

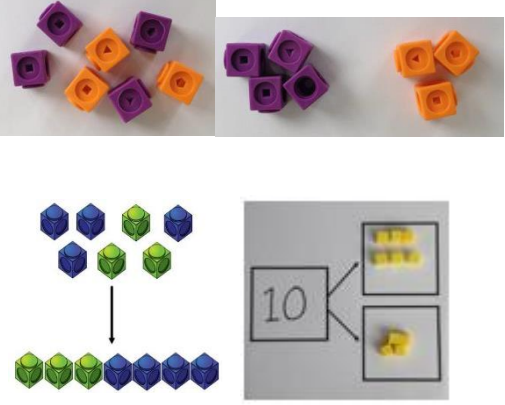
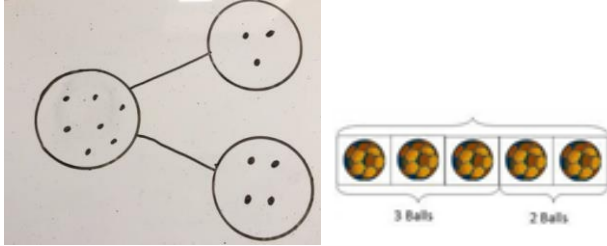
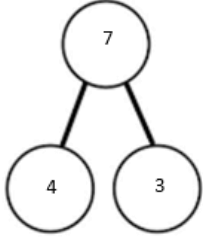
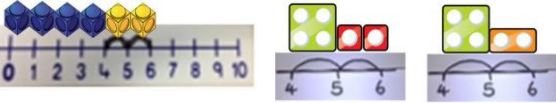

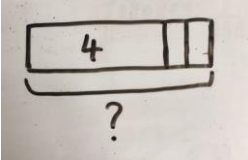

Calculation Policy - Berkeley Academy



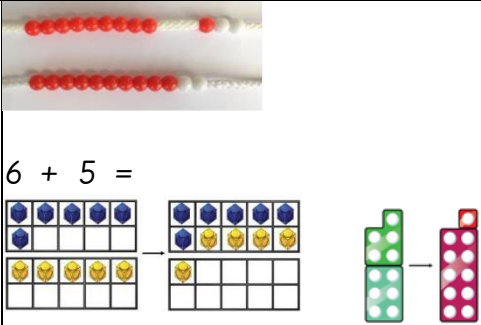
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Addition	<p>Combining two parts to make a whole; part-whole model</p> <p>Starting at the bigger number and counting on</p> <p>Regrouping to make 10</p>	<p>Adding three single digits</p> <p>Adding 2 numbers by partitioning</p>	<p>Column method up to 3 digits using place value counters</p>	<p>Column method up to 4 digits</p>	<p>Column method with more than 4 digits</p> <p>Column method with decimals using place value counters (with the same amount of decimal places)</p>	<p>Column method with more than 4 digits</p> <p>Column method with decimals using place value counters (with different amounts of decimal places)</p>
Subtraction	<p>Taking away ones</p> <p>Counting back</p> <p>Find the difference</p> <p>Making 10</p>	<p>Counting back</p> <p>Find the difference</p> <p>Making 10</p> <p>Subtracting 2 numbers by partitioning</p>	<p>Column method up to 3 digits using place value counters</p>	<p>Column method up to 4 digits</p>	<p>Column method with more than 4 digits</p> <p>Column method with decimals using place value counters (with the same amount of decimal places)</p>	<p>Column method with more than 4 digits</p> <p>Column method with decimals using place value counters (with different amount of decimal places)</p>
Multiplication	<p>Doubling</p> <p>Counting in multiples of 2, 5 & 10</p> <p>Recognising and making equal groups</p>	<p>Doubling</p> <p>Counting in multiples of 2, 3, 5 & 10</p> <p>Repeated addition</p> <p>Arrays - showing commutative multiplication</p>	<p>Counting in multiples of 4, 8, 50 & 100</p> <p>Repeated addition</p> <p>Arrays - showing commutative multiplication</p> <p>Grid method</p>	<p>Column multiplication by 1 digit using place value counters</p>	<p>Column multiplication up to 4 digits by 1 and 2 digits</p>	<p>Column multiplication up to 4 digits by 2 digits</p>
Division	<p>Halving</p> <p>Sharing objects into equal groups</p> <p>Division as grouping</p>	<p>Halving</p> <p>Division as grouping</p> <p>Division within arrays</p>	<p>Division within arrays</p> <p>Division with a remainder</p> <p>Short division up to 2 digits by 1 digit using place value counters</p>	<p>Division with a remainder</p> <p>Short division up to 3 digits by 1 digit using place value counters</p>	<p>Short division up to 4 digits by 1 digit with remainders (interpret remainders appropriately for the context)</p>	<p>Short division</p> <p>Long division up to 4 digits by a 2 digit number using place value counters (interpret remainders as whole numbers, fractions or round)</p>

Addition

Key vocabulary: sum, total, parts and wholes, plus, add, altogether, more, 'is equal to' 'is the same as'.

