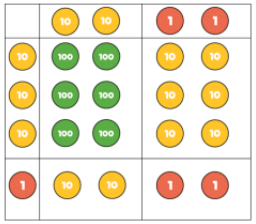
Alongside the use of concrete resources images and drawings of these resources are used.</td>
<td> 
</td>
</tr>
<tr><td></td><td colspan="3"></td></tr>
<tr><td>Key skills and concepts</td><td colspan="3">When multiplying 2-digit numbers by 1-digit numbers:

• The expanded method can be used before moving on to the short multiplication method
• Place value counters are used to support the understanding of the method rather than the supporting of multiplication, as children should use their times table knowledge.</td></tr>
</table>

Year 3/4 - Multiplication	Multiply 3-digit numbers by 1-digit numbers	
Concrete	**Pictorial**	**Abstract**
   The calculation is shown alongside the use of concrete resources	  Alongside the use of concrete resources images and drawings of these resources are used.	 $245 \times 4 = 980$
Key skills and concepts	When multiplying 3-digit numbers by 1-digit numbers: • When moving to 3-digit by 1-digt multiplication encourage children to move towards the short, formal written method. • Base 10 & place value counters support the understanding of the written method. • Limit the number of exchanges needed & move children away from using resources when multiplying larger numbers.	

<table>
<tr><th colspan="2">Year 5 - Multiplication</th><th colspan="2">Multiply 4-digit numbers by 1-digit numbers</th></tr>
<tr><th>Concrete</th><th>Pictorial</th><th colspan="2">Abstract</th></tr>
<tr>
<td> 
<table>
<tr><td></td><td>Th</td><td>H</td><td>T</td><td>O</td></tr>
<tr><td></td><td>1</td><td>8</td><td>2</td><td>6</td></tr>
<tr><td>×</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></td><td>2</td><td></td><td>1</td></tr>
</table>
The calculation is shown alongside the use of concrete resources</td>
<td> 
Alongside the use of concrete resources images and drawings of these resources are used.</td>
<td colspan="2"><table>
<tr><td></td><td>Th</td><td>H</td><td>T</td><td>O</td></tr>
<tr><td></td><td>1</td><td>8</td><td>2</td><td>6</td></tr>
<tr><td>×</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></td><td>2</td><td></td><td>1</td></tr>
</table>
$1{,}826 \times 3 = 5{,}478$</td>
</tr>
<tr><td colspan="4"></td></tr>
<tr><td>Key skills and concepts</td><td colspan="3">When multiplying 4-digit numbers by 1-digit numbers:

• Place value counters are the most effective manipulatives
• Place value counters are used to support the understanding of the method rather than the supporting of multiplication, as children should use their times table knowledge.</td></tr>
</table>

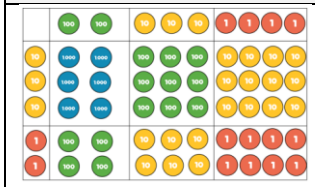
<table>
<tr><th colspan="2">Year 5 - Multiplication</th><th colspan="2">Multiply 2-digit numbers by 2-digit numbers</th></tr>
<tr><th>Concrete</th><th>Pictorial</th><th colspan="2">Abstract</th></tr>
<tr>
<td> 
<table>
<tr><td>×</td><td>20</td><td>2</td></tr>
<tr><td>30</td><td>600</td><td>60</td></tr>
<tr><td>1</td><td>20</td><td>2</td></tr>
</table>
The calculation is shown alongside the use of concrete resources</td>
<td> 
Alongside the use of concrete resources images and drawings of these resources are used.</td>
<td colspan="2">
<table>
<tr><td>×</td><td>20</td><td>2</td></tr>
<tr><td>30</td><td>600</td><td>60</td></tr>
<tr><td>1</td><td>20</td><td>2</td></tr>
</table>
22 × 31 = 682
<table>
<tr><td></td><td>H</td><td>T</td><td>O</td></tr>
<tr><td></td><td></td><td>2</td><td>2</td></tr>
<tr><td>×</td><td></td><td>3</td><td>1</td></tr>
<tr><td></td><td></td><td>2</td><td>2</td></tr>
<tr><td></td><td>6</td><td>6</td><td>0</td></tr>
<tr><td></td><td>6</td><td>8</td><td>2</td></tr>
</table>
</td>
</tr>
<tr><td></td><td></td><td colspan="2"></td></tr>
<tr><td>Key skills and concepts</td><td colspan="3">When multiplying 2-digit numbers by 2-digit numbers:

• When multiplying a multi-digit number by 2-digits, use the area model to help children understand the size of the numbers they are using.
• The grid method matches the area model as an initial written method before moving on to the formal written multiplication method.</td></tr>
</table>

Year 5 - Multiplication

Multiply 3-digit numbers by 2-digit numbers

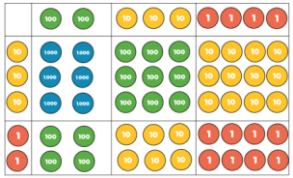
Concrete



×	200	30	4
30	6,000	900	120
2	400	60	8

The calculation is shown alongside the use of any concrete resources

Pictorial



Alongside the use of concrete resources images and drawings of these resources are used.

Abstract

×	200	30	4
30	6,000	900	120
2	400	60	8

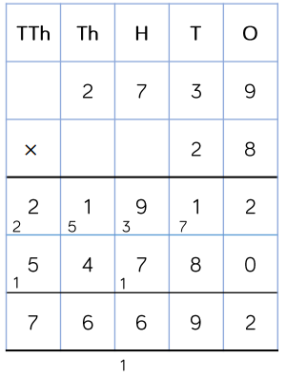
$234 \times 32 = 7{,}488$

Th	H	T	O
	2	3	4
×		3	2
	4	6	8
$^{1}7$	$^{1}0$	2	0
7	4	8	8

Key skills and concepts

When multiplying 3-digit numbers by 2-digit numbers:

- Children can continue to use the area model
- Place value counters are more efficient but Base 10 can be used to highlight the size of numbers
- Move towards the formal method, seeing links with the grid method

<table>
<tr><th colspan="2">Year 5/6 - Multiplication</th><th colspan="2">Multiply 4-digit numbers by 2-digit numbers</th></tr>
<tr><th>Concrete</th><th>Pictorial</th><th colspan="2">Abstract</th></tr>
<tr><td>The calculation can be shown alongside the use of place value counters to link to previous learning.</td><td>Alongside the use of place value counters, images and drawings of these resources can be used to link to previous learning.</td><td colspan="2"> 

2,739 × 28 = 76,692</td></tr>
<tr><td></td><td colspan="3"></td></tr>
<tr><td>Key skills and concepts</td><td colspan="3">When multiplying 4-digit numbers by 2-digit numbers:
• Children should already be confident with the written method
• If they are struggling with times tables, provide multiplication grids
• Ensure exchanged digits are placed underneath and keep this consistent.</td></tr>
</table>

Mount Hawke Calculation Policy