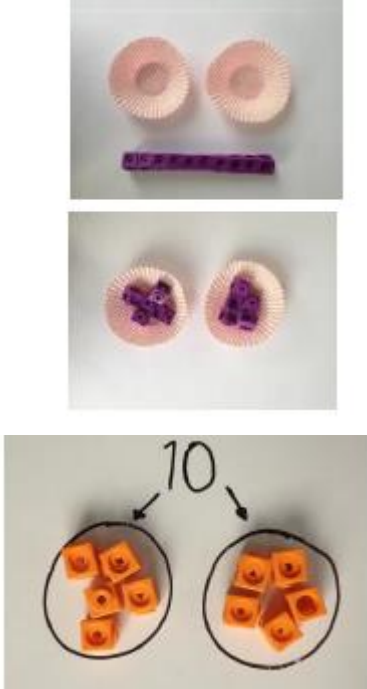
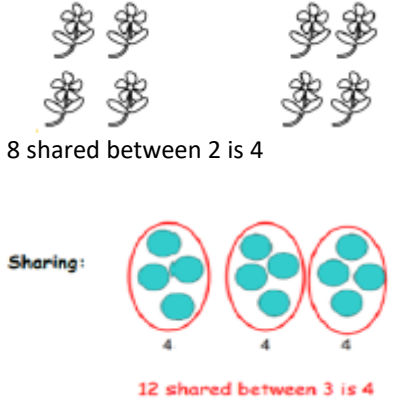
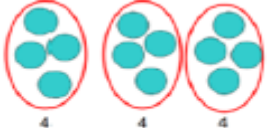
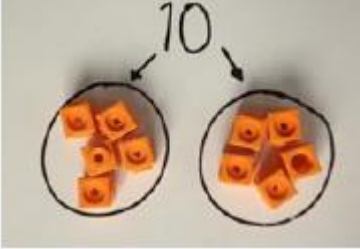
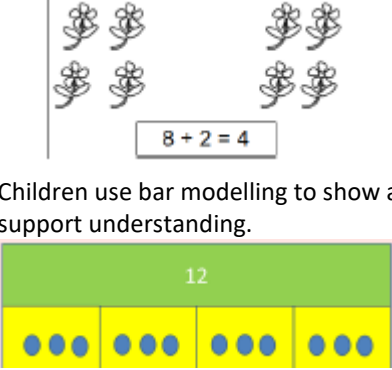
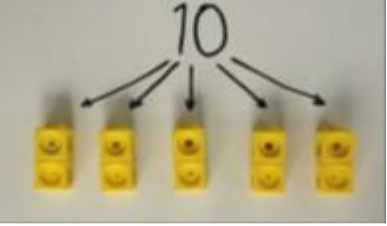
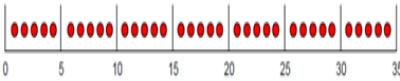
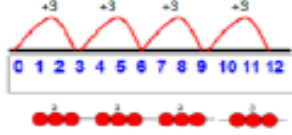
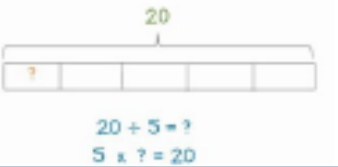


			$\begin{array}{r} 319 \\ \times 8 \\ \hline 2552 \end{array}$
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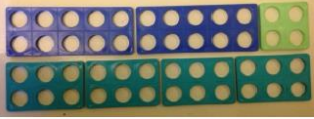
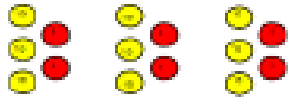


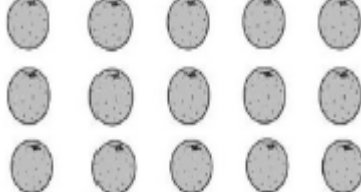
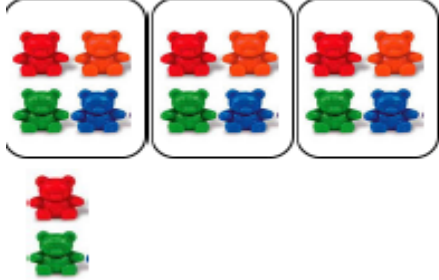


