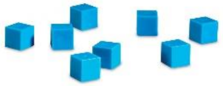
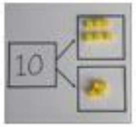
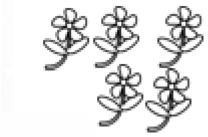
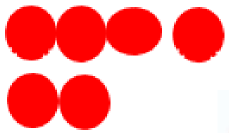
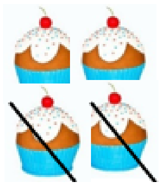
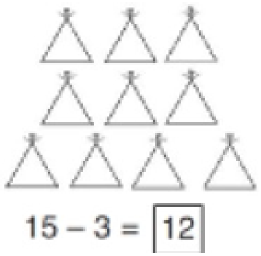
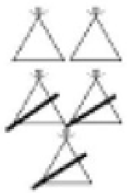
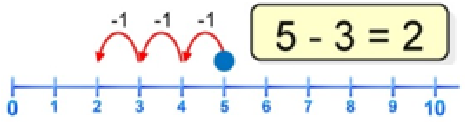
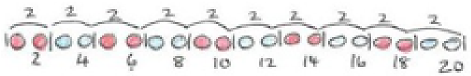
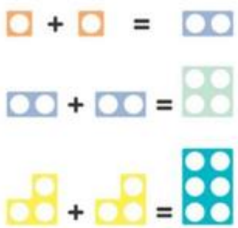
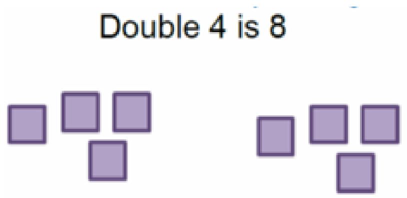
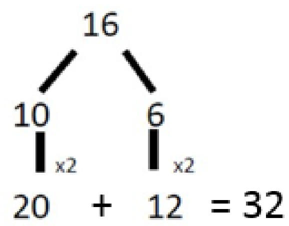
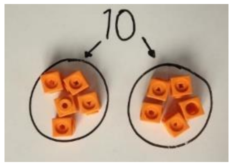
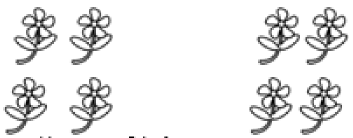
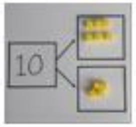
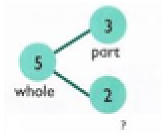
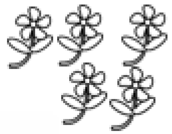
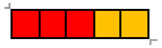
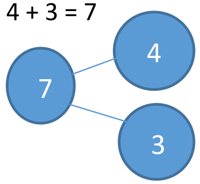
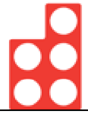
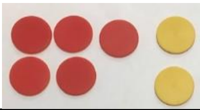
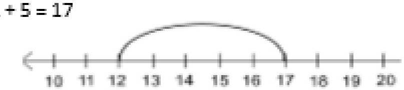
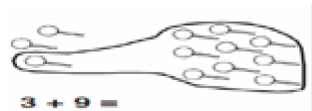
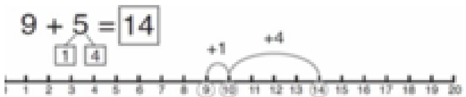
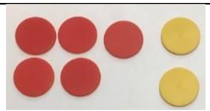
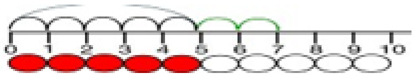
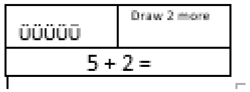
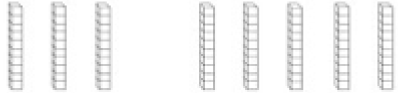
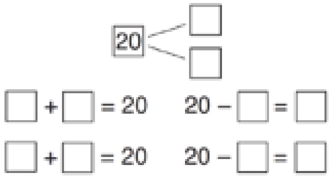
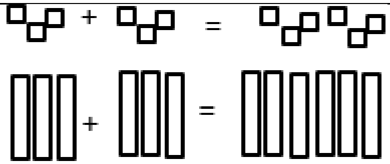
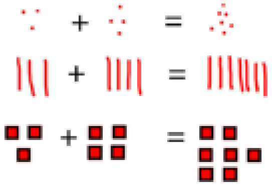
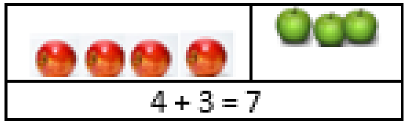
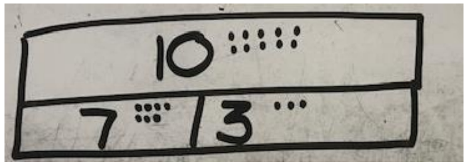
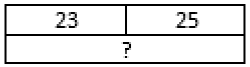
Early Learning Goal	**Concrete**	**Pictorial**	**Abstract**	YR
Count reliably with numbers from 1 to 20	Use a variety of objects to count different groups of 1 to 20   	Use pictures to count groups	Count groups using numbers and counting aloud. Subsidising numbers on dice for board games	Early Years Calculation
Add two single-digit numbers	Use cubes to add 2 numbers together as a group.   Using the part-whole model.  	Use pictures to add 2 single digit numbers 	Use abstract knowledge to add 2 single digit numbers. 3 + 2 = 5	
Subtract two single-digit numbers	Use physical objects, counters, cubes to show how objects can be taken away.  6—4 = 2  4—2 = 2	Cross out drawn objects to show what has been taken away.  	7—4 = 3 16—9 = 7	

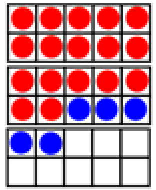
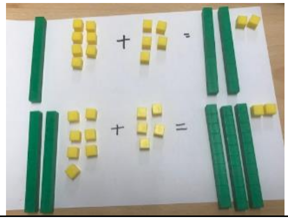
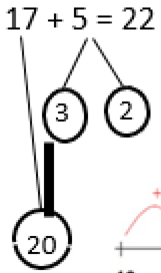
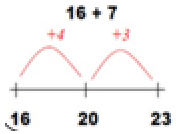
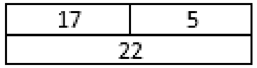
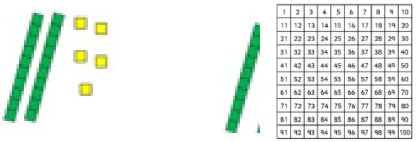
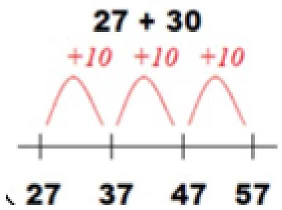
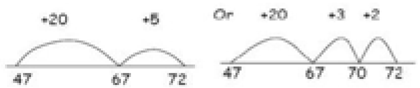
Early Learning Goal	**Concrete**	**Pictorial**	**Abstract**	YR
Counting forwards and backwards	Move objects towards and away from the group. 	Count back in ones using a number line. 	Put 13 in your head, count back 4. What number are you at?	Early Years Calculation
Counting in steps of 2	Count the groups as children are skip counting, children may use their fingers as they are skip counting. 	Children make representations to show counting in multiples. 	Count in multiples of a number aloud. Write sequences with multiples of numbers. 2, 4, 6, 8, 10 5, 10, 15, 20, 25 , 30	
Doubling numbers to 10	Use practical activities using manipulatives including cubes and Numicon to demonstrate doubling. 	Draw pictures to show how to double numbers. 	Partition a number and then double each part before recombining it back together. 	
Halving even numbers less than 20	Sharing numbers into 2 groups I have 10 cubes, can you share them equally in 2 groups? 	Children draw a picture to show the sharing  8 shared between 2 is 4	12 shared between 2 is 6	

