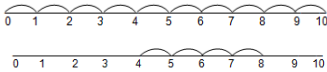
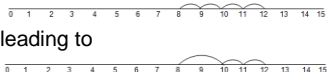
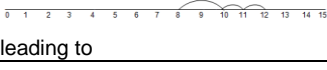

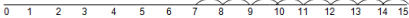
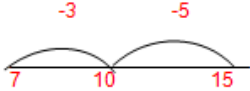

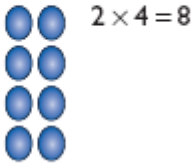
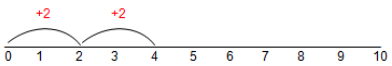


Crudgington Primary School

Calculation policy

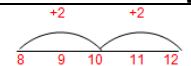
Year 1

Policy reflects: concrete (do it!) abstract (see it!) visual (remember it!) communication (record it!)

<u>Year 1</u>	<u>Year 1</u>	<u>Year 1</u>	<u>Year 1</u>						
<p>Key skills of knowing number bonds to 10 and within 20.</p> <p>Develop knowledge of fact families, e.g. 2, 5, 7.</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> <table style="font-size: small;"> <tr> <td style="text-align: center;">○○○○○ ○○</td> <td style="text-align: center;">$7 = 5 + 2$</td> <td style="text-align: center;">$2 + 5 = 7$</td> </tr> <tr> <td></td> <td style="text-align: center;">$7 - 2 = 5$</td> <td style="text-align: center;">$7 - 5 = 2$</td> </tr> </table> </div> <p>Counting forwards and recording on a number line- use arrows on last jump to show direction of jump.</p> <p>All answers to be recorded in a number sentence following any informal recording.</p>  <p>$4 + 8 =$</p> <p>Reordering – biggest number first.</p> <p>$8 + 4 =$</p> <p>Recording in number sentences and communication along number lines or with informal written methods.</p> <p style="color: green;">Bridge through 10: recall number bonds to 10 and 20</p>  <p>leading to</p>  <p>leading to</p>	○○○○○ ○○	$7 = 5 + 2$	$2 + 5 = 7$		$7 - 2 = 5$	$7 - 5 = 2$	<p>Subtraction sentences and jumps (backwards for take away – left and forwards for difference – right) along number lines.</p> <p>Check with the inverse. Understand the effect of adding and subtracting zero</p> <p>Know that 6 can be thought of as 5 and 1.</p>  <p style="text-align: center;">6 is 5 and 1 more</p> <p>Know that 8 is 5 and 3, therefore subtract 5 then 3.</p> <p>$15 - 8 = 7$</p>  <p>leading to</p>  <p style="color: red;">Children to show notation</p> <p>Find the difference by counting on along a number line.</p> <p>$15 - 8 =$</p> <p>Reinforce the role of the number</p>	<p>Pictorial repeated addition. Grouping is a random arrangement of a quantity into equal groups.</p> <p>Arrays are a rectangular arrangement to show the equal groups.</p>  <p style="text-align: center;">$4 \times 2 = 8$</p> <p style="text-align: center;">$2 \times 4 = 8$</p>  <p style="text-align: center;">$2 \times 4 = 8$</p> <p style="text-align: center;">$4 \times 2 = 8$</p> <p>Counting in 2s, 5s and 10s and begin counting in 3s.</p> <p>Introduce the x symbol once repeated addition is understood.</p>	<p>With practical equipment:</p> <p>Counting on and back in 2s, 5s and 10s and begin counting in 3s.</p> <p>Grouping as repeated addition along the number line.</p> <p>Introduce the \div symbol once repeated addition (grouping) is understood.</p> <p>If I have got 4, how many groups of 2 have I got?</p>  <p>Grouping and sharing practically. (NB If the answer is in the same units as the dividend, it is sharing. If the answer is in different units, it is grouping.)</p> <p>Record sharing by using pictorial notation</p> <p><i>There are 6 cakes and 2 children. How many cakes will they each get? One for you and one for you.</i></p>
○○○○○ ○○	$7 = 5 + 2$	$2 + 5 = 7$							
	$7 - 2 = 5$	$7 - 5 = 2$							


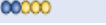
Crudgington Primary School Calculation policy Year 1

Policy reflects: concrete (do it!) abstract (see it!) visual (remember it!) communication (record it!)



Children to show notation

**Addition is the inverse of subtraction.
Fact family.**

	$15 = 12 + 3$	$3 + 12 = 15$
	$15 - 3 = 12$	$15 - 12 = 3$

Using shapes to represent a missing number.

$\square + \circ = \triangle$ $\square + \square = \triangle$
 $5 + 4 = 9$ $6 + 6 = 12$

Adding more than two numbers

Strategy to include looking for facts or bonds that are useful e.g. bonds up to and including 10, doubles or adding 10 to a given number.

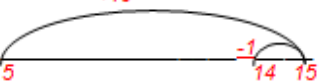
$6 + 3 + 4 = 13$
 $\underbrace{\quad\quad}_{10}$

$6 + 3 + 4 + 7 + 2 = 22$
 $\underbrace{\quad\quad}_{10}$

Children to show notation

Adjust strategy

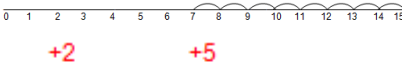
$5 + 9 =$
 $5 + 10 - 1$
 $\underbrace{\quad\quad}_{+10}$



Children to show notation

$6 + 11$ by $(10 + 1)$

sentence.