Strategies	Concrete	Pictorial	Abstract
<p><i>Combining two parts to make a whole</i> (use other resources too e.g. eggs, shells, teddy bears, cars).</p> <p><i>Introduced in Year 1</i></p>		<p>Use pictures to add two numbers together as a group or in a bar.</p> 	<p>$4 + 3 = 7$ Four is a part, 3 is a part and the whole is seven.</p>  <p>Use the part-part whole diagram as shown above to move into the abstract.</p>
<p><i>Starting at the bigger number and counting on</i> (use number lines alongside resources)</p> <p><i>Introduced in Year 1</i></p>	  <p>Start with the larger number on the bead string and then count on to the smaller number 1 by 1 to find the answer.</p>	<p>A bar model which encourages the children to count on, rather than count all.</p>  <p>Start at the larger number on the number line and count on in ones or in one jump to find the answer.</p>	<p>The abstract number line: What is 2 more than 4? What is the sum of 2 and 4? What is the total of 4 and 2? $4 + 2$</p>  <p>Place the larger number in your head and count on the smaller number to find your answer.</p>

Regrouping to make 10
(using ten frames and counters/cubes or using Numicon)



$$6 + 5 =$$

Introduced in Year 1

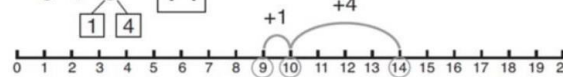
Start with the bigger number and use the smaller number to make 10.

Use pictures or a number line. Regroup or partition the smaller number to make 10.



$$3 + 9 =$$

$$9 + 5 = 14$$



$$7 + 4 = 11$$

If I am at seven, how many more do I need to make 10. How many more do I add on now?

Begin to develop an understanding of equality:

$$7 + _ = 11$$

$$_ + 4 = 11$$

$$_ = 7 + 4$$

$$11 = _ + 4$$

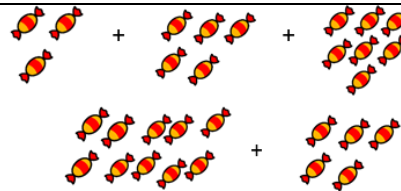
Adding 3 single digits

$$4 + 7 + 6 = 17$$

Put 4 and 6 together to make 10. Add on 7.



Look for bonds to 10 then add the third digit.



$$(4 + 7) + 6 = 10 + 7 = 17$$

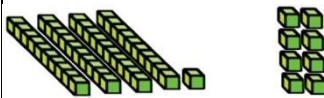
Combine the two numbers that make 10 and then add on the remainder.

Introduced in Year 2

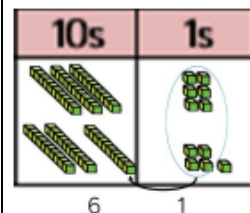
Adding 2 numbers by partitioning - T0+0, T0+T0 (developing mental methods)

Continue to develop understanding of partitioning and place value.

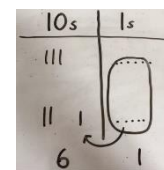
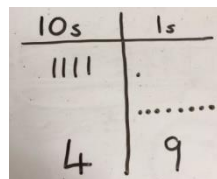
$$41 + 8 =$$



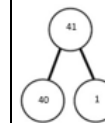
$$36 + 25 =$$



Children to represent the base 10 in a place value chart.

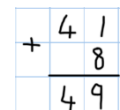


$$41 + 8 =$$



$$1 + 8 = 9$$

$$40 + 9 = 49$$



Looking for ways to make 10.

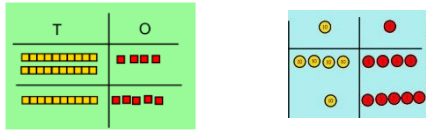
$$36 + 25 =$$

30 + 20 = 50	36
5 + 5 = 10	<u>+25</u>
50 + 10 + 1 = 61	<u>61</u>
	1

Introduced in Year 2

Column method
- no regrouping
(use base ten and place value counters)

Add together the ones first then add the tens. Use the Base 10 blocks first before moving onto place value counters.



After practically using the base 10 blocks and place value counters, children can draw the counters to help them to solve additions.



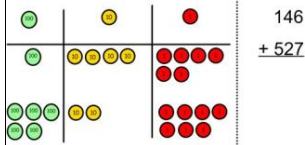
Apply to abstract method

$$\begin{array}{r} 21 \\ +34 \\ \hline \end{array}$$

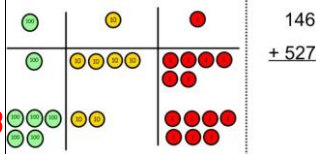
Introduced in Year 3

Column Method
- regrouping
(use base ten initially to consolidate place value understanding)

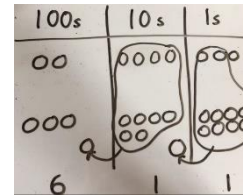
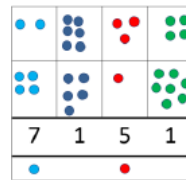
When there are 10 ones in the 1s column- we exchange for 1 ten, when there are 10 tens in the 10s column- we exchange for 1 hundred.