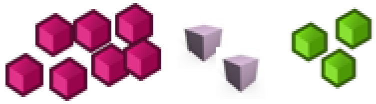
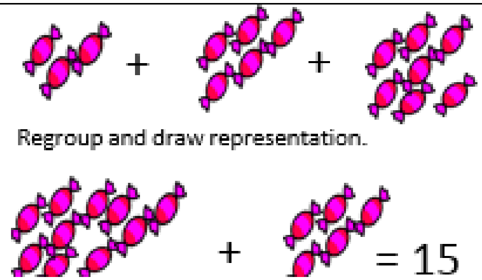
Y1

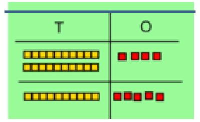
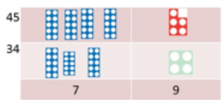
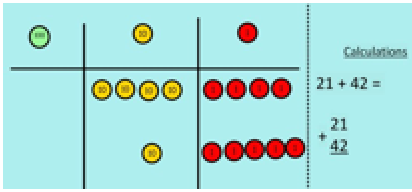
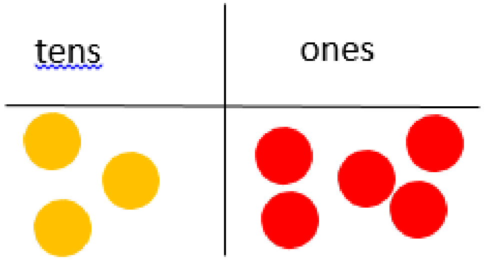
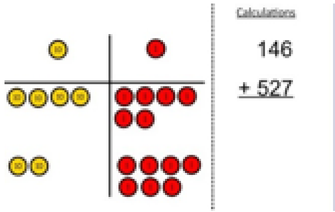
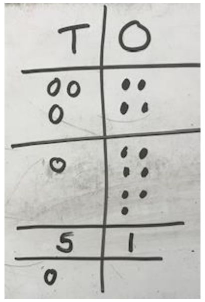
Addition

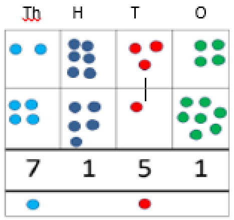
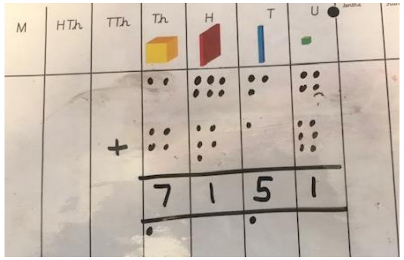
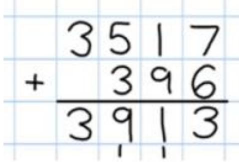
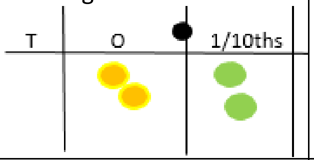
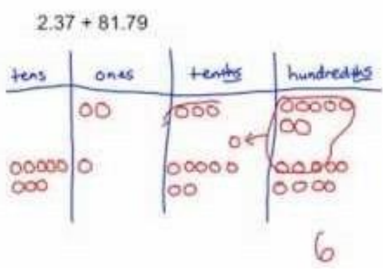
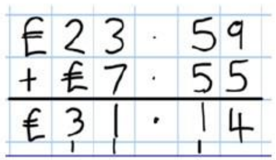
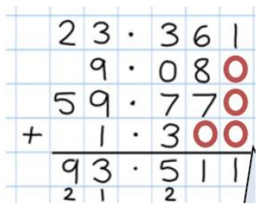
Objective and Strategy	Concrete	Pictorial	Abstract
Combining two parts to make a whole: part-whole model	Use cubes and other counting objects to add 2 numbers together as a group.   Using the part-whole model.   And bar model.	Use pictures to add 2 numbers together as a group or a bar.    	4 + 3 = 7  Use the part-whole diagram or the abstract: 7= 4 + 3
Starting at the bigger number and counting on	Start with the larger number then count on the smaller number 1 by 1 to find the answer.  	Use a number line and jump in ones from the larger number. 12 + 5 = 17 	5 + 12 = 17 Place the larger number in your head and count on the smaller number to find the answer.
Regrouping to make 10. *This is an essential skill for column addition later.*	e.g. 6+5 = Start with the bigger number and use the smaller number to make 10. Use ten frames. 	 Use pictures or a number line. Regroup or partition the smaller number using the part-whole model to make 10. 	7 + 4 = 11 If I am at 7, how many more do I need to make 10? How many more do I need to add on now?
Represent & use number bonds and related subtraction facts within 20	 2 more than 5	 	Emphasis should be on the language: *'1 more than 5 is equal to 6.'* *'2 more than 5 is 7.'* Introduce the > and < signs

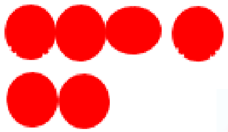
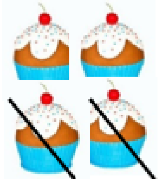
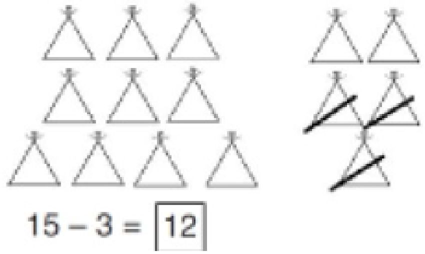
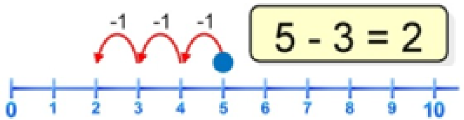
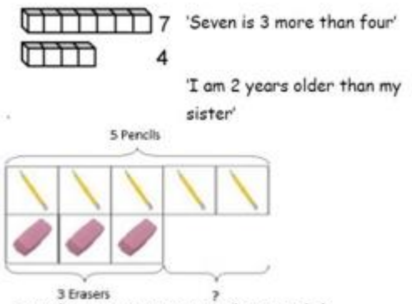
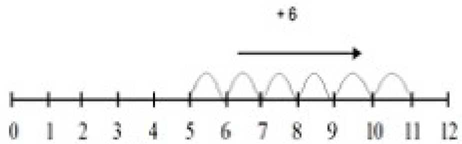
Objective and Strategy	Concrete	Pictorial	Abstract	Y2
Adding multiples of 10	50 = 30 + 10  Use dienes or bead strings	Use representations for base ten  3 tens + 5 tens = ______tens 30 + 50 = ______	20 + 30 = 50 70 = 50 + 20 40 + □ = 60	Addition
Use known number facts Part-whole	Children explore different ways of making numbers within 20. 		□ + 1 = 16 1 + □ = 16 16 - 1 = □ 16 - □ = 1	
Using known facts		 Children draw representations of H, T, O	3 + 4 = 7 leads to 30 + 40 = 70 leads to 300 =400 = 700	
Bar model		 7 + 3 = 10	 23 + 25 = 48	