Children to show notation

Bridging through 10

Use patterns to find answers to subtractions

$10 + 4 =$
 $10 - 4 =$
 $20 + 4 =$
 $20 - 4 =$

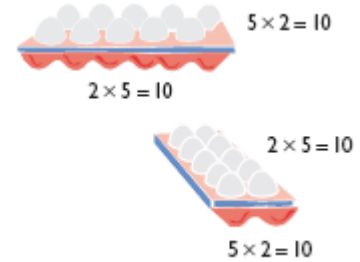
Decision making

$17 - \square = 12$

Sam works out

$17 - 5 = 12.$


How could he have done this?




Children to show notation

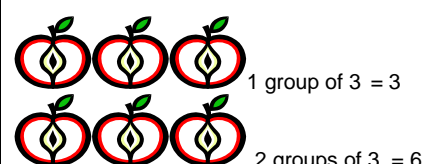
Bridging through 10

Use patterns to find answers to subtractions



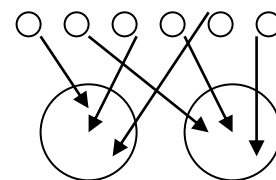


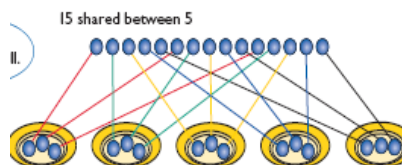
$5 + 5 + 5 + 5 + 5 + 5 = 30$
 $5 \times 6 = 30$
 5 multiplied by 6
 6 groups of 5
 6 hops of 5

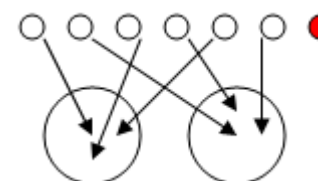


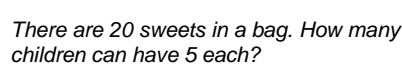
Doubles and grouping recorded on number lines

$2 + 2 =$









There are 7 cakes and 2 children. How many cakes will they each get? 'Leftovers' introduced.

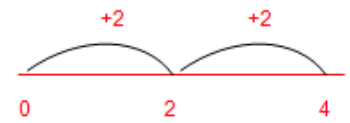
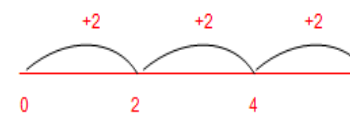
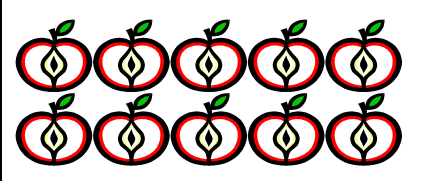

There are 20 sweets in a bag. How many children can have 5 each?

Crudgington Primary School

Calculation policy

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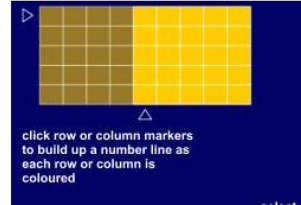
<p>Doubles then near doubles</p> <p>$5 + 6 =$ $5 + 5 + 1 = 11$</p> <p>$7 + 8 =$ $8 + 8 - 1 = 15$</p> <p>Decision making</p> <p>Using statements such as</p> <p>Ben did $14 + 9 = 23$ How could he have done it?</p> <p>To know that the = sign means 'the same as' and can appear in a different place within a calculation; $14 = 8 + 6$, $7+6=8+5$</p>		<div style="text-align: center;">  <p style="color: red; font-size: small;">+2 +2</p> <p style="color: red; font-size: small;">0 2 4</p> <p style="color: red; font-size: x-small;"><i>Children to show notation</i></p> </div> <p>$2 + 2 + 2 =$</p> <div style="text-align: center;">  <p style="color: red; font-size: small;">+2 +2 +2</p> <p style="color: red; font-size: small;">0 2 4 6</p> <p style="color: red; font-size: x-small;"><i>Children to show notation</i></p> </div> <p>$3 \times 2 = 6$</p> <div style="border: 1px solid black; border-radius: 50%; width: 100px; height: 100px; margin: 10px auto; display: flex; align-items: center; justify-content: center; text-align: center;"> <p style="font-size: x-small; margin: 0;">3 multiplied by 2 equals 6. 3 times 2 equals 6</p> </div> <p style="font-size: x-small;">Finding simple fractions of quantities. Finding half of 10 apples.</p> <div style="text-align: center; margin-top: 10px;">  </div>	<p>$20 \div 5 = 4$</p> <div style="text-align: right; margin-right: 20px;">  </div> <p style="font-size: x-small;">"How many groups of 5 are there in 20?"</p>
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In the example above with 5 rows and 9 columns, when you select to count along the columns the given calculation is:
 $5 \times 9 = 45$ [the 5 is multiplied by 9].
Selecting to count along rows gives:
 $9 \times 5 = 45$ [the 9 is multiplied by 5].