Year 1 Division

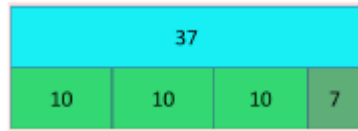
<u>Objective / Strategy</u>	<u>Concrete</u>	<u>Pictorial</u>	<u>Abstract</u>
Division as sharing	 <p>I have 10 cubes, can you share them equally in 2 groups?</p>	<p>Children use pictures or shapes to share quantities.</p>  <p>8 shared between 2 is 4</p> <p>Sharing: </p> <p>12 shared between 3 is 4</p>	12 shared between 3 is 4

Year 2 – Division

<u>Objective / Strategy</u>	<u>Concrete</u>	<u>Pictorial</u>	<u>Abstract</u>
Division as sharing	 <p>I have 10 cubes, can you share them equally in 2 groups?</p>	 <p>Children use bar modelling to show and support understanding.</p> $12 \div 4 = 3$	$12 \div 3 = 4$
Division as grouping	<p>Divide quantities into equal groups. Use cubes, counters, objects or place value counters to aid understanding.</p>  	<p>Use number lines for grouping</p>  $12 \div 4 = 3$ <p>Think of the bar as a whole. Split it into the number of groups you are dividing by and work out how many would be within each group.</p> 	$28 \div 7 = 4$ Divide 28 into 7 groups. How many are in each group?

Year 3 – Division

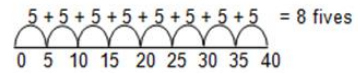
<u>Objective / Strategy</u>	<u>Concrete</u>	<u>Pictorial</u>	<u>Abstract</u>
Division with arrays	<p>Use cubes, counters, objects or place value counters to aid understanding.</p>  <p>24 divided into groups of 6 = 4</p> $96 + 3 = 32$ 	<p>Continue to use bar modelling to aid solving division problems.</p>  <p style="text-align: center;">20</p> $20 \div 5 = ?$ $5 \times ? = 20$	<p>How many groups of 6 in 24?</p> $24 \div 6 = 4$
Division with remainders.	 <p>Link division to multiplication by creating an array and thinking about the number sentences that can be created.</p> <p>E.g. $15 \div 3 = 5$ $5 \times 3 = 15$ $15 \div 5 = 3$ $3 \times 5 = 15$</p>	<p>Draw an array and use lines to split the array into groups to make multiplication and division sentences</p> 	<p>Find the inverse of multiplication and division sentences by creating eight linking number sentences.</p> $7 \times 4 = 28$ $4 \times 7 = 28$ $28 \div 7 = 4$ $28 \div 4 = 7$ $28 = 7 \times 4$ $28 = 4 \times 7$ $4 = 28 \div 7$ $7 = 28 \div 4$
Division as grouping	<p>$14 \div 3 =$ Divide objects between groups and see how much is left over</p> 	<p>Jump forward in equal jumps on a number line then see how many more you need to jump to find a remainder.</p>  <p>Draw dots and group them to divide an amount and clearly show a remainder.</p>  <p>Use bar models to show division with remainders.</p>	<p>Complete written divisions and show the remainder using r.</p> $29 \div 8 = 3 \text{ REMAINDER } 5$ <p style="text-align: center;"> \uparrow \uparrow \uparrow \uparrow dividend divisor quotient remainder </p>



Example without remainder:

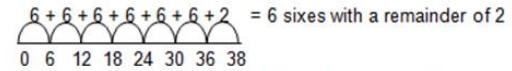
$$40 \div 5$$

Ask "How many 5s in 40?"