Add up the units and exchange 10 ones for one 10.



Children can draw a pictorial representation of the columns and place value counters to further support their learning and understanding.



$$\begin{array}{r} 243 \\ +368 \\ \hline 611 \\ 11 \end{array}$$

As children move on to decimals, money and decimal place value counters can be used to support learning.

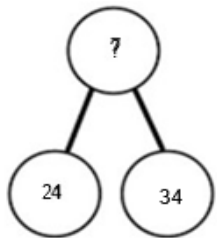
Introduced in Year 3 with decimals introduced in Year 5

As the children move on, introduce decimals with the same number of decimal places and different. Money can be used here

$$\begin{array}{r} 72.8 \\ +54.6 \\ \hline 127.4 \\ 11 \end{array}$$

$$\begin{array}{r} £ 23.59 \\ + £ 7.55 \\ \hline £ 31.14 \\ 11 \end{array}$$

Conceptual Variation; different ways to ask children to solve 21 + 34



?	
21	34

Word problems:
In year 3, there are 21 children and in year 4, there are 34 children.
How many children in total?

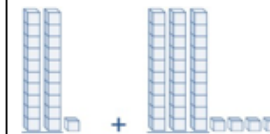
$21 + 34 = 55$. Prove it

$$\begin{array}{r} 21 \\ +34 \\ \hline \end{array}$$

$21 + 34 =$

$\square = 21 + 34$

Calculate the sum of twenty-one and thirty-four.

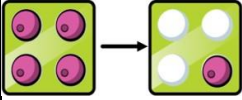

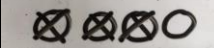
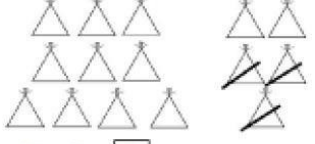
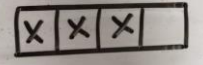
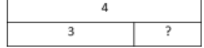
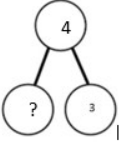

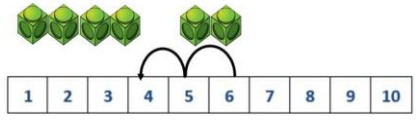
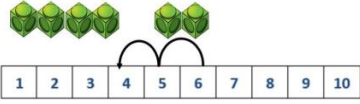
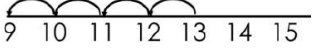
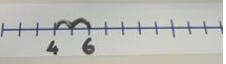
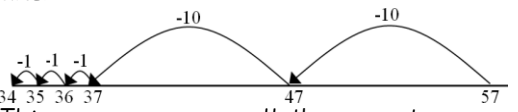

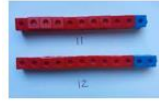
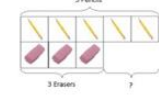
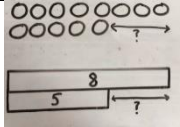
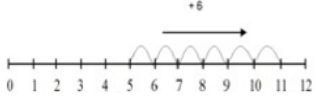
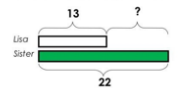


Missing digit problems:

10s	1s
10 10	1
10 10 10	?

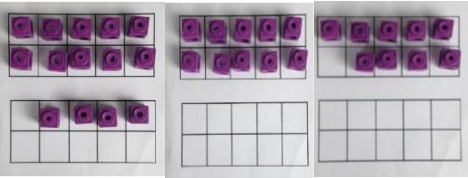
Subtraction

Key vocabulary: take away, less than, the difference between, subtract, minus, fewer, decrease