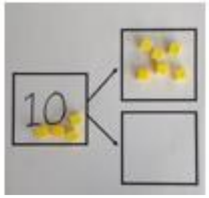
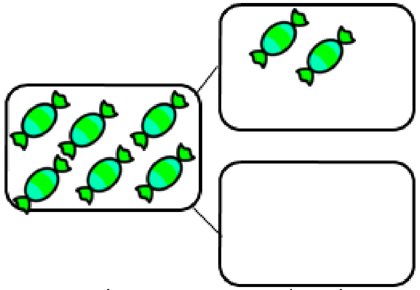
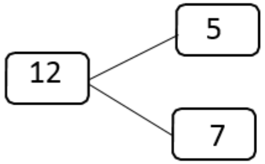
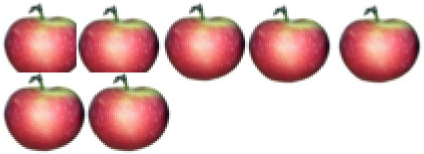
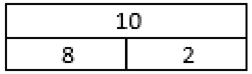
Objective and Strategy	Concrete	Pictorial	Abstract	Y2
Add a two digit number and ones	17 + 5 = 22  Use ten frame to make 'magic ten' Children explore the patterns 17 +5 = 22 27 + 5 = 22 	Use part-whole model and number lines   	17 + 5 = 22  Make explicit the related facts 17 + 5 = 22 5 +17 = 22 22 – 5 = 17 22 – 17 = 5	
Add a 2 digit number and tens	25 + 10 = 35  Explore that the ones digit does not change, 100 square to investigate number sense.	 	27 + 10 = 27 27 +20 = 37 27 + □ = 57	Addition
Add 2 two-digit numbers	 Model using dienes, place value counters and numicon	 Use number line and bridge ten using part whole if necessary.	25 + 47 Only partition 1 number (47 = 40 +7) 25 + 40 = 65 65 + 7 = 72	

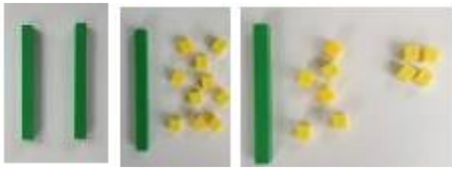
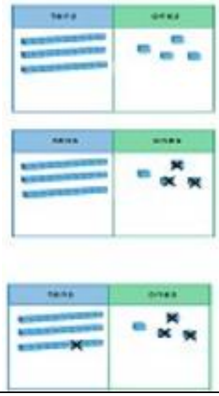
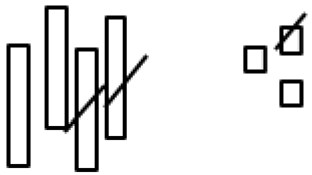
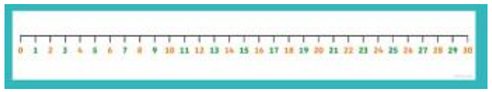
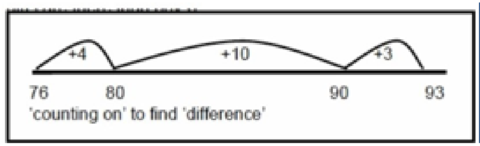
Add three 1-digit numbers	 Combine to make 10 first if possible, or bridge 10 then add third digit. Use dienes, place value counters, ten frames and numicon		Combine 2 numbers that make or bridge 10, then add third number. 4 + 7 + 6 = 4+ 6 = 10 10 + 7 = 17	

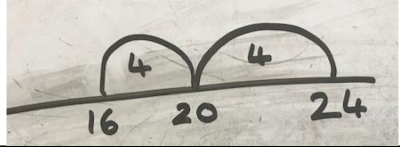
Objective and Strategy	Concrete	Pictorial	Abstract	Y3
Column Addition—no regrouping (friendly numbers)	Model using Dienes & numicon. Add the ones first, then the tens.  T O  Moving to place value counters. H T O  	Children move to drawing the counters using a tens and one frame.  	Add the ones first, then the tens, then the hundreds. H T O 200 + 20 + 3 100 + 10 4 300 + 30 + 7 = 337	Addition
Column Addition with regrouping.	Exchange ten ones for a ten, using PV counters.  	Children can draw a representation of the grid to further support their understanding, carrying the ten **underneath** the line.  	Start by partitioning the numbers. T O 20 + 5 40 8 60 + 13 = 73 Then use the formal column to show the exchange. T O 2 5 + 4 8 7 3 1	

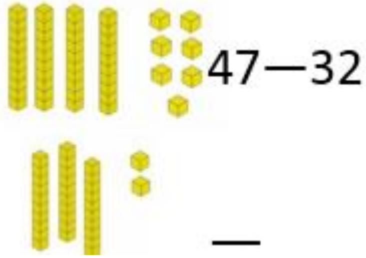
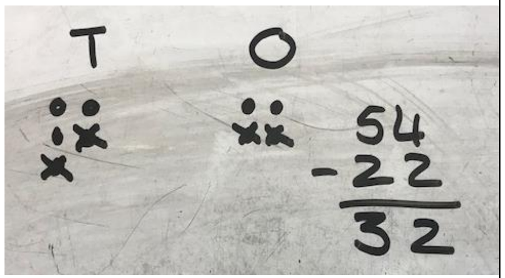
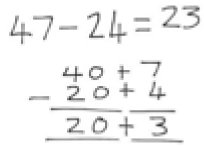
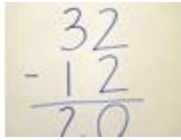
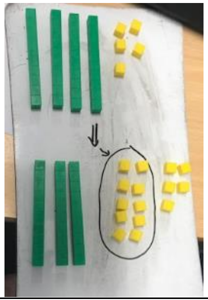
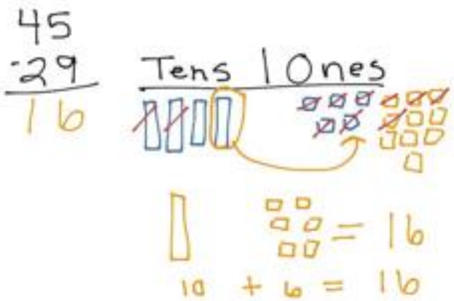
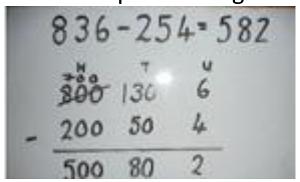
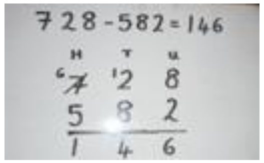
Objective and Strategy	Concrete	Pictorial	Abstract	Y4-6
Year 4 Add numbers with up to 4 digits	Children continue to use PV counters to add and understand the concept of exchanging between the PV columns. 	Draw representations using PV grid. 	Continue from previous work to include carrying hundreds. Relate to money and measures. Th H T O 	
Year 5 Add numbers with more than 4 digits. Add decimals with 2 decimal places, including money.	Continue to use PV Counters and introduce decimal place value counters to model exchange. 		T O . 1/10ths 1/100ths 	Addition
Year 6 Add several numbers of increasing complexity. Important to be in the context of money and measure using 3dp	See above	See above	Insert place holders! 	

