



ST JOHN'S CALCULATION ROUTEWAY

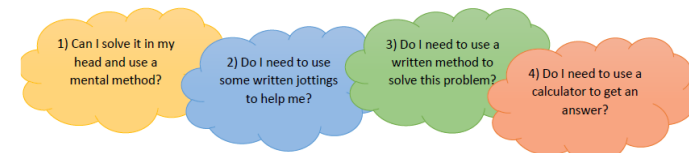
This policy has been largely adapted from the White Rose Maths Hub Calculation Policy with further material added. It is a working document and will be revised and amended as necessary. It has been created to meet the expectations of the national curriculum but most importantly the learning needs of our children at St John's.

Mastery

The policy has been organised by year group, considering the national curriculum 2014 expectations. The new policy encourages a CPA (concrete, pictorial and abstract) approach to encourage children to gain a solid foundation to build upon. Our curriculum is designed to move children on to the next method as soon as they can do the one before. Working and more complex and richer problems rather than new methods will support this 'mastering' of maths.

Efficient Methods

The written methods in this document are important but they by no means replace mental methods we also develop. As children become more mature and confident with their calculation, they need to start following these 4 steps when approaching problems:



The policy is broken down into each of the four calculation strands (addition, subtraction, multiplication and division) and then by year group.

Addition

Year 1

Year 2

Year 3

Year 4

Year 5

Year 6

Subtraction

Year 1

Year 2

Year 3

Year 4

Year 5

Year 6

Multiplication

Year 1

Year 2

Year 3

Year 4

Year 5

Year 6

Division

Year 1

Year 2

Year 3

Year 4

Year 5

Year 6

ADDITION

Key vocabulary

add more

groups of plus

increase total

sum altogether

Making links to other areas of the curriculum

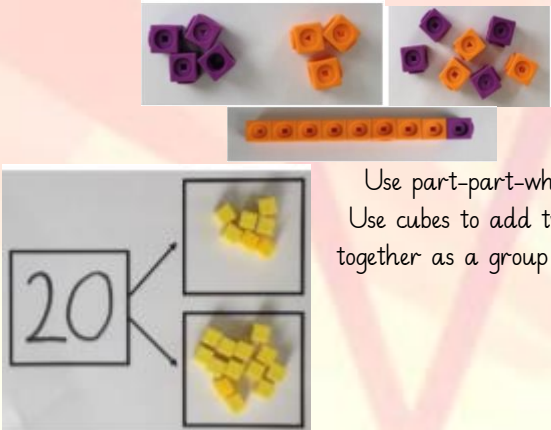
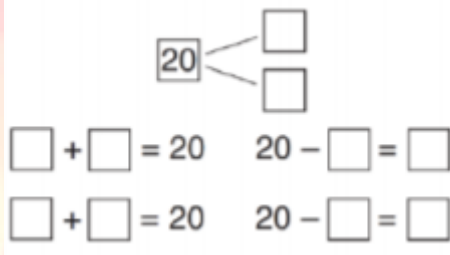
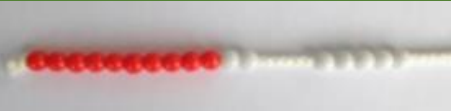
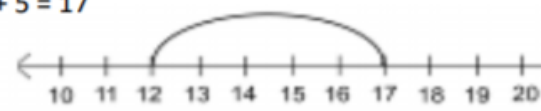

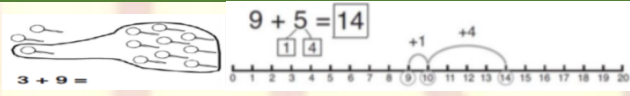
£ p ml L

g kg mm cm m


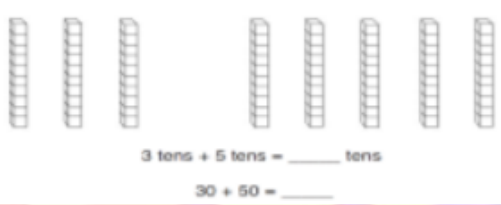
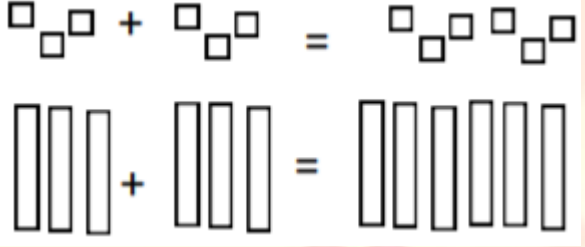


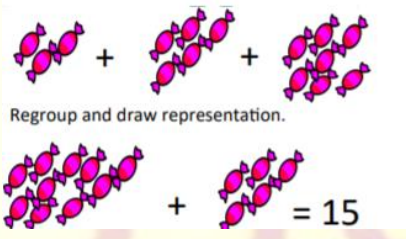
perimeter

statistics

Y1: ADDITION

Objective and strategy	Concrete	Pictorial	Abstract
<p>Apply knowledge about number bonds to 10 to number bonds to 20.</p>	 <p>Use part-part-whole model. Use cubes to add two numbers together as a group or in a bar.</p>		<p>$20 = 15 + 5$ $20 - 7 = 13$</p> <p>Use the part-part-whole diagram to move into the abstract and write written calculations.</p>
<p>Using a number line to add.</p> <p>Starting and the bigger number and counting on</p>	 <p>$12 + 5 = 17$</p> <p>Start with the larger number on the bead string then count on to the smaller number 1 by 1 to find the answer.</p>	<p>$12 + 5 = 17$</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>$5 + 12 = 17$</p> <p>Place the larger number in your head and count on the smaller number to find your answer (you could use your fingers to help you count!).</p>
<p>Using a number line to add.</p> <p>Regrouping to make 10. <i>This is an essential skill for column addition later.</i></p>	 <p>$6 + 5 = 11$</p> <p>Start with the bigger number and use the smaller number to make 10. Use tens frames.</p>	 <p>$9 + 5 = 14$</p> <p>Use pictures or a number line. Regroup or partition the smaller number about using the part-part-whole model to make 10.</p>	<p>$7 + 4 = 11$</p> <p>If I am at seven, how many more do I need to make 10? How many do I add on now?</p>

Y2: ADDITION

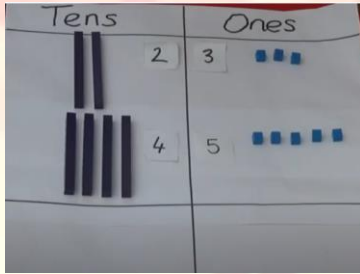
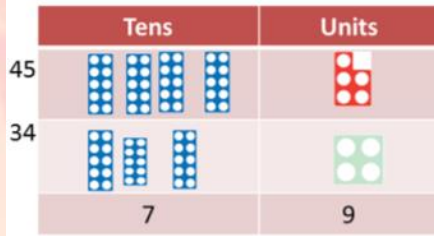
Objective and strategy	Concrete	Pictorial	Abstract
Adding multiples of ten	 <p>$50 = 30 + 20$ Model using Dienes and bead strings.</p>	 <p>Use representations for Dienes.</p>	$20 + 30 = 50$ $70 = 50 + 20$ $40 + ? = 60$
Use known facts (bonds to 10/20) to derive related addition facts to 100		 <p>Use hundred squares, bar models and part whole diagrams. Draw images of Dienes to support</p>	<p>I know $3 + 7 = 10$ so...</p> $30 + 70 = 100$
Add 3 ine-digit numbers	 <p>Combine to make 10 first if possible, or bridge 10 then add the third digit.</p>	 <p>Regroup and draw representation.</p>	$\begin{array}{r} 4 + 7 + 6 = 10 + 7 \\ 10 \quad \quad = 17 \end{array}$ <p>Combine the two numbers that make/bridge 10 then add on the third digit.</p>