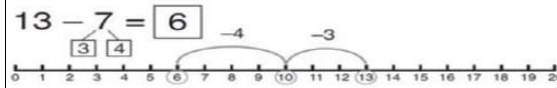
Strategies	Concrete	Pictorial	Abstract
<p>Taking away ones</p> <p>Introduced in Year 1</p>	<p>Use physical objects, counters, cubes etc to show how objects can be taken away.</p>  	<p>Children to draw the concrete resources they are using and cross out the correct amount. The bar model can also be used.</p>    <p>$15 - 3 = 12$</p>	<p>$4 - 3 =$</p>  
<p>Counting back (use number lines alongside resources)</p> <p>Introduced in Year 1</p>	<p>Make the larger number in your subtraction. Move the beads along your bead string as you count backwards in ones.</p>  <p>Using number lines or number tracks, children start with 6 and count back 2.</p> 	<p>Using number lines or number tracks, children start with 6 and count back 2.</p>  	<p>Put 13 in your head, count back 4. What number are you at?</p>  <p>Start at the bigger number and count back the smaller number showing the jumps on the number line.</p>  <p>This can progress all the way to counting back using two 2 digit numbers.</p>
<p>Finding the difference (using cubes, Numicon, range of objects etc)</p> <p>Introduced in Year 1</p>	<p>Use cubes to build towers or make bars to find the difference</p>  <p>Use basic bar models with items to find the difference</p>  	<p>Children to draw the cubes/other concrete objects to illustrate what they need to calculate.</p>  <p>Count on to find the difference</p>  <p>Comparison Bar Models</p> <p>Lisa is 13 years old. Her sister is 22 years old. Find the difference in age between them.</p> 	<p>Hannah has 23 sandwiches, Helen has 15 sandwiches. Find the difference between the number of sandwiches.</p> <p>Find the difference between 8 and 5.</p> <p>8 - 5, the difference is</p> <p>Children to explore why $9 - 6 = 8 - 5 = 7 - 4$ have the same difference.</p>

Making 10

$14 - 9 =$



Make 14 on the ten frame. Take away the four first to make 10 and then take away one more so you have taken away 5. You are left with the answer of 9.



$$14 - 5 = 9$$

$$14 - 4 = 10$$

$$10 - 1 = 9$$

$16 - 8 =$

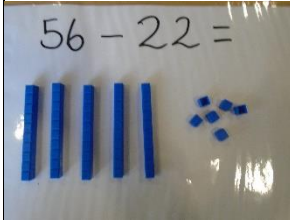
How many do we take off to reach the next 10?

How many do we have left to take off?

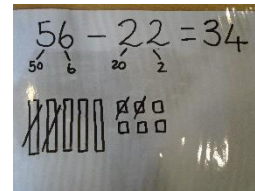
Introduced in Year 1

Subtracting 2 numbers by partitioning (where numbers do not require regrouping)

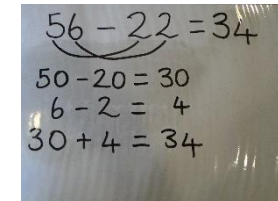
Use base ten to make the biggest number, take the ones away first then the tens.



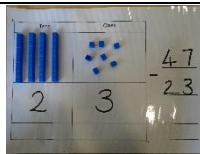
Draw an image of the resources used then cross off the tens and ones to be subtracted. What is left is the answer.



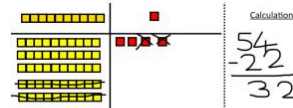
Partition the number to find the tens and ones remaining then add them together to give the answer.



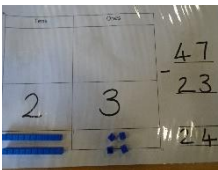
Column Method - no regrouping (use base ten first then move on to place value counters)



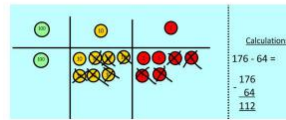
Make the number using resources then write the number to be taken away underneath - link to abstract at the side.



$$\begin{array}{r} 54 \\ - 22 \\ \hline 32 \end{array}$$



Take away the right amount of tens and ones then move what is left to the bottom as the answer.



$$\begin{array}{r} 176 \\ - 64 \\ \hline 112 \end{array}$$

$47 - 24 = 23$

$$\begin{array}{r} 40 + 7 \\ - 20 + 4 \\ \hline 20 + 3 \end{array}$$

This will lead to a clear column subtraction

$$\begin{array}{r} 32 \\ - 12 \\ \hline 20 \end{array}$$

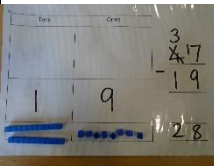
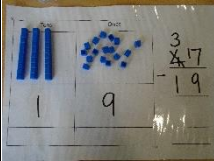
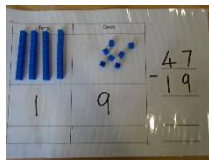
Introduced in Year 3

Column Method - regrouping

(use base ten initially to consolidate place value understanding)

As children move on to decimals, money and decimal place value counters can be used to support learning.

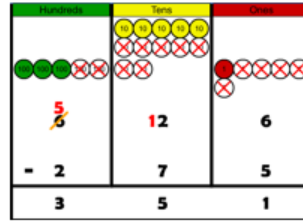
Introduced in Year 3 with decimals introduced in Year 5



Make the number using resources then write the number to be taken away underneath - link to abstract at the side.

Exchange tens for ones and show what has been done on the abstract at the side.

Take away then move what is left to the bottom as the answer.

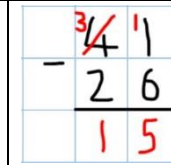


When confident, children can find their own way to record the exchange/regrouping. Just writing the numbers as shown here shows that the child understands the method and knows when to exchange/regroup.