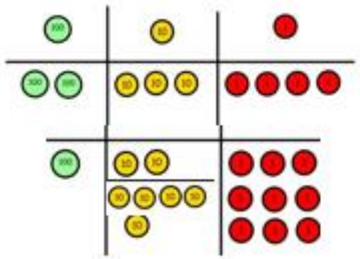
Objective and Strategy	Concrete	Pictorial	Abstract	Y1
Taking away ones.	Use physical objects, counters, cubes to show how objects can be taken away.  6—4 = 2  4—2 = 2	Cross out drawn objects to show what has been taken away. 	7—4 = 3 16—9 = 7	Subtraction
Counting back	Move objects away from the group. 	Count back in ones using a number line. 	Put 13 in your head, count back 4. What number are you at?	
Find the difference	Compare objects and amounts.  Lay objects to represent bar model. Use two-sided counters 	Count on using a number line to find the difference.  Difference between 5 and 11 11 5 | ?	Hannah has12 sweets and her sister has 5. How many more does Hannah have than her sister?	

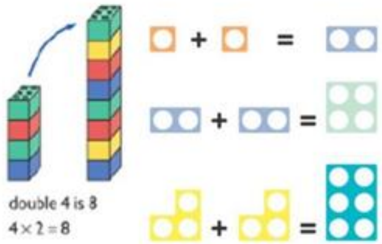
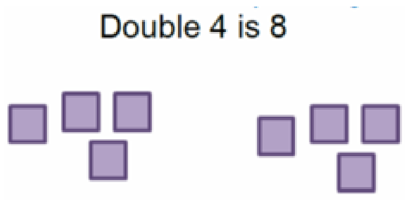
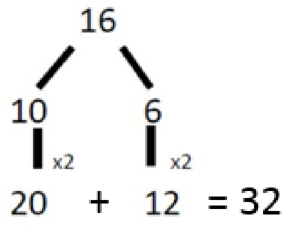
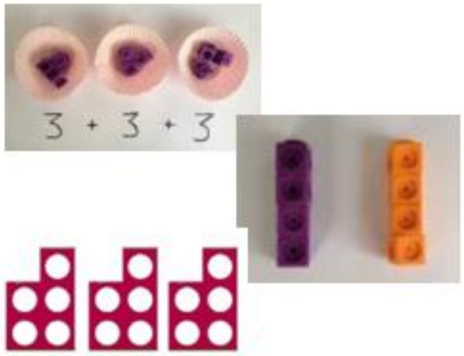
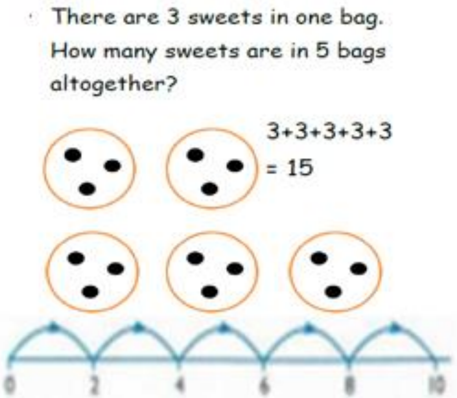
Objective and Strategy	Concrete	Pictorial	Abstract	Y1
Represent and use number bonds and related subtraction facts within 20	Link to addition. Use Part-whole model to link to the inverse. If 10 is the whole and 6 is one of the parts, what s the other part? 10-6 =? 	Use pictorial representations to show the part-whole. 	Move to using numbers 	subtraction
	Bar Model  5—2 = 3		 10 = 8 +2 10 = 2 + 8 10 – 2 = 8 10 – 8 = 2	

Objective and Strategy	Concrete	Pictorial	Abstract	Y2
Regroup a ten into ten ones	Use a PV chart to show how to change a ten into ten ones, use the term 'take and make' 		Use what we know to help calculate, e.g. number bonds, 20 = 10 + 10, number bond for 10 and 4 is? 20—4 = 16	subtraction
Partitioning to sub- tract without re- grouping. *'Friendly numbers'*	34—13 = 21 Use Dienes to show how to partition the number when subtracting without regrouping. 	Draw a representation so can cross off.  43—21 = 22	43—21 = 22	
Make ten strategy *Progression should be crossing one ten, crossing more than one ten, cross- ing the hundreds.*	Use a number line to model counting to next ten and the rest. 24 - 16 	Use a number line to count on to next ten and then the rest. 	93 – 76 = 17 28 + $\boxed{}$ = 34	

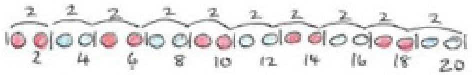
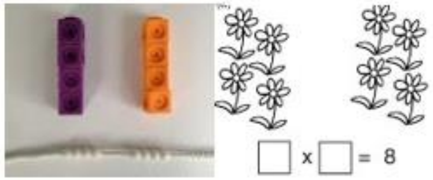
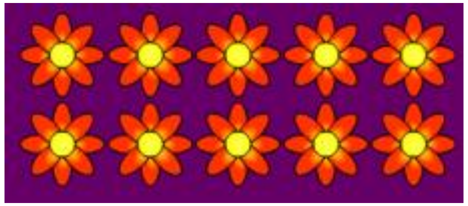
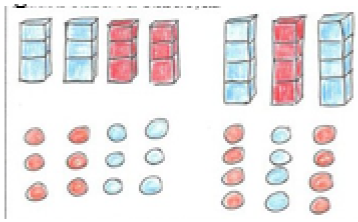
Objective and Strategy	Concrete	Pictorial	Abstract	Y3
Column subtraction without regrouping (friendly numbers)	Use Diennes or Numiocon to model 	Draw representations to support under-standing. T O 	Intermediate step may be needed to lead to clear subtraction understanding. This:  To: 	subtraction
Column subtraction with regrouping	Begin with Diennes or Numicon. Move to PV counters, modelling the exchange of a ten into ten ones. Use the phrase 'take and make' for exchange. **45 -29** 	Children may draw Diennes or PV counters and cross off. 	Start with partitioning  To formal method 	

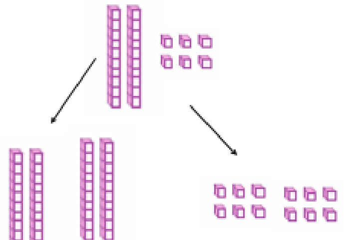
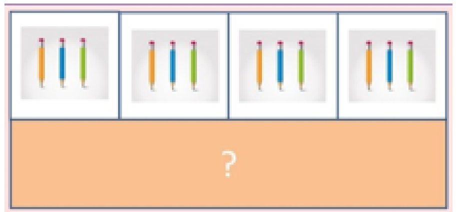
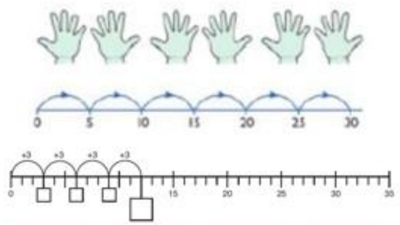
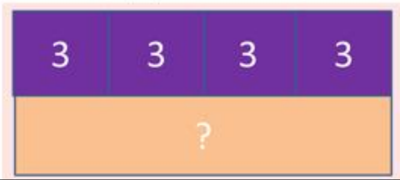
Objective and Strategy	Concrete	Pictorial	Abstract	Y4-6
Subtracting tens and ones <u>Year 4 -</u> subtract with up-to 4 digits. *Introduce decimal subtraction through context of money*	Model exchange using Dienes or PV counters. 234 - 179 	Children to draw PV counters and show their exchange (see Year 3)	Use the phrase 'take and make' for exchange. Th H T O 2 7 5 4 − 1 5 6 2 1 1 9 2	**subtraction**
<u>Year 5</u>- Subtract with at least 4 digits, including money and measures. *Subtract with decimal values, including mixtures of integers and decimals and aligning the decimal.*		Children to draw PV counters and show their exchange (see Year 3)	**TTh Th H T O** 3 1 0 5 6 − 2 1 2 8 2 8,9 2 8 Remember to use PV holders! Th H T O . 1/10ths 7 1 6 9 . 0 − 3 7 2 . 5 6 7 9 6 . 5	
<u>Year 6</u> - Subtract with increasingly large and more complex numbers and decimal values.			1 0 5 . 4 1 9 − 3 6 . 0 8 0 6 9 . 3 3 9	