Y2: ADDITION

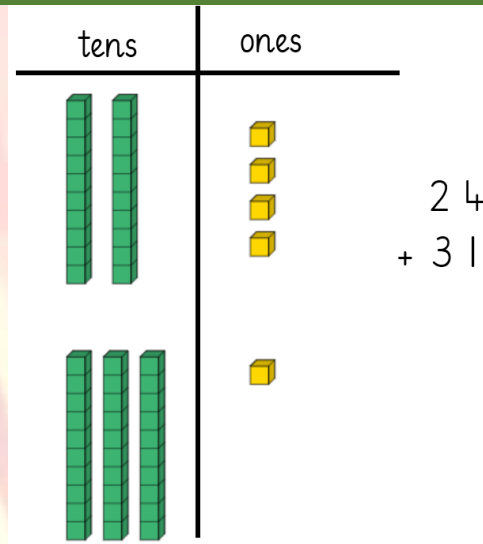
Column method

Introduce the column method (with no regrouping) as a method to add a two digit number and ones/tens and a two digit number and two-digit number.

Model using Dienes and Numicon. Add together the ones first then the tens.



https://www.youtube.com/watch?v=38dc-eS8S_k



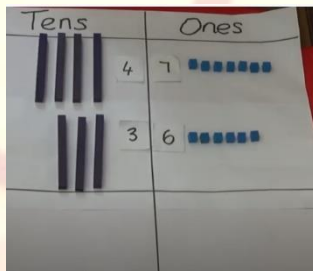
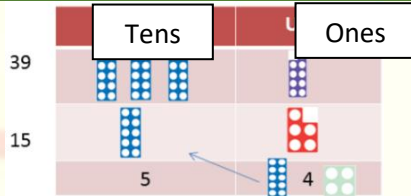
Move to drawing Dienes

$$\begin{array}{r} 24 \\ + 31 \\ \hline 55 \end{array}$$

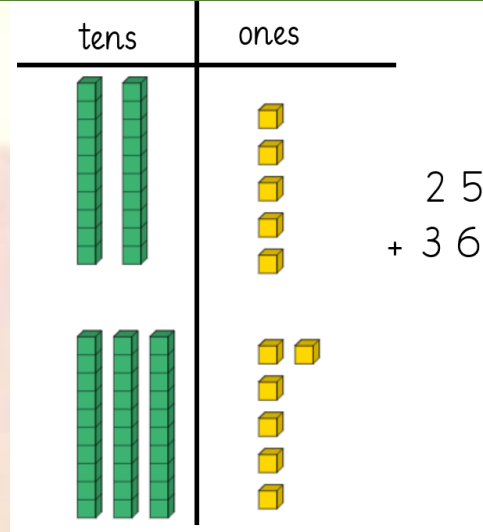
Column method

Introduce the column method (with regrouping) to add a two-digit number and ones/tens and a two-digit number and two-digit number

Exchange ten ones for a ten. Model using Numicon and Dienes



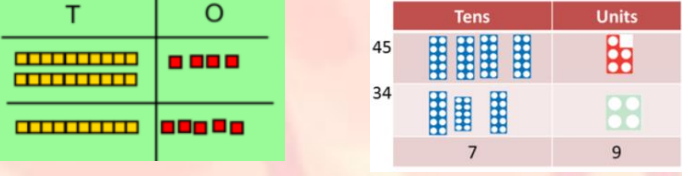
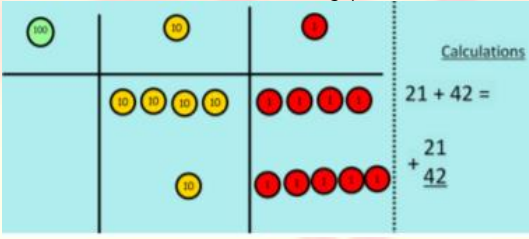
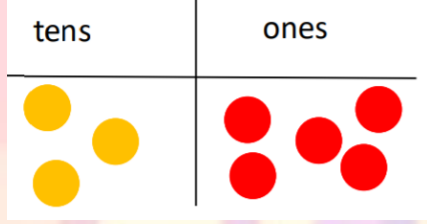
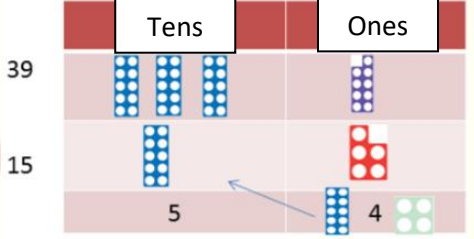
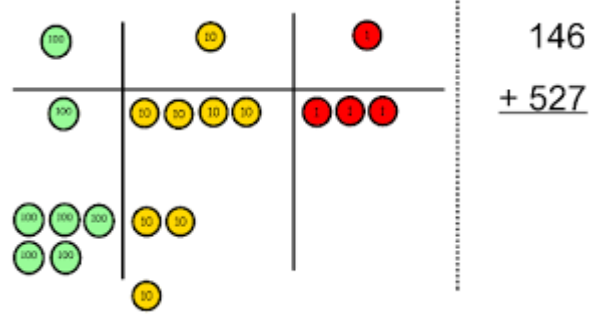
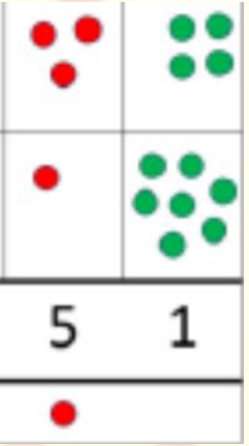
https://www.youtube.com/watch?v=38dc-eS8S_k