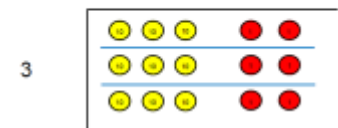
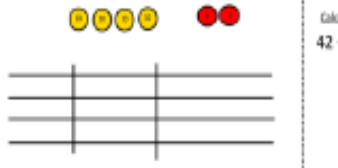
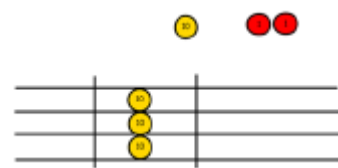
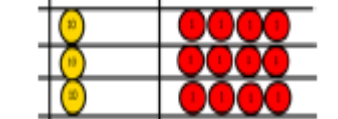
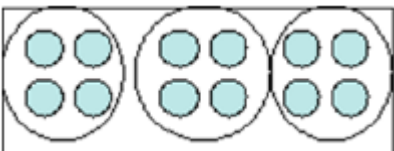
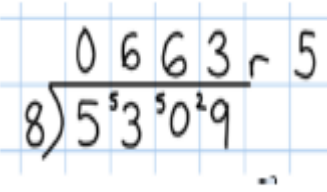
Example with remainder:

$$38 \div 6$$



For larger numbers, when it becomes inefficient to count in single multiples, bigger jumps can be recorded using known facts.

Year 4 and Year 5- Division

<u>Objective / Strategy</u>	<u>Concrete</u>	<u>Pictorial</u>	<u>Abstract</u>				
<p>Divide at least 3-digit numbers by 1 digit.</p> <p>Short Division</p>	<p>$96 \div 3$</p> <table style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <tr> <td style="padding: 0 10px;">Tens</td> <td style="padding: 0 10px;">Units</td> </tr> <tr> <td style="text-align: center;">3</td> <td style="text-align: center;">2</td> </tr> </table>  <p>Use place value counters to divide using the bus stop method alongside</p>  <p>$42 \div 3 =$</p> <p>Start with the biggest place value, we are sharing 40 into three groups. We can put 1 ten in each group and we have 1 ten left over.</p>  <p>We exchange this ten for ten ones and then share the ones equally among the groups.</p>  <p>We look how much in 1 group so the answer is 14.</p>	Tens	Units	3	2	<p>Students can continue to use drawn diagrams with dots or circles to help them divide numbers into equal groups.</p>  <p>Encourage them to move towards counting in multiples to divide more efficiently.</p>	<p>Begin with divisions that divide equally with no remainder.</p> $\begin{array}{r} 218 \\ 4 \overline{) 872} \end{array}$ <p>Move onto divisions with a remainder.</p> $\begin{array}{r} 86 \text{ r } 2 \\ 5 \overline{) 432} \end{array}$ <p>Finally move into decimal places to divide the total accurately.</p> $\begin{array}{r} 14.6 \\ 35 \overline{) 511.0} \end{array}$ 
Tens	Units						
3	2						

Year 6 – Division

Objective / Strategy

Step 1- Long Division

$$\begin{array}{r} \text{h t o} \\ 041 \text{ R}1 \\ \hline 4 \overline{) 165} \end{array}$$

4 does not go into 1 (hundred). So combine the 1 hundred with the 6 tens (160).

4 goes into 16 four times.

4 goes into 5 once, leaving a remainder of 1.

$$\begin{array}{r} \text{th h t o} \\ 0400 \text{ R}7 \\ \hline 8 \overline{) 3207} \end{array}$$

8 does not go into 3 of the thousands. So combine the 3 thousands with the 2 hundreds (3,200).

8 goes into 32 four times ($3,200 \div 8 = 400$)

8 goes into 0 zero times (tens).

8 goes into 7 zero times, and leaves a remainder of 7.

$$\begin{array}{r} \text{h t o} \\ 061 \\ \hline 4 \overline{) 247} \\ \quad \underline{-4} \\ \quad \quad 3 \end{array}$$

When dividing the ones, 4 goes into 7 one time. Multiply $1 \times 4 = 4$, write that four under the 7, and subtract. This finds us the remainder of 3.

Check: $4 \times 61 + 3 = 247$

$$\begin{array}{r} \text{th h t o} \\ 0402 \\ \hline 4 \overline{) 1609} \\ \quad \quad \quad \underline{-8} \\ \quad \quad \quad \quad 1 \end{array}$$

When dividing the ones, 4 goes into 9 two times. Multiply $2 \times 4 = 8$, write that eight under the 9, and subtract. This finds us the remainder of 1.