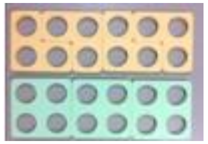
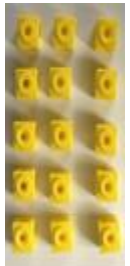
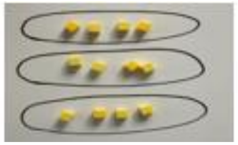
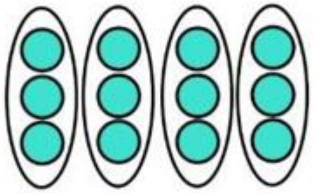
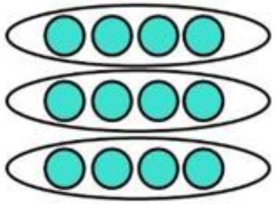
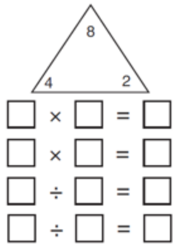
<table>
<tr><th>Objective and Strategy</th><th>Concrete</th><th>Pictorial</th><th>Abstract</th><th>Y1</th></tr>
<tr><td>Doubling</td><td>Use practical activities using manipulatives including cubes and Numicon to demonstrate doubling.

</td><td>Draw pictures to show how to double numbers.

</td><td>Partition a number and then double each part before recombining it back together.

</td><td rowspan="2">multiplication</td></tr>
<tr><td>Repeated addition</td><td>Use different objects to add equal groups.

</td><td>Use pictorial including number lines to solve problems.

</td><td>Write addition sentences to describe objects and pictures.

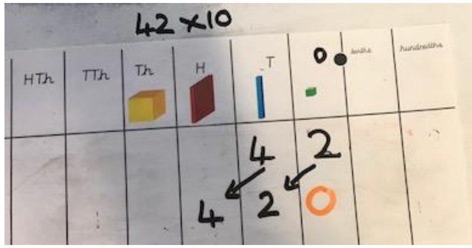
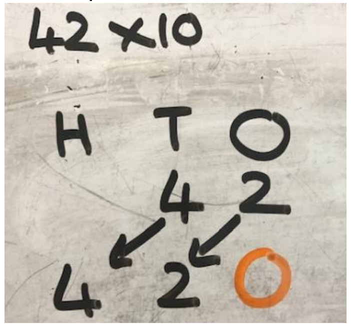
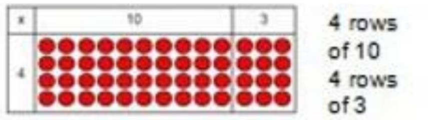
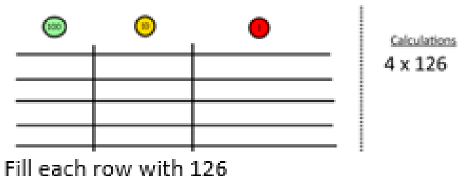
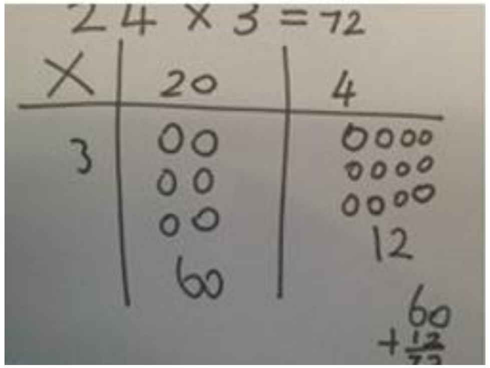
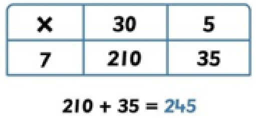
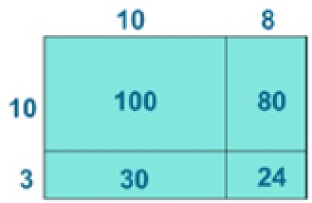
</td></tr>
</table>

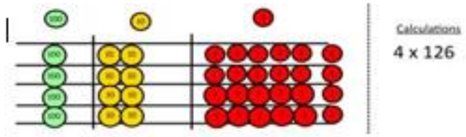
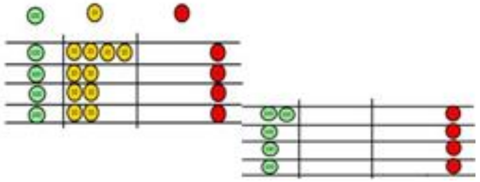
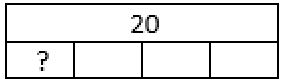
Y1 multiplication

Counting in multiples	Count the groups as children are skip counting, children may use their fingers as they are skip counting.  	Children make representations to show counting in multiples. 	Count in multiples of a number aloud. Write sequences with multiples of numbers. 2, 4, 6, 8, 10 5, 10, 15, 20, 25 , 30
Making equal groups and counting the total	Use manipulatives to create equal groups or 'lots of'. 	Draw and make representations. Draw  to show 2 x 3 = 6	2 x 4 = 8
Understanding arrays	Use objects laid out in arrays to find the answers to 2 lots 5, 3 lots of 2 etc. 	Draw representations of arrays to show understanding. 	3 x 2 = 6 2 x 5 = 10

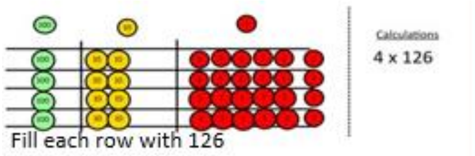
Objective and Strategy	Concrete	Pictorial	Abstract	Y2
Doubling	Model doubling using Dienes and PV counters.  40 + 12 = 52	Draw pictures and representations to show how to double numbers.	Partition number, then double each part before recombining. 16 10 6 $\times 2$ + $\times 2$ = 32 20 12 Or near double mental strategy.	multiplication
Counting in multiples of 2, 3, 4, 5, 10 from 0 (repeated addition)	Count the groups as children are skip counting, children may use their fingers as they are skip counting. Use bar models. 5 + 5 + 5 + 5 + 5 + 5 = 35   	Number lines, counting sticks and bar models should be used to show representation of counting in multiples.   	Count in multiples of a number aloud. Write sequences with multiples of numbers. 0, 2, 4, 6, 8, 10 0, 3, 6, 9, 12, 15 0, 5, 10, 15, 20, 25 , 30 $4 \times 3 = \square$	