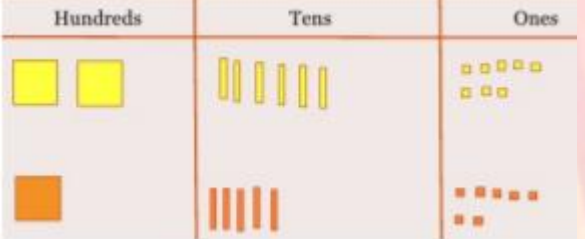
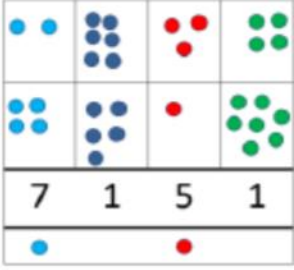
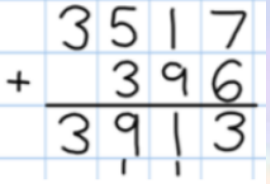
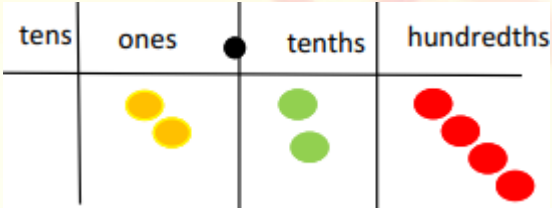
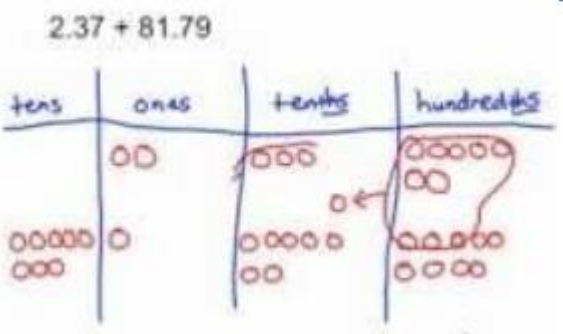
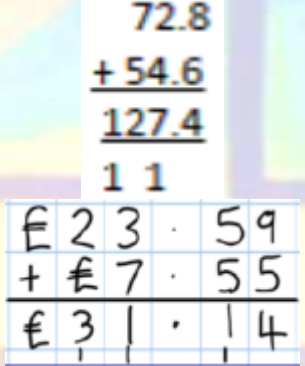
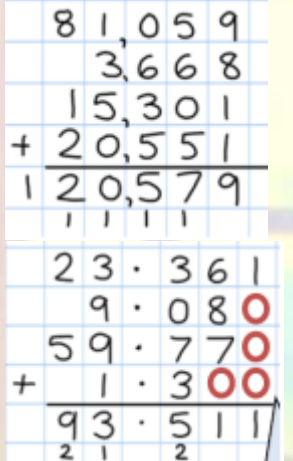
Move to drawing Dienes.

$$\begin{array}{r} 25 \\ + 36 \\ \hline 61 \end{array}$$

Y3: ADDITION

Objective and strategy	Concrete	Pictorial	Abstract
<p>Column addition - no regrouping. Add two or three 2 or 3-digit numbers</p>	 <p>Model using Dienes and Numicon. Add together the ones first then the tens. Then move on to using place value counters.</p> 	 <p>Children move to drawing the counters using a tens and ones frame.</p>	$\begin{array}{r} 23 \\ + 14 \\ \hline 37 \end{array}$ <p>Add the ones first, then the tens and then the hundreds.</p>
<p>Column addition with regrouping.</p>	 <p>Exchange ten ones for a ten. Model using Numicon and place value counters.</p> 	 <p>Children can draw a representation of the grid to further support their understanding, carrying the ten underneath the line.</p>	$\begin{array}{r} 20 + 5 \\ 40 + 8 \\ 60 + 13 = 73 \end{array}$ <p>Start by partitioning the numbers before the formal column method to show the exchange.</p> $\begin{array}{r} 536 \\ + 85 \\ \hline 621 \\ 11 \end{array}$

Y4-6: ADDITION

Objective and strategy	Concrete	Pictorial	Abstract
<p>Y4 – Add numbers with up to 4 digits</p>	 <p>Children continue to use Dienes or pv counters to add, exchanging ten ones for a ten and ten tens for a hundred and ten hundreds for a thousand.</p>	 <p>Draw representations using pv grid.</p>	 <p>Continue from previous work to carry hundreds as well as tens. Relate to money and measures.</p>
<p>Y5- Add numbers with more than 4 digits.</p> <p>Add decimals with 2 decimal places, including in the context of money.</p>	<p>Continue to work on the skills developed in Year 4 using the formal column method.</p>  <p>Introduce decimal place value counters and model exchanging when adding. E.g. exchanging ten tenths for a one and ten hundredths for a ten.</p>		
<p>Y6- Add several numbers of increasing complexity. This includes adding money, measures and decimals (including a different amount of decimal places)</p>	<p>Using the same methods as in Year 5 with increasingly complex numbers.</p> <p>Insert zeros as place holders when adding numbers with a different amount of decimal places.</p>	<p>Using the same methods as in Year 5 with increasingly complex numbers.</p> <p>Insert zeros as place holders when adding numbers with a different amount of decimal places.</p>	

SUBTRACTION

Making links to other areas of the curriculum

£ p ml L

g kg mm cm m

statistics

Key vocabulary

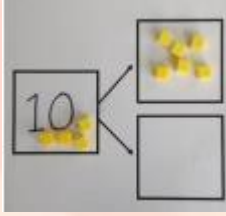
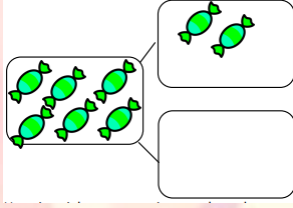
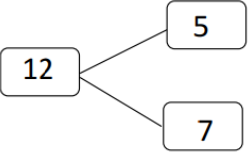


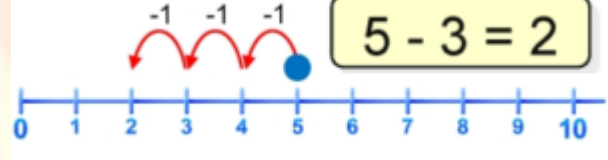
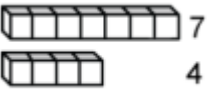
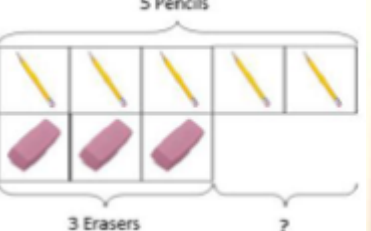
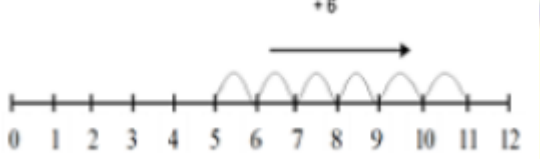