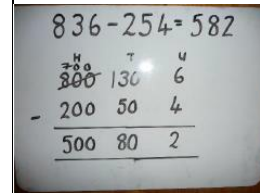
Draw the counters onto a place value grid and show what you have taken away by crossing the counters out as well as clearly showing the exchanges you make.

When confident, children can find their own way to record the exchange/regrouping.

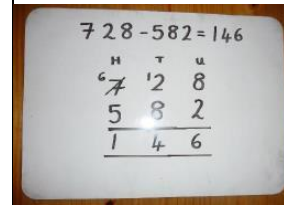
Just writing the numbers as shown here shows that the child understands the method and knows when to exchange/regroup.



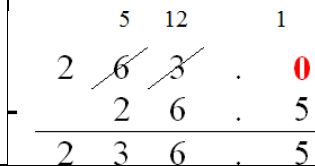
Children must understand that when they have exchanged the 10 they still have 41 because $41 = 30 + 11$.



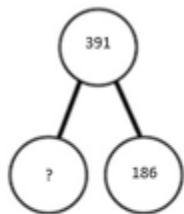
Children can start their formal written method by partitioning the number into clear place value columns.



Moving forward the children use a more compact method.



Conceptual Variation; different ways to ask children to solve $391 - 186$



391	
186	?

Raj spent £391, Timmy spent £186. How much more did Raj spend?

Calculate the difference between 391 and 186.

$$\boxed{\quad} = 391 - 186$$

$$\begin{array}{r} 391 \\ -186 \\ \hline \end{array}$$

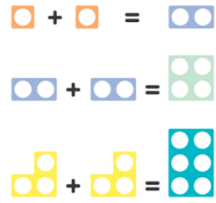

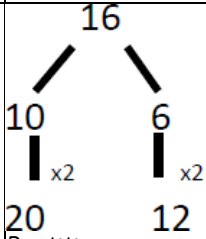

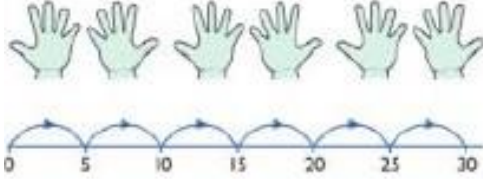
What is 186 less than 391?

Missing digit calculations

$$\begin{array}{r} 39\boxed{} \\ - \boxed{}\boxed{}6 \\ \hline \boxed{}05 \end{array}$$

Multiplication

Key vocabulary: double, times, multiplied by, the product of, groups of, lots of, equal groups.

Strategies	Concrete	Pictorial	Abstract
<p>Doubling</p> <p><i>Introduced in Year 1</i></p>	<p>Use practical activities to show how to double a number linking to addition.</p> <p>  </p>	<p>Draw pictures of doubling</p> <p>Double 4 is 8</p> <p>  </p>	<p>  </p> <p>Partition a number and then double each part before recombining it back together.</p>
<p>Counting in multiples (forwards and backwards and from any given number)</p> <p><i>Introduced in Year 1</i></p>	<p>  </p> <p>Count in multiples supported by concrete objects in equal groups.</p>	<p>  </p> <p>Use a number line or pictures to continue support in counting in multiples.</p>	<p>Count in multiples of a number aloud forwards and backwards.</p> <p>Write sequences with multiples of numbers and find missing numbers.</p> <p>2, 4, 6, 8, 10</p> <p>5, 10, 15, 20, 25, 30</p>

Repeated Addition



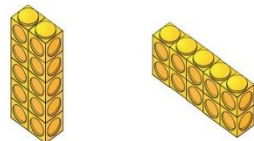
3×4
 $4 + 4 + 4$
 There are 3 equal groups, with 4 in each group.



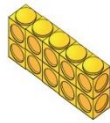
Introduced in Year 2

Arrays to show commutative multiplication (use a range of resources)

Create arrays using counters/ cubes to show multiplication sentences.



2 lots of 5



5 lots of 2

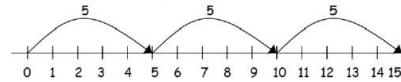
Reinforce language of 'lots of' and commutativity

Introduced in Year 2

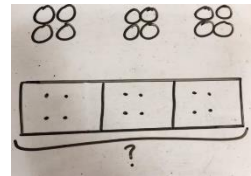
There are 3 plates. Each plate has 2 star biscuits on. How many biscuits are there?



2 add 2 add 2 equals 6



$5 + 5 + 5 = 15$



$3 \times 4 = 12$

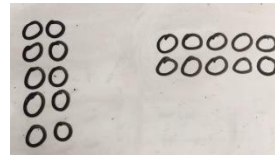
$4 + 4 + 4 = 12$

Write addition sentences to describe objects and pictures.