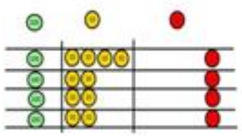
Objective and Strategy	Concrete	Pictorial	Abstract	Y2
Multiplication is commutative	Create arrays using counters and cubes and Numicon.    Pupils should understand that an array can represent different equations and that, as multiplication is commutative, the order of the multiplication does not affect the answer.  	Use representations of arrays to show different calculations and explore commutativity.  	$12 = 3 \times 4$ $12 = 4 \times 3$ Use an array to write multiplication sentences and reinforce repeated addition.  $5 + 5 + 5 = 15$ $3 + 3 + 3 + 3 + 3 = 15$ $5 \times 3 = 15$ $3 \times 5 = 15$	multiplication
Using the Inverse *This should be taught alongside division, so pupils learn how they work alongside each other.*			$2 \times 4 = 8$ $4 \times 2 = 8$ $8 \div 2 = 4$ $8 \div 4 = 2$ $8 = 2 \times 4$ $8 = 4 \times 2$ $2 = 8 \div 4$ $4 = 8 \div 2$ Show all 8 related fact family sentences.	

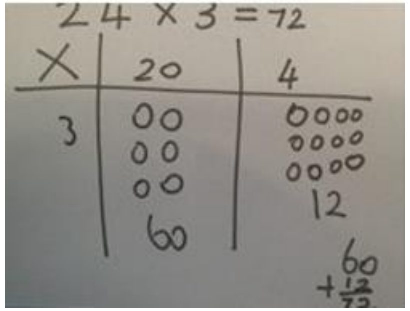
<table>
<tr><th>Objective and Strategy</th><th>Concrete</th><th>Pictorial</th><th>Abstract</th><th>Y3</th></tr>
<tr><td>Multiply a number by 10</td><td>Use place value charts to move the digits through the PV columns.
</td><td>Draw a place vlaue chart to move the digits.
</td><td>Use known facts, 20 x 3 = 2 x 3 x 10</td><td rowspan="3">multiplication</td></tr>
<tr><td>Multiply a number by 10 or 100</td><td>Use place value charts to move the digits through the PV columns.
As above</td><td>Draw a place vlaue chart to move the digits.
As above</td><td>Use known facts, 20 x 3 = 2 x 3 x 10</td></tr>
<tr><td>Grid Method</td><td>Show the links with arrays to first introduce the grid method.

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.
</td><td>Children can draw the counters using colours to show different amounts or just use the circles in the different columns to show their thinking as shown below.

Bar model are used to explore missing number.</td><td>Start with multiplying by one digit numbers and showing the clear addition alongside the grid.

Moving forward, multiply by a 2 digit number showing the different rows within the grid method.
</td></tr>
</table>

	 Add up each column, starting with the ones making any exchanges needed  Then you have your answer	4 X $\square$ = 20 		

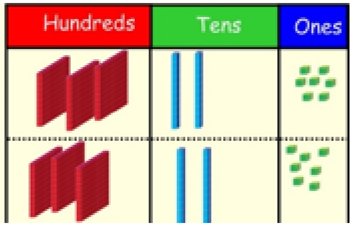
<table>
<tr><th>Objective and Strategy</th><th>Concrete</th><th>Pictorial</th><th>Abstract</th><th>Y4
multiplication</th></tr>
<tr><td>Grid method recap from Year 3 for 2 digits x 1 digit

Move to multiplying 3 digit numbers by 1 digit. (Year 4 ex-pectation)</td><td>Use place value counters to show how we are finding groups of a number. We are multiplying by 4 so we need 4 rows.



Add up each column, starting with the ones and exchange where necessary.</td><td>Children can represent their work with place value counters in a way that they understand.

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

</td><td>Start with multiplying by one digit numbers and showing the clear addition alongside the grid.

× | 30 | 5
7 | 210 | 35

210 + 35 = 245</td><td></td></tr>
<tr><td>Column multiplication</td><td>Children can continue to be supported by place value counters at this stage of multiplication. This initially done where there is no regrouping. 321 x 2 = 642


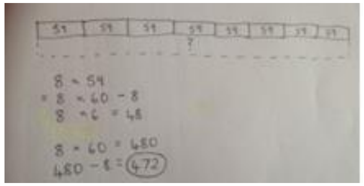
Remember to add from the ones!</td><td>The grid method may be used to show how this relates to a formal written method.

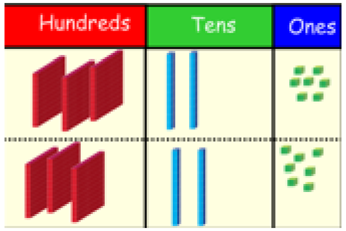
x | 300 | 20 | 7
4 | 1200 | 80 | 28

Bar modelling and number lines can support learners when solving problems with multiplication alongside the formal written methods.</td><td>H T O
3 2 7
x 4
2 8 = 4 x 7
8 0 = 4 x x20
1 2 0 0 = 4 x 300
1 3 0 8

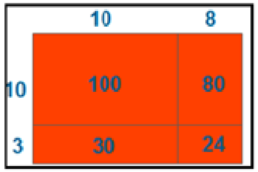
Then moving to the contracted method.

H T O
3 2 7
x 4
1 3 0 8
1 2</td><td></td></tr>
</table>

		59 59 59 59 59 59 59 59 ? 8 × 59 = 8 × 60 − 8 8 × 6 = 48 8 × 60 = 480 480 − 8 = 472		

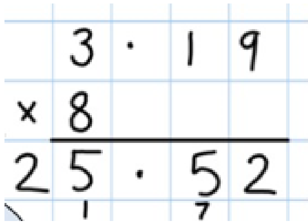
<table>
<tr><th>Objective and Strategy</th><th>Concrete</th><th>Pictorial</th><th>Abstract</th><th>Y5-6</th></tr>
<tr>
<td>Column Multiplication for 3 and 4 digits x 1 digit.</td>
<td>Children can continue to be supported by place value counters at the stage of multiplication. This initially done where there is no regrouping. 321 x 2 = 642
It is important that they always multiply the ones first.

</td>
<td>327 x 7 =
<table><tr><td>x</td><td>300</td><td>20</td><td>7</td></tr><tr><td>4</td><td>1200</td><td>80</td><td>28</td></tr></table></td>
<td>H T O
3 2 7
x 4
2 8 = 4 x 7
8 0 = 4 x x20
1 2 0 0 = 4 x 300
1 3 0 8

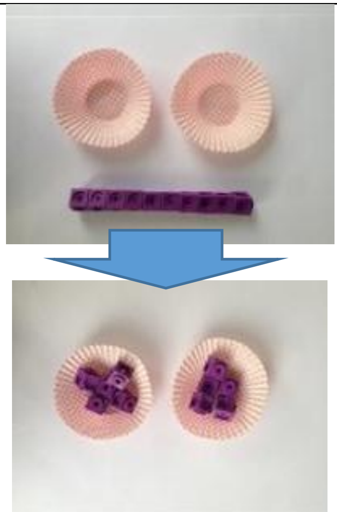
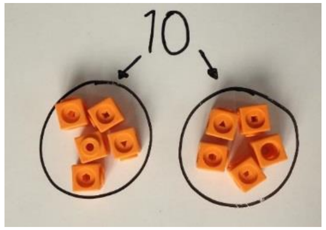
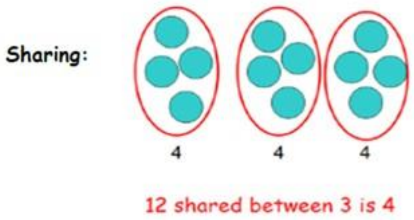
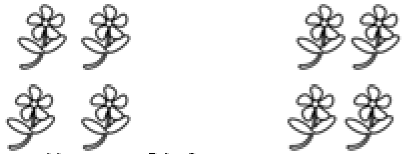
Which leads to the contracted method.