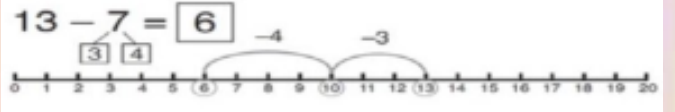
subtract minus

less decrease

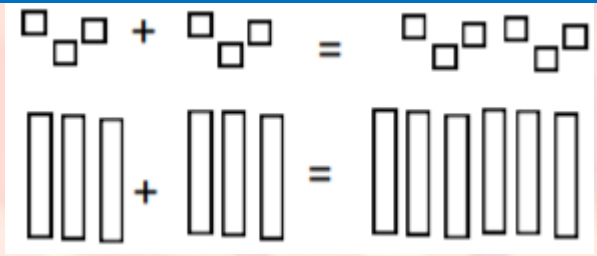
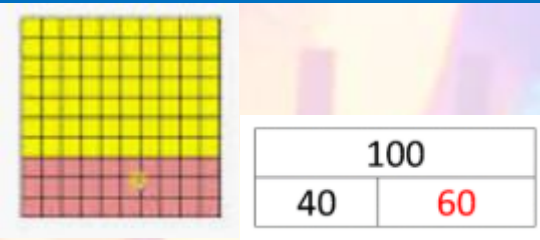
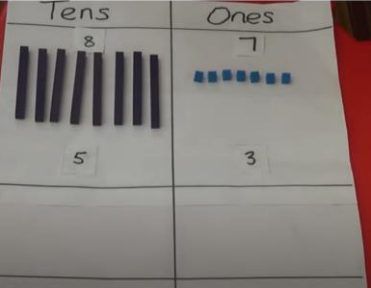
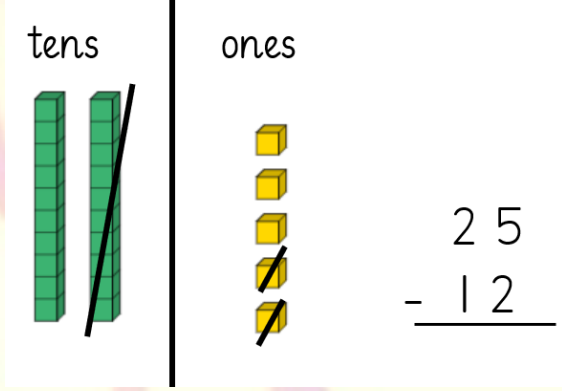
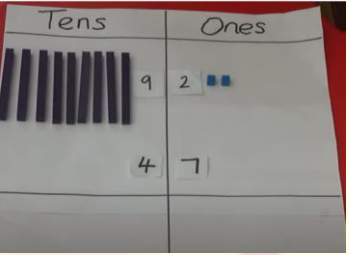
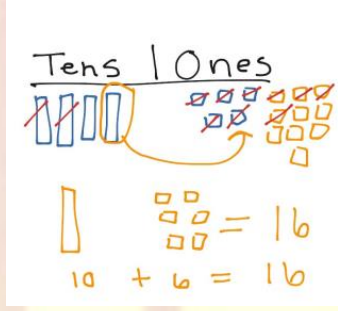
take away fewer

leave difference

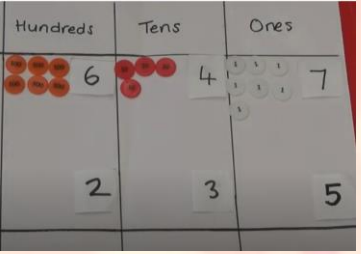
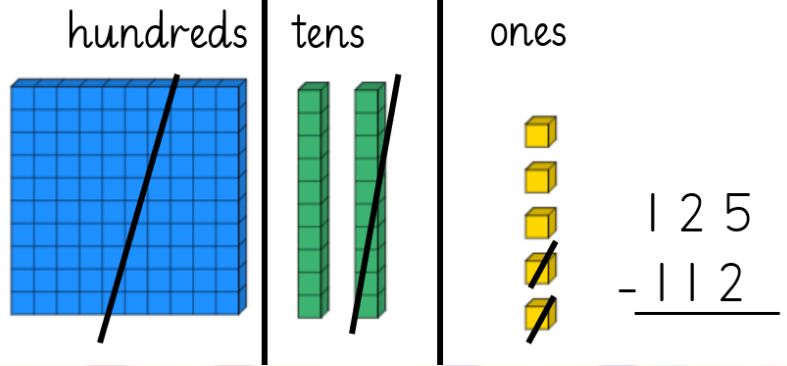
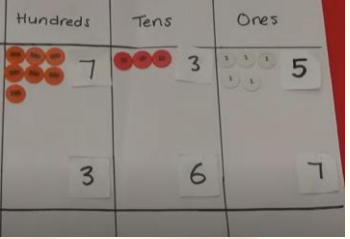
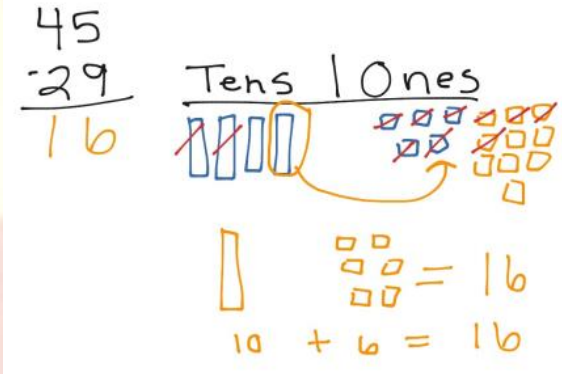
Y1: SUBTRACTION

Objective and strategy	Concrete	Pictorial	Abstract
Represent and use number bonds and subtraction facts within 20	 <p>Link to addition. Use part-part-whole to model the inverse.</p> <p>If 10 is the whole and 6 is one of the parts, what is the other part?</p>	 <p>Use pictorial representations to show the part.</p>	 <p>Move to using numbers.</p>
Using a number line to subtract. Counting back.	 <p>Move objects away from the group, counting backwards.</p>  <p>Move the beads along the bead string as you count backwards.</p>	 <p>Count back in ones using a number line.</p>	Put 13 in your head, count back 4. What number are you on now?
Using a number line to subtract. Find the difference.	 <p>Compare objects and amounts. "7 is 3 more than 4." "I am 2 years older than my sister."</p>  <p>Lay objects to represent a bar model.</p>	<p>Count on using a number line to find the difference.</p> 	Hannah has 12 sweets and her sister has 5. How many more does Hannah have than her sister?
Using a number line to subtract. Make 10	 <p>14 - 9. Make 14 on the tens frame. Take away 4 to make 10, then take away 5 more so you have taken 9.</p>	 <p>13 - 7. Jump back 3 first, then another 4. Use ten as the stopping point.</p>	16 - 8 How many do we take off first to get back to 10? How many more do we have left to take away?

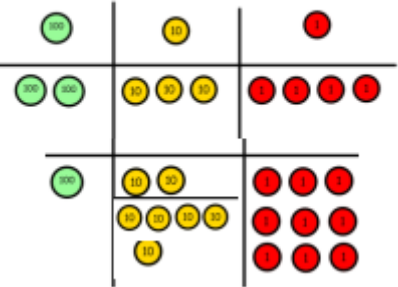
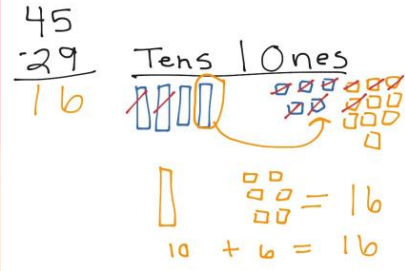
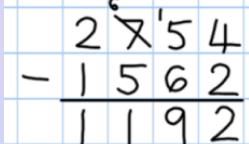
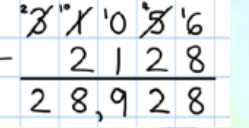
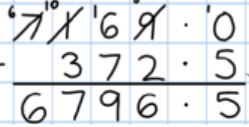
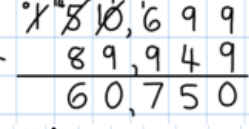
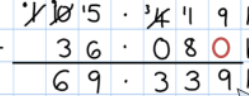
Y2: SUBTRACTION