Check: $4 \times 402 + 1 = 1,609$

Step 2 – Long Division

1. Divide.	2. Multiply & subtract.	3. Drop down the next digit.
$\begin{array}{r} \text{t o} \\ 2 \\ \hline 2 \overline{)58} \end{array}$	$\begin{array}{r} \text{t o} \\ 2 \\ \hline 2 \overline{)58} \\ -4 \\ \hline 1 \end{array}$	$\begin{array}{r} \text{t o} \\ 29 \\ \hline 2 \overline{)58} \\ -4 \downarrow \\ \hline 18 \end{array}$
Two goes into 5 two times, or 5 tens $\div 2 = 2$ whole tens -- but there is a remainder!	To find it, multiply $2 \times 2 = 4$, write that 4 under the five, and subtract to find the remainder of 1 ten.	Next, drop down the 8 of the ones next to the leftover 1 ten. You combine the remainder ten with 8 ones, and get 18.

1. Divide.	2. Multiply & subtract.	3. Drop down the next digit.
$\begin{array}{r} \text{t o} \\ 29 \\ \hline 2 \overline{)58} \\ -4 \\ \hline 18 \end{array}$	$\begin{array}{r} \text{t o} \\ 29 \\ \hline 2 \overline{)58} \\ -4 \\ \hline 18 \\ -18 \\ \hline 0 \end{array}$	$\begin{array}{r} \text{t o} \\ 29 \\ \hline 2 \overline{)58} \\ -4 \\ \hline 18 \\ -18 \\ \hline 0 \end{array}$
Divide 2 into 18. Place 9 into the quotient.	Multiply $9 \times 2 = 18$, write that 18 under the 18, and subtract.	The division is over since there are no more digits in the dividend. The quotient is 29.

1. Divide.	2. Multiply & subtract.	3. Drop down the next digit.
$\begin{array}{r} \text{h t o} \\ 1 \\ \hline 2 \overline{)278} \end{array}$	$\begin{array}{r} \text{h t o} \\ 1 \\ \hline 2 \overline{)278} \\ -2 \\ \hline 0 \end{array}$	$\begin{array}{r} \text{h t o} \\ 18 \\ \hline 2 \overline{)278} \\ -2 \downarrow \\ \hline 07 \end{array}$
Two goes into 2 one time, or 2 hundreds $\div 2 = 1$ hundred.	Multiply $1 \times 2 = 2$, write that 2 under the two, and subtract to find the remainder of zero.	Next, drop down the 7 of the tens next to the zero.

Divide.	Multiply & subtract.	Drop down the next digit.
$\begin{array}{r} \text{h t o} \\ 13 \\ \hline 2 \overline{)278} \\ -2 \\ \hline 07 \end{array}$	$\begin{array}{r} \text{h t o} \\ 13 \\ \hline 2 \overline{)278} \\ -2 \\ \hline 07 \\ -6 \\ \hline 1 \end{array}$	$\begin{array}{r} \text{h t o} \\ 13 \\ \hline 2 \overline{)278} \\ -2 \\ \hline 07 \\ -6 \\ \hline 18 \end{array}$
Divide 2 into 7. Place 3 into the quotient.	Multiply $3 \times 2 = 6$, write that 6 under the 7, and subtract to find the remainder of 1 ten.	Next, drop down the 8 of the ones next to the 1 leftover ten.

1. Divide.

$$\begin{array}{r}
 \text{h t o} \\
 139 \\
 2 \overline{) 278} \\
 \underline{-2} \\
 07 \\
 \underline{-6} \\
 18
 \end{array}$$

Divide 2 into 18. Place 9 into the quotient.

2. Multiply & subtract.

$$\begin{array}{r}
 \text{h t o} \\
 139 \\
 2 \overline{) 278} \\
 \underline{-2} \\
 07 \\
 \underline{-6} \\
 18 \\
 \underline{-18} \\
 0
 \end{array}$$

Multiply $9 \times 2 = 18$, write that 18 under the 18, and subtract to find the remainder of zero.

3. Drop down the next digit.

$$\begin{array}{r}
 \text{h t o} \\
 139 \\
 2 \overline{) 278} \\
 \underline{-2} \\
 07 \\
 \underline{-6} \\
 18 \\
 \underline{-18} \\
 0
 \end{array}$$

There are no more digits to drop down. The quotient is 139.