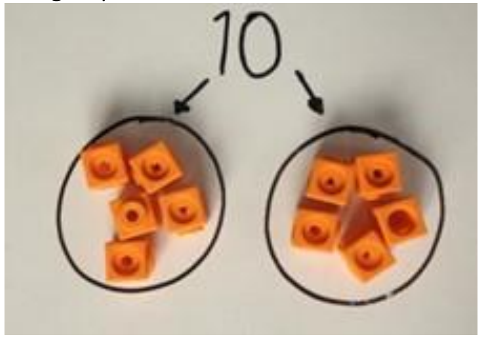
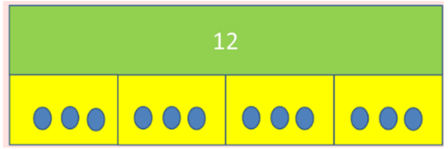
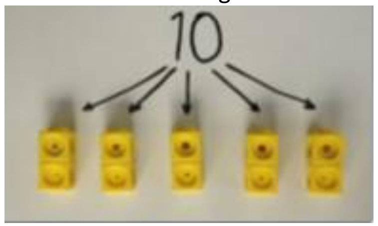
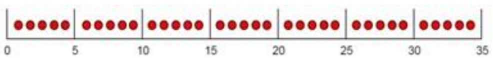
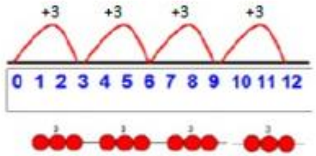
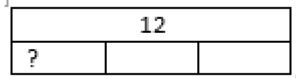
H T O
3 2 7
x 4
1 3 0 8
1 2</td>
<td rowspan="2">multiplication</td>
</tr>
<tr>
<td>Column multiplication for x by 2 digit</td>
<td>Manipulatives can be used alongside the written method.</td>
<td>18 x 13 =

</td>
<td>Using the contracted formal method

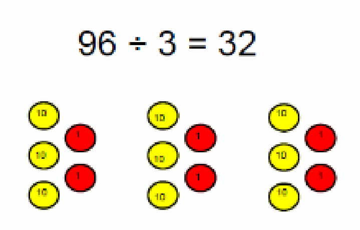
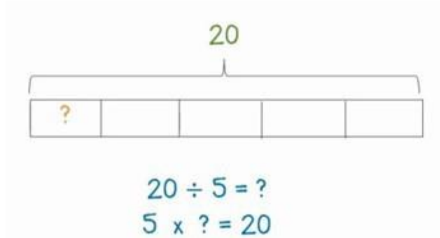
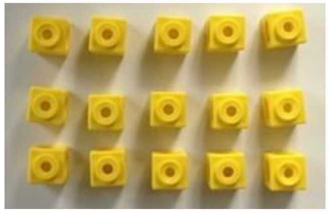
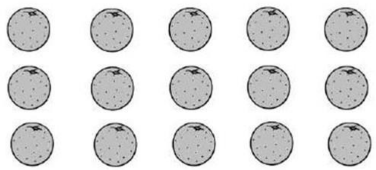
H T O
1 8
x 1 3
5_2 4 = 3 x1 8
1 8 0 = 10 x 18
2 3 4
1

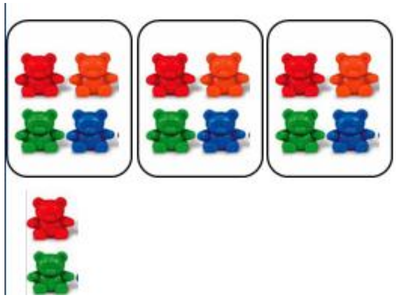
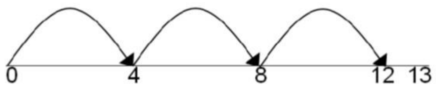
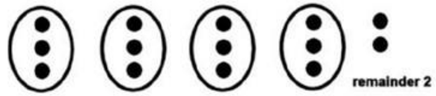
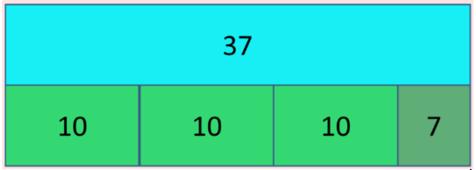
Remember you place value holder</td>
</tr>
</table>

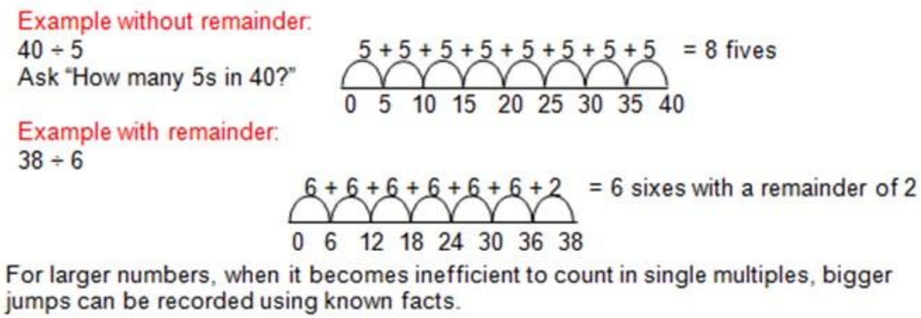
Objective and Strategy	Concrete	Pictorial	Abstract	multiplication
Multiplying decimals up to 2 decimal places by a single digit.			Remind children that the single digit belongs in the ones column. Line up the decimal points in the question and the answer. O . 1/10ths 1/100ths 	

Objective and Strategy	Concrete	Pictorial	Abstract	Y1
Division as sharing, groups of, lots of	 I have 10 cubes, can you share them equally in 2 groups?  	Children use pictures or shapes to share quantities.   8 shared between 2 is 4	12 shared between 3 is 4	Division

Objective and Strategy	Concrete	Pictorial	Abstract	Y2
Division as sharing	I have 10 cubes, can you share them equally in 2 groups 	Children use pictures or shapes to share quantities.  $8 \div 2 = 4$ Children use bar modelling to show and support understanding. $12 \div 4 = 3$ 	$12 \div 2 = 6$	Division
Division as grouping	Divide quantities into equal groups. Use cubes, counters, objects or PV counters to aid understanding.  	Use number lines for grouping.  **$12 \div 3 = 4$** Use the bar model, how many will go in each group? 	$28 \div 7 = 4$ Use the inverse to help!	
Division with remainders	See Year 3 for ideas as a GDS objective			