Objective and strategy	Concrete	Pictorial	Abstract
<p>Use known facts (bonds to 10/20) to derive related facts to 100</p>		 <p>Use hundred squares, bar models and part whole diagrams. Draw images of Dienes to support</p>	<p>I know $3 + 7 = 10$ so... $30 + 70 = 100$</p>
<p>Column method Introduce the column method to subtract a two-digit number and ones/tens/two-digit number with no exchanges.</p>	 <p>https://www.youtube.com/watch?v=-JUxKogWhF8</p> <p>Use Dienes to introduce the column subtraction method.</p>	 <p>Draw representations to support understanding.</p>	$47 - 24 = 23$ $\begin{array}{r} 40 + 7 \\ - 20 + 4 \\ \hline 20 + 3 \end{array}$ <p>Use this intermediate step to then lead on to clear column understanding.</p> $\begin{array}{r} 47 \\ - 24 \\ \hline 23 \end{array}$
<p>Column method Introduce the column method to subtract a two-digit number and ones/tens/two-digit number with exchanges.</p>	 <p>https://www.youtube.com/watch?v=-JUxKogWhF8</p> <p>Introduce the phrase 'take and make' for exchange. E.g. "We're going to take a ten and make ten ones."</p>	 <p>Draw representations to support understanding.</p>	$\begin{array}{r} 3 \cancel{4} 5 \\ - 29 \\ \hline 16 \end{array}$

Y3: SUBTRACTION

Objective and strategy	Concrete	Pictorial	Abstract
Column subtraction without regrouping	 <p>Use Dienes or Numicon to model before moving on to place value counters.</p>	 <p>Draw representations to support understanding.</p>	$\begin{array}{r} 125 \\ - 112 \\ \hline 013 \end{array}$
Column subtraction with regrouping	 <p>Begin with Dienes or Numicon. Move to pv counters, modelling the exchange of a ten into ten ones. Use the phrase 'take and make' for exchange. E.g. "We're going to take a ten and make ten ones."</p>	 <p>Children may draw Dienes or PV counters and cross off.</p>	$\begin{array}{r} 3^3 \cancel{4}^1 2 \\ - 225 \\ \hline 117 \end{array}$

Y4-6: SUBTRACTION

Objective and strategy	Concrete	Pictorial	Abstract
<p>Year 4 subtract numbers with up to 4 digits.</p> <p><i>Introduce decimal subtraction through the context of money.</i></p>	<p style="text-align: center;">234 - 179</p>  <p>Model the process of exchange using Numicon, Dienes and then move on to PV counters.</p>	 <p>Children may wish to draw representations of Dienes or PV counters to support understanding.</p>	 <p>Use the phrase 'take and make' for exchange. "Let's take a ten and exchange it for ten ones."</p>
<p>Year 5 subtract numbers with at least 4 digits including money and measures.</p> <p><i>Subtract with decimal values, including mixtures of integers and decimals ensuring the decimal is aligned.</i></p>	<p>As Year 4. Continue to embed children's understanding of 'exchanging' with numbers greater than 4 digits.</p>	<p>As Year 4. Children may find it helpful to draw representations of Dienes or PV counters until their understanding is secure.</p>	 <p>Use zeros for place holders.</p> 
<p>Year 6 - Subtract with increasingly large and more complex numbers and decimal values.</p>	<p>As Year 5. Continue to embed children's understanding of 'exchanging' with increasingly large numbers.</p>	<p>As Year 4. Children may find it helpful to draw representations of Dienes or PV counters until their understanding is secure.</p>	 

MULTIPLICATION

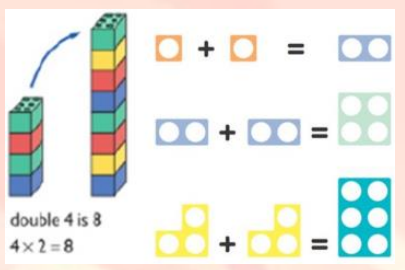

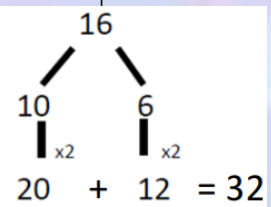
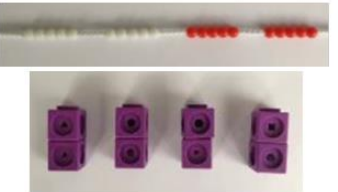


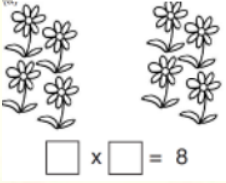

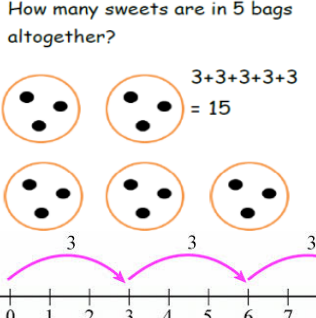


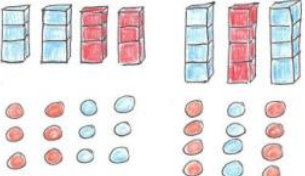
Making links to other areas of the curriculum

£ p ml L
g kg mm cm m
area
fractions

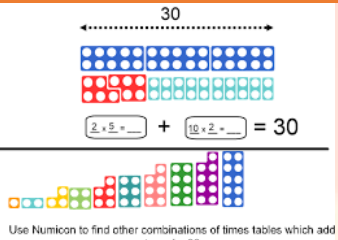
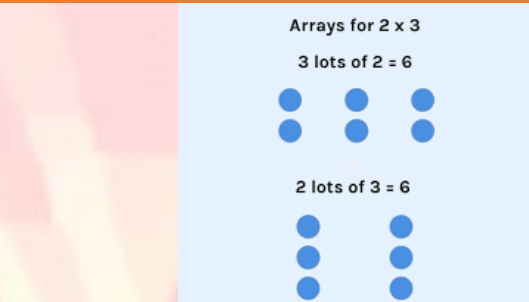
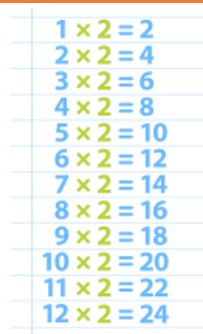
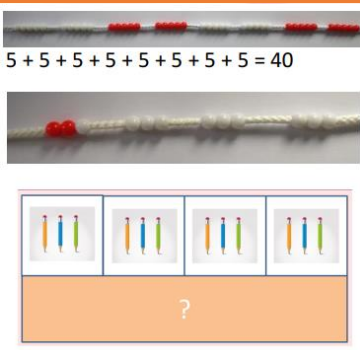
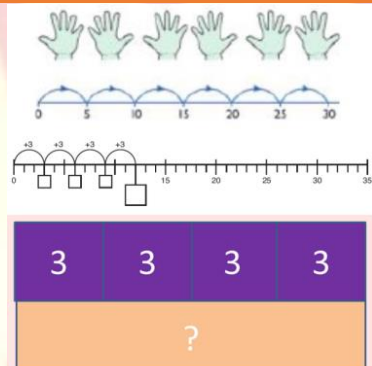