$2 + 2 + 2 + 2 + 2 = 10$

Children to represent the arrays pictorially in different orientations.



Children to be able to use an array to write a range of calculations e.g.

$10 = 2 \times 5$

$5 \times 2 = 10$

$2 + 2 + 2 + 2 + 2 = 10$

$10 = 5 + 5$

Grid Method

Show the link with arrays to first introduce the grid method.

x	10	3
4		

4 rows of 10
4 rows of 3

Move on to using Base 10 to move towards a more compact method.

x	T	U
4		

4 rows of 13

Move on to place value counters to show how we are finding groups of a number. We are multiplying by 4 so we need 4 rows.

● 100 ● 10 ● 1

Calculations
4 x 126

Fill each row with 126.

● 100 ● 10 ● 1

● 100	● 10	● 1
● 100	● 10	● 1
● 100	● 10	● 1
● 100	● 10	● 1

Calculations
4 x 126

Add up each column, starting with the ones making any exchanges needed.

● 100	● 10	● 1
● 100	● 10	● 1
● 100	● 10	● 1
● 100	● 10	● 1

● 100	● 100	● 1
● 100	● 1	● 1
● 100	● 1	● 1
● 100	● 1	● 1

Children can represent the work they have done with place value counters in a way that they understand.

They can draw the counters, using colours to show different amounts or just use circles in the different columns to show their thinking as shown below.

24 x 3 = 72

X	20	4
3	00 00 00	0000 0000 0000
	60	12
		60 + 12

Start with multiplying by one digit numbers and showing the clear addition alongside the grid.

X	30	5
7	210	35

210 + 35 = 245

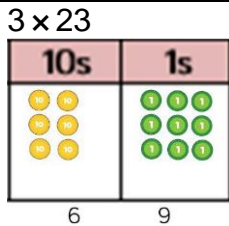
Moving forward, multiply by a 2 digit number showing the different rows within the grid method.

	10	8
10	100	80
3	30	24

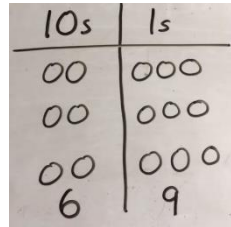
X	1000	300	40	2
10	10000	3000	400	20
8	8000	2400	320	16

Introduced in Year 3

Column Multiplication by 1 digit
(introduced using place value counters.)



Children to represent the counters pictorially.



Children to record what it is they are doing to show understanding.

$$3 \times 23 \quad 3 \times 20 = 60$$

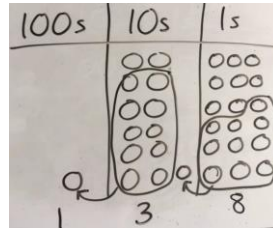
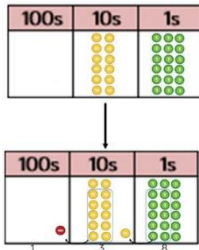
$$\quad \quad \quad 3 \times 3 = 9$$

$$20 \quad 3 \quad 60 + 9 = 69$$

$$\begin{array}{r} 23 \\ \times 3 \\ \hline 69 \end{array}$$

With exchanging:

$6 \times 23 =$



$6 \times 23 =$

$$\begin{array}{r} 23 \\ \times 6 \\ \hline 138 \\ 11 \end{array}$$

Introduced in Year 4

Column Multiplication by 2 digits

When children start to multiply 3d \times 3d and 4d \times 2d etc., they should be confident with the abstract:

Start with long multiplication, reminding the children about lining up their numbers clearly in columns.

If it helps, children can write out what they are solving next to their answer.

$$\begin{array}{r} 32 \\ \times 24 \\ \hline 8 \quad (4 \times 2) \\ 120 \quad (4 \times 30) \\ 40 \quad (20 \times 2) \\ 600 \quad (20 \times 30) \\ \hline 768 \end{array}$$

$$\begin{array}{r} 74 \\ \times 63 \\ \hline 12 \\ 210 \\ 240 \\ + 4200 \\ \hline 4662 \end{array}$$

This moves to the more compact method:

$$\begin{array}{r} 231 \\ 1342 \\ \times 18 \\ \hline 13420 \\ 10736 \\ \hline 24156 \\ 1 \end{array}$$

$$\begin{array}{r} 124 \\ \times 26 \\ \hline 744 \\ 1240 \\ \hline 3224 \\ 11 \end{array}$$

Answer: 3224

Introduced in Year 5

Conceptual Variation; different ways to ask children to solve 6 X 23

23	23	23	23	23	23
?					

Mai had to swim 23 lengths, 6 times a week.
How many lengths did she swim in one week?