Objective and Strategy	**Concrete**	**Pictorial**	**Abstract**	**Y3**
Division as grouping	Use cubes, counters, objects or place value counters to aid understanding. 24 divided into groups of 6 = 4   	Continue to use bar modelling to aid solving division problems.  	How many groups of 6 in 24? 24 ÷ 6 = 4	Division
Division with arrays	 Link division to multiplication by creating an array and thinking about the number sentences that can be created. E.g. 15 ÷ 3 = 5 5 x 3 = 15 15 ÷ 5 = 3 3 x 5 = 15	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 eight linking number sentences. 7 x 4 = 28 4 x 7 = 28 28 ÷ 7 = 4 28 ÷ 4 = 7 28 = 7 x 4 28 = 4 x 7 4 = 28 ÷ 7 7 = 28 ÷ 4	

Objective and Strategy	Concrete	Pictorial	Abstract	Y3
Division with remainders.	14 ÷ 3 = Divide objects between groups and see how much is left over 	Jump forward in equal jumps on a number line then see how many more you need to jump to find a remainder.  Draw dots and group them to divide an amount and clearly show a remainder.  Use bar models to show division with remainders. 	Complete the written divisions showing the remainders with an r. 29 ÷ 8 = 3 REMAINDER 5 dividend divisor quotient remainder	Division



Example without remainder:
40 ÷ 5
Ask "How many 5s in 40?"

5 + 5 + 5 + 5 + 5 + 5 + 5 + 5 = 8 fives

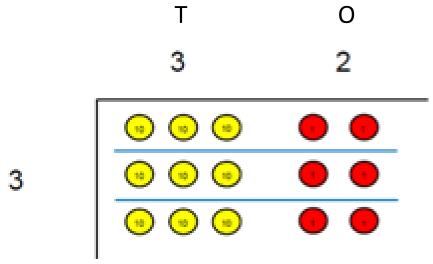
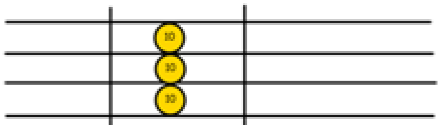
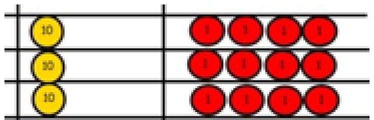
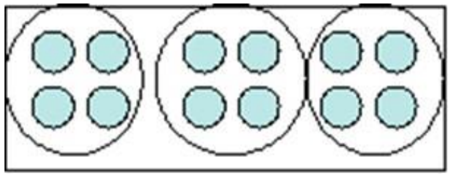
0 5 10 15 20 25 30 35 40

Example with remainder:
38 ÷ 6

6 + 6 + 6 + 6 + 6 + 6 + 2 = 6 sixes with a remainder of 2

0 6 12 18 24 30 36 38

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

Objective and Strategy	**Concrete**	**Pictorial**	**Abstract**	**Y4-6**
Divide at least 3 digit numbers by 1 digit. Short Division	96 ÷ 3 Use PV counters using the formal method alongside.  42 ÷ 3= 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.   We exchange this ten for ten ones and then share the ones equally among the groups.  We look how much in 1 group so the answer is 14.	Continue to use drawn diagrams with dots or circles to help them divide numbers into equal groups.  Encourage them to move towards counting in multiples to divide more efficiently.	Begin with divisions that divide equally with no remainder. Encourage children to create a multiples line of the divisor. e.g. 872 ÷ 4 4 8 12 16 20 etc 2 1 8 3 4 | 8 7 2 Move to division with a remainder. 8 6 r 2 3 5 | 4 3 2 Introduce concept that the remainder can be expressed as a fraction. 432 ÷5 = 86 $\frac{2}{5}$, with the remainder being the numerator and the denominator being the divisor. Finally move into decimal places to divide the total accurately.	Division

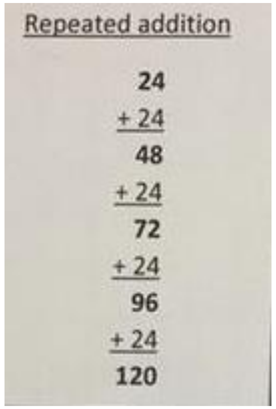
			$\begin{array}{r\|l} & \;\;\;\;1\;\;4\;.\;6 \\ \hline 3\,5 & 5\;\;1\;\;{}^{16}1\;.\;{}^{21}0 \end{array}$	

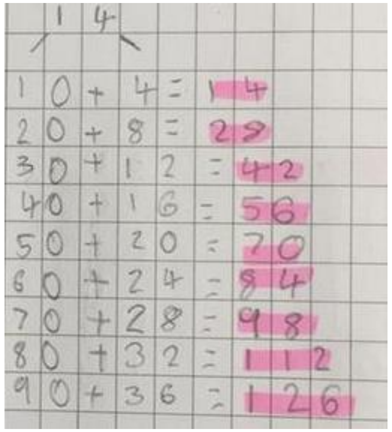
Long division

Make sure the terminology – divisor, multiple, remainder, carry.

Step 1

Create a multiples line either using repeated addition or partitioning.

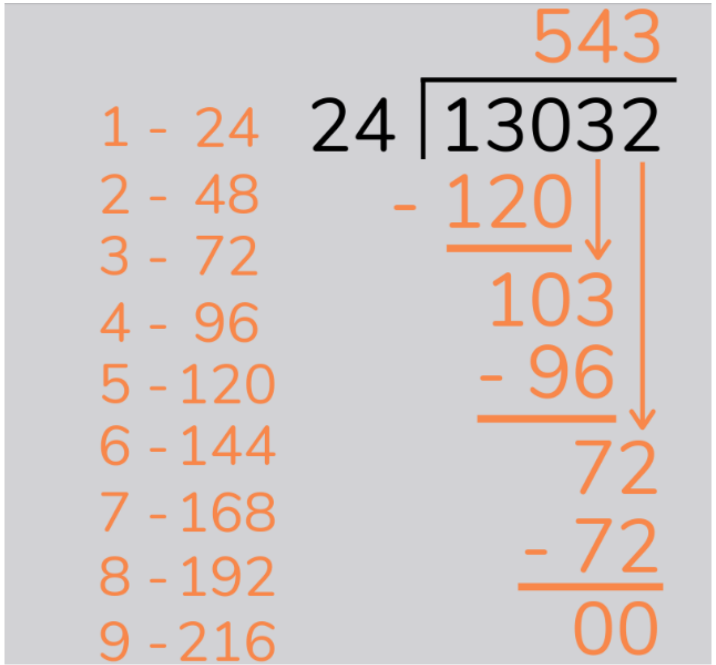




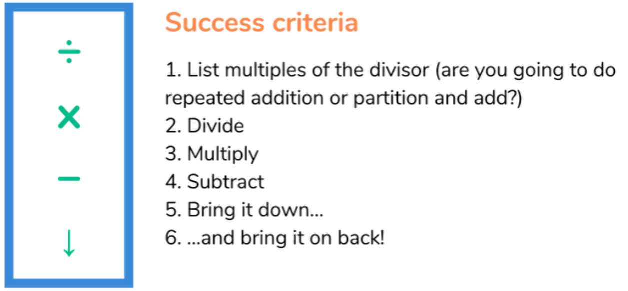
See link for video:
https://thirdspacelearning.com/blog/best-long-division-method-ks2/

Step 2

Adopt the 'I, we, you' process to go through a worked example.



As working through make sure they understand the steps and encourage them to write the symbols for each step to secure the process.



Step 3

Lots of practice and modelling.