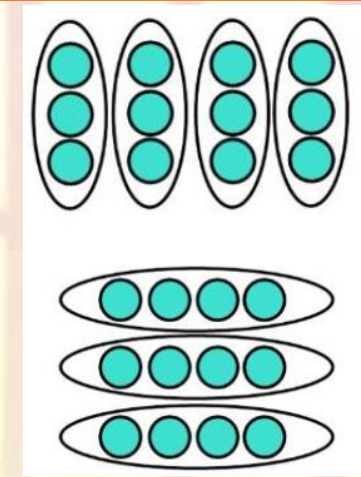

Key vocabulary

multiply times
groups of lots of
repeated addition
product array

Y1: MULTIPLICATION

Objective and strategy	Concrete	Pictorial	Abstract
Doubling	 <p>Use practical activities (including using manipulatives such as cubes and Numicon) to demonstrate doubling</p>	<p>Double 4 is 8</p>  <p>Draw pictures to show how numbers double.</p>	<p>Partition larger numbers to help us double.</p> 
Counting in multiples	 <p>Count the groups as children are skip counting, they may use their fingers as they are skip counting.</p>	<p>Use representations, including arrays, to show counting in multiples.</p> 	<p>Count in multiples of a number aloud. Write sequences of multiples. 2, 4, 6, 8, 10... 5, 10, 15, 20, 25...</p>
Making equal groups and counting the total	 <p>Make equal groups using manipulatives.</p>	 <p>Draw and make representations to show equal groups.</p>	$2 \times 4 = 8$
Repeated addition	 <p>Use different objects to add equal groups.</p>	<p>How many sweets are in 5 bags altogether?</p>  <p>Use pictorial representations, including number lines, to solve problems.</p>	 <p>Write addition sentences to describe objects and pictures.</p> $2 + 2 + 2 + 2 + 2 = 10$
Understanding arrays	 <p>Use objects laid out in arrays to find the answer to two lots of four, 3 lots of two etc.</p>	 <p>Draw representations of arrays to show understanding.</p>	$3 \times 2 = 6$ $2 \times 5 = 10$

Y2: MULTIPLICATION

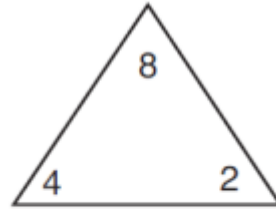
Objective and strategy	Concrete	Pictorial	Abstract
<p>2, 5 and 10 times tables</p>	 <p>Use practical resources including Numicon, cubes and bead strings to find times tables using repeated addition and skip counting</p>	 <p>Children can draw images such as arrays to support.</p>	
<p>Making equal groups and skip counting using a number line</p>	 <p>Count in groups as children are skip counting, children may use their fingers as they are skip counting. Use bar models.</p>	 <p>Number lines, counting sticks and bar models should be used to show representation of counting in multiples.</p>	<p>Count in multiples of a number aloud. Write sequences with multiples of numbers.</p> <p>0, 2, 4, 6, 8, 10 0, 3, 6, 9, 12, 15 0, 5, 10, 15, 20, 25</p> <p>$4 \times 3 = \square$</p>
<p>Multiplication is commutative</p>	 <p>Create arrays using counters, 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.</p>	 <p>Use representations of arrays to show different calculations and explore commutativity.</p>	<p>$12 = 3 \times 4$ $12 = 4 \times 3$</p>  <p>$5 + 5 + 5 = 15$ $3 + 3 + 3 + 3 + 3 = 15$ $5 \times 3 = 15$ $3 \times 5 = 15$</p>

Using the inverse

(this should be taught alongside division to embed multiplication facts)



Use practical objects to show that $4 \times 2 = 8$ so $8 \div 2 = 4$

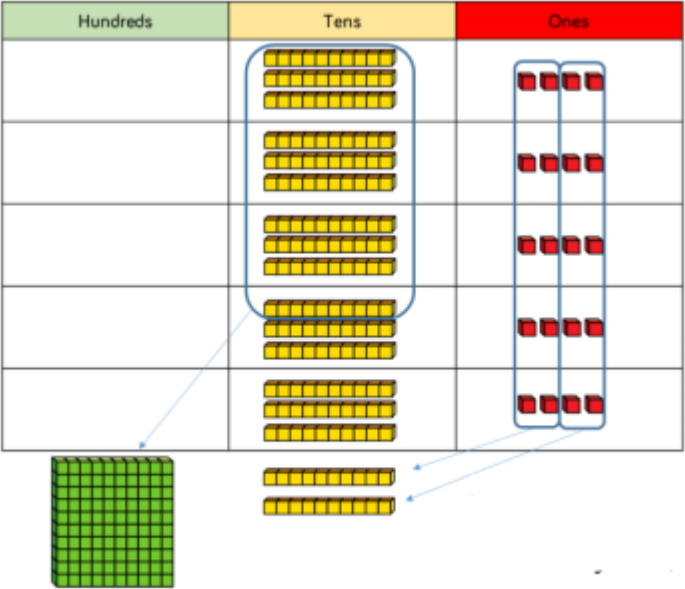


$$\begin{array}{l} \square \times \square = \square \\ \square \times \square = \square \\ \square \div \square = \square \\ \square \div \square = \square \end{array}$$

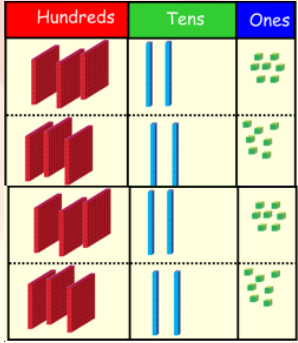
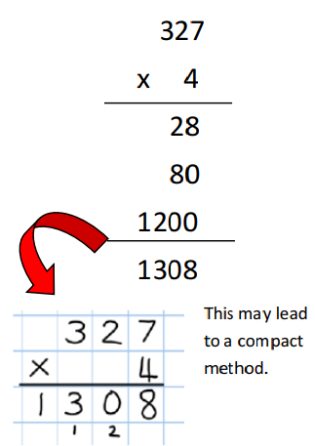
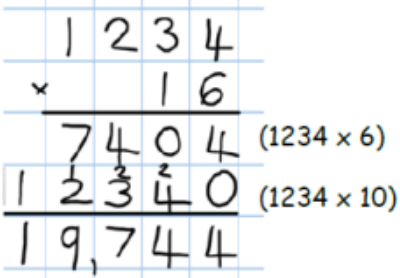
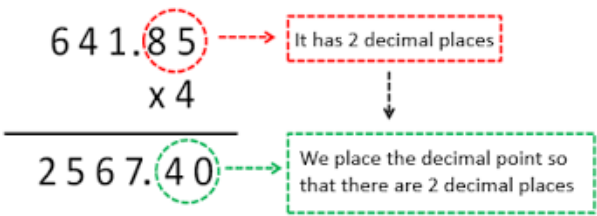
$$\begin{array}{l} 2 \times 4 = 8 \\ 4 \times 2 = 8 \\ 8 \div 2 = 4 \\ 8 \div 4 = 2 \\ 8 = 2 \times 4 \\ 8 = 4 \times 2 \\ 2 = 8 \div 4 \\ 4 = 8 \div 2 \end{array}$$