With the counters, prove that $6 \times 23 = 138$

Find the product of 6 and 23

$$6 \times 23 =$$

$$\square = 6 \times 23$$


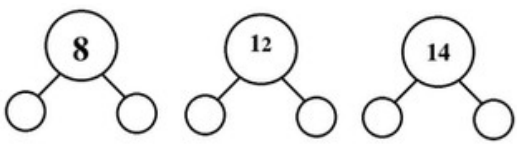
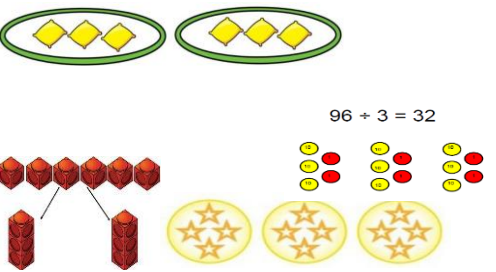
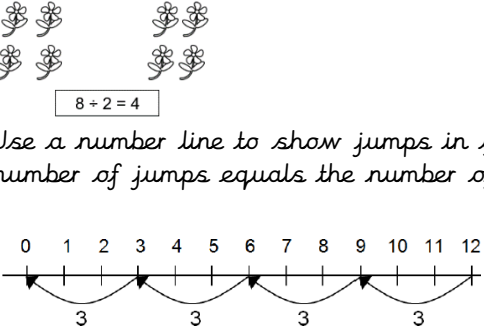
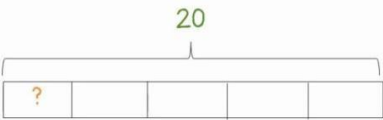
$$\begin{array}{r} 6 \quad 23 \\ \times \quad 23 \\ \hline \end{array} \quad \begin{array}{r} \quad 23 \\ \times \quad 6 \\ \hline \end{array}$$

What is the calculation?
What is the product?

100s	10s	1s
	●● ●● ●● ●● ●●	●●● ●●● ●●● ●●● ●●●

Division

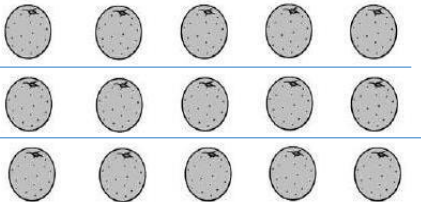
Key vocabulary: share, group, divide, divided by, half

Strategies	Concrete	Pictorial	Abstract		
<p>Halving (by the end of Reception, children are expected to understand the concept of halving and sharing which can then be built on in subsequent year groups) <i>Introduced in Year 1</i></p>	<p>Use practical activities to show how to halve a number.</p> 	<p>Draw pictures of halving by sharing equally in part-whole models.</p> 	<p>Halve 28 = Halve 20 + 8</p> $\begin{array}{c} 20 + 8 \\ \swarrow \quad \searrow \\ 10 + 4 = 14 \end{array}$ <p>Partition a number and then halve each part before recombining it back together.</p>		
<p>Sharing into equal groups/division as grouping (using a range of objects) <i>Introduced in Year 1</i></p>	<p>Eg. I have 12 sweets and put them in groups of 3, how many groups?</p> 	<p>Use a number line to show jumps in groups. The number of jumps equals the number of groups.</p>  <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>  $20 \div 5 = ?$ $5 \times ? = 20$	<p>Children should also be encouraged to use their times tables facts.</p> $6 \div 2 = 3$ <table border="1" data-bbox="1657 941 2105 1013"> <tr> <td>3</td> <td>3</td> </tr> </table> <p>Share 9 buns between three people.</p> $9 \div 3 = 3$ <p>Divide 28 into 7 groups. How many are in each group?</p> $28 \div 7 = 4$	3	3
3	3				

Division within arrays
(use a range of resources)



Link division to multiplication by creating an array and thinking about the number sentences that can be created.



Draw an array and use lines to split the array into groups to make multiplication and division sentences.

Find the inverse of multiplication and division sentences by creating four linking number sentences.

$$7 \times 4 = 28$$

$$4 \times 7 = 28$$

$$28 \div 7 = 4$$

$$28 \div 4 = 7$$

Introduced in Year 2

$$\text{Eg } 15 \div 3 = 5 \quad 5 \times 3 = 15$$

$$15 \div 5 = 3 \quad 3 \times 5 = 15$$

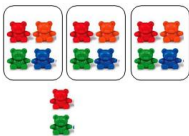
Division with remainders
(introduced using practical resources)

$$13 \div 4$$

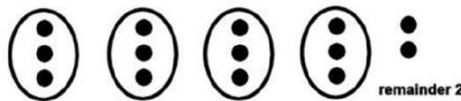
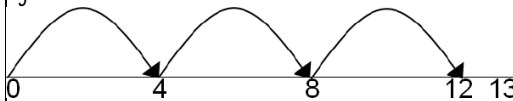
Use of lollipop sticks to form whole squares are made because we are dividing by 4.



There are 3 whole squares, with 1 left over.



Jump forward in equal jumps on a number line then see how many more you need to jump to find a remainder.