Y2: MULTIPLICATION

Y3: MULTIPLICATION

Objective and strategy	Concrete	Pictorial	Abstract																																				
<p>Column multiplication (expanded short multiplication)</p> <p>Begin with 2 digit x 1 digit with no regrouping before eventually moving on to 3 digit by 1 digit with regrouping.</p> <p>Progress to short method when confident.</p>			<table border="1" data-bbox="1388 167 1848 622"> <thead> <tr> <th></th> <th>H</th> <th>T</th> <th>O</th> <th></th> <th></th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td>3</td> <td>4</td> <td></td> <td></td> </tr> <tr> <td>x</td> <td></td> <td></td> <td>5</td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td>2</td> <td>0</td> <td>(5 × 4)</td> <td></td> </tr> <tr> <td>+</td> <td>1</td> <td>5</td> <td>0</td> <td>(5 × 30)</td> <td></td> </tr> <tr> <td></td> <td>1</td> <td>7</td> <td>0</td> <td></td> <td></td> </tr> </tbody> </table>		H	T	O					3	4			x			5					2	0	(5 × 4)		+	1	5	0	(5 × 30)			1	7	0		
	H	T	O																																				
		3	4																																				
x			5																																				
		2	0	(5 × 4)																																			
+	1	5	0	(5 × 30)																																			
	1	7	0																																				

Y4-6: MULTIPLICATION

Objective and strategy	Concrete	Pictorial	Abstract
<p>Column multiplication (short multiplication)</p>	<p>Children can still use Dienes then move on to using PV counters. Move on from calculations with no regrouping to calculations with regrouping.</p>  <p>It is important at this stage that children always multiply the ones first. Alongside using practical resources, record the written method to show the link between the two.</p>	<p>When modelling the short multiplication method, ensure children understand when they are multiplying by 10s and 100s. Model the expanded method alongside the short multiplication method and ensure children understand the short multiplication is used as a quick and efficient way to record this.</p> 	
<p>Column multiplication (long multiplication)</p>	<p>Manipulatives may still be used alongside the written method.</p>		<p>Children learn to multiply using the long multiplication method. Remainders needed to use a zero place holder and carry any tens.</p>
<p>Multiplying decimals up to 2 decimal places by a single digit.</p>			<p>When moving on to multiplying decimals, ensure that children put the decimal point in the correct place in their answer.</p>

DIVISION

Making links to other areas of the curriculum

£ p ml L
g kg mm cm m

Key vocabulary


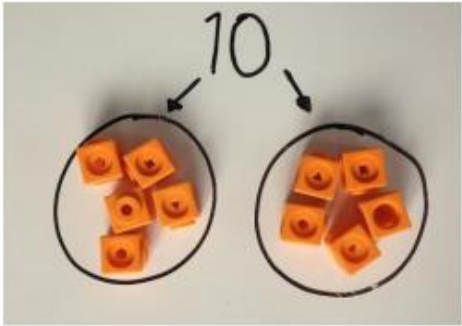
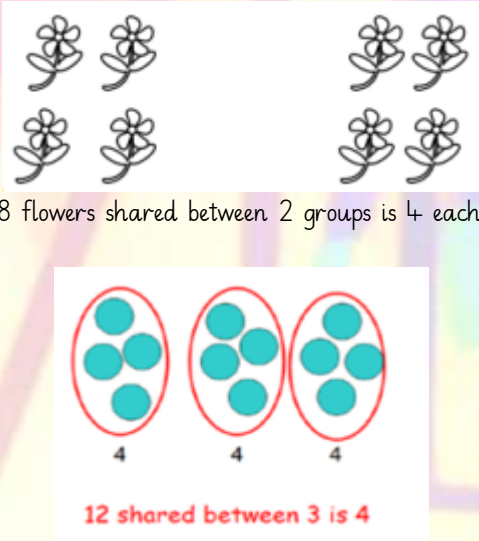
divided by share

share equally

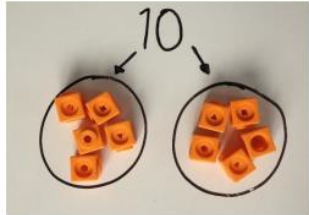
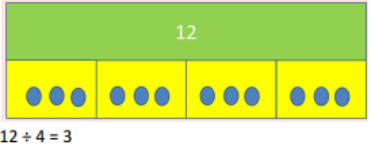
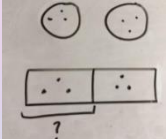
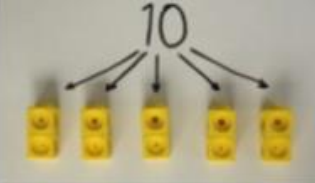

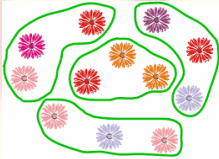
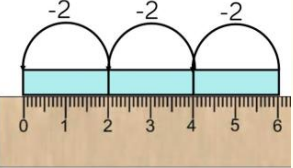
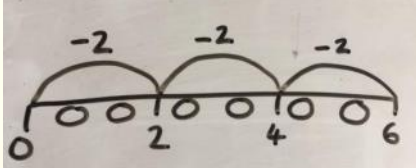
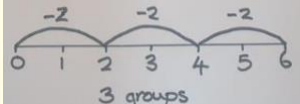

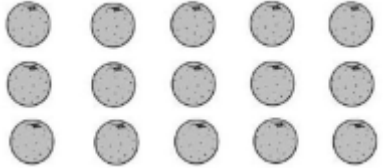
divisible by

group



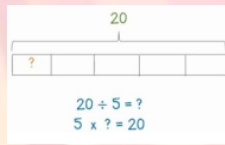
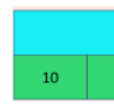


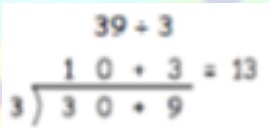
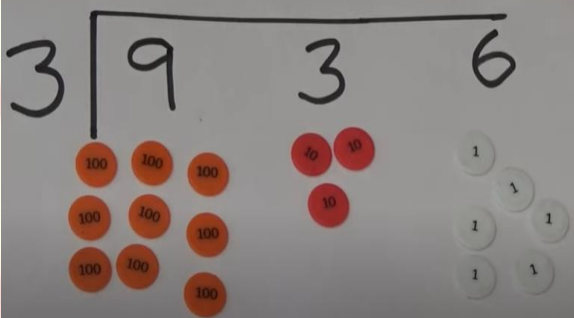
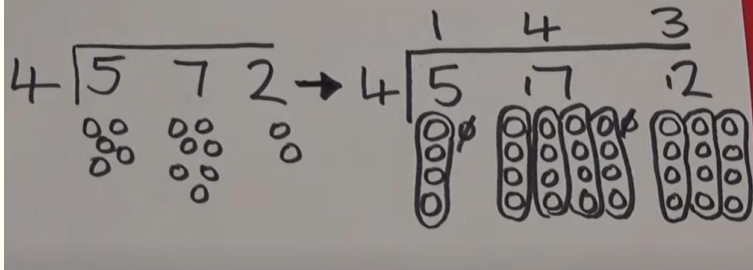
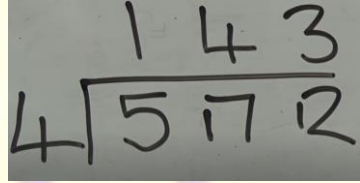
Y1: DIVISION

Objective and strategy	Concrete	Pictorial	Abstract
Division as sharing	 <p>Children should have opportunities to practically share objects. The part-part-whole (cherry diagram) can be a useful way to represent this sharing.</p> 	<p>Children can use pictures or shapes to share quantities</p>  <p>8 flowers shared between 2 groups is 4 each.</p> <p>12 shared between 3 is 4</p> <p>Children can create circles for sharing dots. E.g. If I am sharing into 3 groups I need to draw 3 circles.</p>	12 shared between 3 is 4.

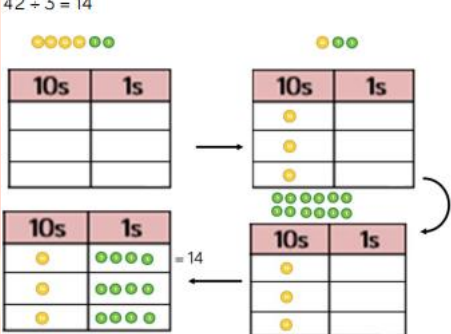
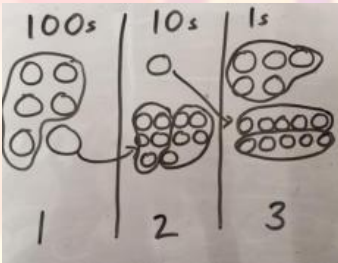
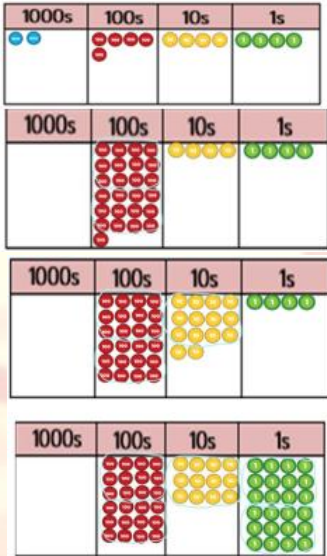
Y2: DIVISION

Objective and strategy	Concrete	Pictorial	Abstract
Division as sharing	 <p>Continue to build upon knowledge from Year 1 and practically share objects. The part-part-whole (cherry diagram) can be a useful way to represent this sharing.</p>	 <p>Children can continue to draw pictures to share dots. Bar models can also be used to support children's understanding.</p> 	$12 \div 3 = 4$
Division as grouping	<p>Divide quantities into equal groups. Use cubes, counters, objects or place value counters to aid understanding</p>  	 <p>Children can use drawings to help them group. I have 12 flowers. How many groups of 3 are there? Can you draw a circle around every group of 3?</p>	$12 \div 3 = 4$
Repeated subtraction	 <p>Cuisenaire rods above a ruler can demonstrate how to break down $6 \div 2$</p> <p>3 groups of 2</p>	 <p>Represent pictorially.</p>	<p>Children to use a number line to show how many groups have been subtracted.</p>  <p>3 groups</p>
Division as arrays	 <p>Link division to multiplication and arrays. If I know $3 \times 5 = 15$, I know $15 \div 5 = 3$.</p>	 <p>Draw arrays to aid understanding.</p>	<p>Find the inverse of multiplication and division and create number sentences.</p> $2 \times 4 = 8$ $4 \times 2 = 8$ $8 \div 2 = 4$ $8 \div 4 = 2$

Y3: DIVISION

Objective and strategy	Concrete	Pictorial	Abstract
<p>Division as grouping including with remainders.</p> <p>Expanded short division.</p>	<p>Continue to use practical resources including cubes, counters, objects, place value counters or Numicon to aid understanding.</p>  <p>24 divided into groups of 6 = 4</p> <p>Use of lollipop sticks to form wholes- squares are made because we are dividing by 4.</p>  <p>There are 3 whole squares, with 1 left over.</p>	<p>Use bar modelling to aid solving division problems.</p>  <p>20 ÷ 5 = ? 5 × ? = 20</p> <p>Use bar models to show the remainder.</p>  <p>10</p> <p>Draw dots and group them to divide an amount and clearly show a remainder.</p>  <p>remainder 2</p> <p>This then to using as a visual model of the expanded method.</p> <p>639 ÷ 3</p>  <p>should lead on grouping short</p>	<p>How many groups of 6 are there in 24? 24 ÷ 6 = 4</p> <p>Children can make sense of the place value counters by writing calculations by each step then leading to the expanded method</p>  <p>39 ÷ 3 10 ÷ 3 = 3 30 ÷ 3 = 10</p>
<p>Short division</p> <p>Introduce short division initially dividing a two-digit number by a one-digit number with no exchanges before moving on to a three-digit number by a one-digit number with exchanges.</p>	 <p>3 9 3 6</p> <p>100 100 100 100 100 100 100 100</p> <p>5 10 10</p> <p>1 1 1 1 1</p>	 <p>4 5 7 2 → 4 5 17 12</p> <p>1 4 3</p> <p>100 100 100 100 100 100 100 100 100</p>	 <p>4 5 7 2</p> <p>1 4 3</p>

Y4-6: DIVISION

Objective and strategy	Concrete	Pictorial	Abstract
Divide at least 3 digit numbers by 1 digit (short division)	<p>$42 \div 3 = 14$</p>  <p>Children can continue to use place value counters to support them dividing. Children should move on to dividing a three digit number by a 1 digit number in Year 4 then moving on to four digit numbers by a one digit number in Year 5 and increasingly complex numbers in Year 6.</p>	<p>Children can represent the place value counters pictorially before moving on to more efficient written methods.</p> 	<p>Move on to the formal short division ('bus stop') method. Begin with no remainders.</p> $\begin{array}{r} 123 \\ 5 \overline{) 615} \end{array}$ <p>Move on to dividing with remainders.</p> $\begin{array}{r} 86 \text{ r } 2 \\ 5 \overline{) 432} \end{array}$ <p>Finally, in Year 6, turn your remainder into a decimal remainder to be more accurate.</p> $\begin{array}{r} 14.6 \\ 35 \overline{) 511.0} \end{array}$ $\begin{array}{r} 0663 \text{ r } 5 \\ 8 \overline{) 5309} \end{array}$
Year 6 Long division	 <p>We can't group 2 thousands into groups of 12 so we will exchange them.</p> <p>We can group 24 hundreds into groups of 12 which leaves us with 1 hundred.</p> <p>After exchanging the hundred. We have 14 tens. We can group 12 tens into a group of 12, which leaves 2 tens.</p> <p>After exchanging the 2 tens, we have 24 ones. We can group 24 ones into 2 groups of 12, which leaves no remainders.</p>		$\begin{array}{r} 02 \\ 12 \overline{) 2544} \\ \underline{24} \\ 1 \\ 12 \overline{) 021} \\ \underline{24} \\ 14 \\ \underline{12} \\ 2 \end{array}$ $\begin{array}{r} 0212 \\ 12 \overline{) 2544} \\ \underline{24} \\ 14 \\ \underline{12} \\ 24 \\ \underline{24} \\ 0 \end{array}$