Complete written divisions and show the remainder using r.

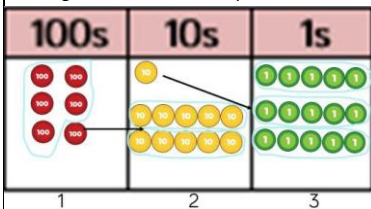
$$29 \div 8 = 3 \text{ REMAINDER } 5$$

$\uparrow \quad \uparrow \quad \uparrow \quad \uparrow$
 dividend divisor quotient remainder

Introduced in Year 3

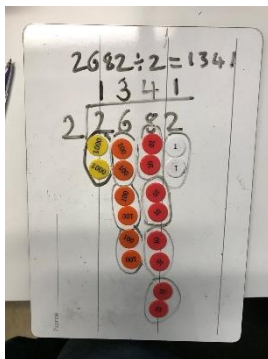
Short division
(introduce using place value counters beginning with no remainders)

Use place value counters to divide using the bus stop method alongside



1. Make 615 with place value counters.
2. How many groups of 5 hundreds can you make with 6 hundred counters?
3. Exchange 1 hundred for 10 tens.
4. How many groups of 5 tens can you make with 11 ten counters?
5. Exchange 1 ten for 10 ones.

As in the picture below but children can draw the counters before grouping.



Children to the calculation using the short division scaffold.

$$\begin{array}{r}
 123 \\
 5 \overline{) 615} \\
 \underline{5 } \\
 11 \\
 \underline{10 } \\
 15 \\
 \underline{15} \\
 0
 \end{array}$$

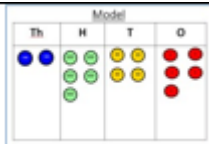
Move onto divisions with a remainder.

$$\begin{array}{r}
 86 \text{ r } 2 \\
 3 \overline{) 432} \\
 \underline{30 } \\
 13 \\
 \underline{15} \\
 2
 \end{array}$$

Introduced in Year 3

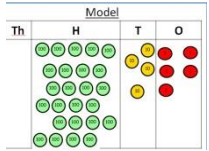
How many groups of 5 ones can you make with 15 ones.

Long division



$2544 \div 12$
How many groups of 12 thousands do we have? None

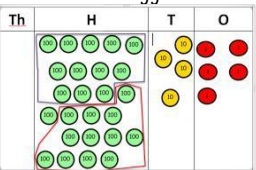
Exchange 2 thousand for 20 hundreds.



$$12 \overline{) 2544}$$

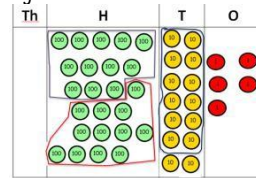
How many groups of 12 are in 25 hundreds? 2 groups. Circle them.

We have grouped 24 hundreds so can take them off and we are left with one.



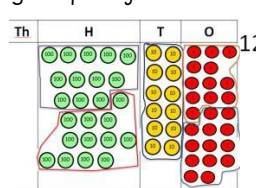
$$\begin{array}{r} 02 \\ 12 \overline{) 2544} \\ \underline{24} \\ 1 \end{array}$$

Exchange the one hundred for ten tens so now we have 14 tens. How many groups of 12 are in 14? 1 remainder 2



$$\begin{array}{r} 021 \\ 12 \overline{) 2544} \\ \underline{24} \\ 14 \\ \underline{12} \\ 2 \end{array}$$

Exchange the two tens for twenty ones so now we have 24 ones. How many groups of 12 are in 24? 2



$$\begin{array}{r} 0212 \\ 12 \overline{) 2544} \\ \underline{24} \\ 14 \\ \underline{12} \\ 24 \\ \underline{24} \\ 0 \end{array}$$

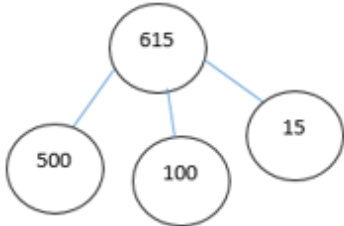
Instead of using physical counters, students can draw the counters and circle the groups.

Use this method to explain what is happening and as soon as they have understood that move on to the abstract method as this can be a time consuming process.

$$\begin{array}{r} 0318r5 \\ 20 \overline{) 6365} \\ \underline{-60} \\ 36 \\ \underline{-20} \\ 165 \\ \underline{-160} \\ 5 \end{array}$$

Conceptual Variation; different ways to ask children to solve $615 \div 5$

Using the part whole model below, how can you divide 615 by 5 without using short division?



I have £615 and share it equally between 5 bank accounts. How much will be in each account?

615 pupils need to be put into 5 groups. How many will be in each group?

$$5 \overline{)615}$$

$$615 \div 5 =$$

$$\square = 615 \div 5$$

What is the calculation?
What is the answer?

