

Year 1 Subtraction

National Curriculum objective	Concrete	Pictorial	Abstract
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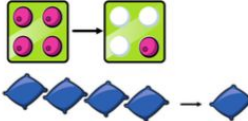
add and subtract one digit and two-digit numbers to 20, including zero

Represent and use number bonds and related subtraction facts within 20

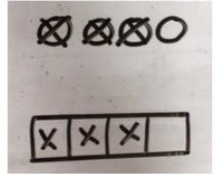
solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as $7 = \square - 9$.

Physically taking away and removing objects from a whole (ten frames, Numicon, cubes and other items such as beanbags could be used).

$4 - 3 = 1$

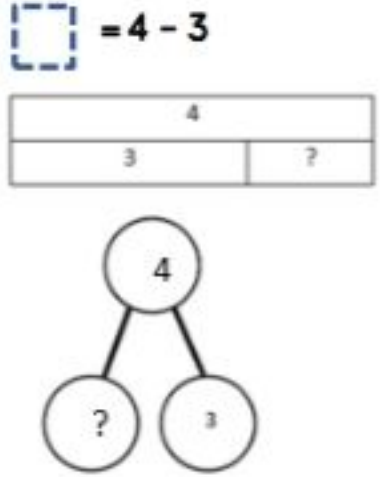


Children to draw the concrete resources they are using and cross out the correct amount. The bar model can also be used.




$4 - 3 =$

$\square = 4 - 3$

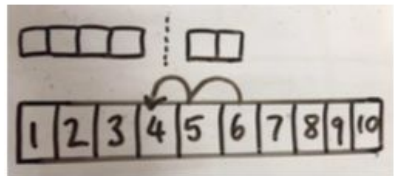


Counting back (using number lines or number tracks) children start with 6 and count back 2.

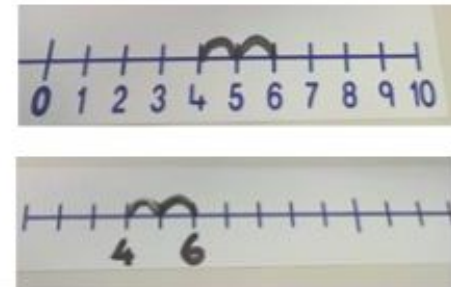
$6 - 2 = 4$

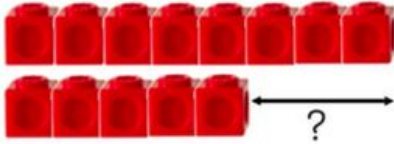
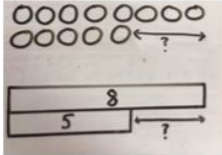

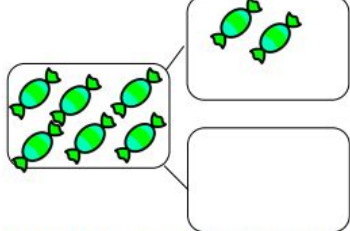
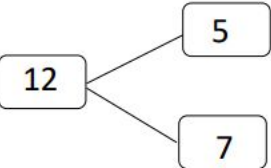



Children to represent what they see pictorially e.g.

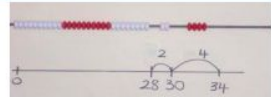
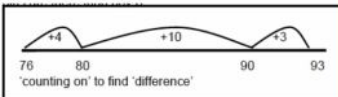


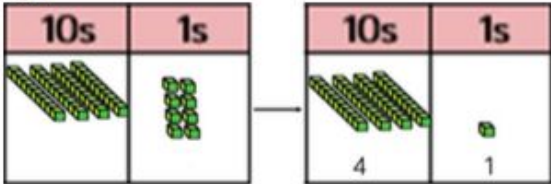
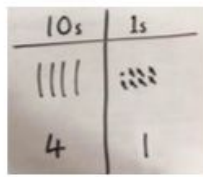
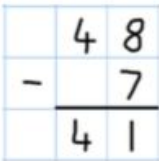
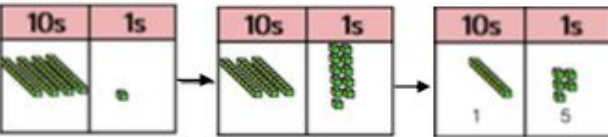
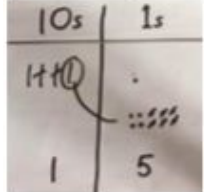
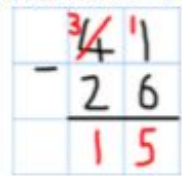
Children to represent the calculation on a number line or number track and show their jumps. Encourage children to use an empty number line



	<p>Finding the difference (using cubes, Numicon or Cuisenaire rods, other objects can also be used).</p> <p>Calculate the difference between 8 and 5.</p> 	<p>Children to draw the cubes/other concrete objects which they have used or use the bar model to illustrate what they need to calculate.</p> 	<p>Find the difference between 8 and 5.</p> <p>8 - 5, the difference is <input type="text"/></p> <p>Children to explore why 9 - 6 = 8 - 5 = 7 - 4 have the same difference.</p>		
	<p>Link to addition. Use PPW model to model the inverse.</p>  <p>If 10 is the whole and 6 is one of the parts, what's the other part?</p> <p>$10 - 6 = 4$</p>	 <p>Use pictorial representations to show the part.</p>	<p>Move to using numbers within the part whole model.</p> 		
			<table border="1" data-bbox="1559 967 1962 1046"> <tr> <td>8</td> <td>2</td> </tr> </table> <p>$10 = 8 + 2$</p> <p>$10 = 2 + 8$</p> <p>$10 - 2 = 8$</p> <p>$10 - 8 = 2$</p>	8	2
8	2				

Year 2 Subtraction (+ refer to previous year group expectations)				
National Curriculum objective	Concrete	Pictorial	Abstract	
<p>using concrete objects and pictorial representations, including those involving numbers, quantities and measures ♣ applying their increasing knowledge of mental and written methods</p> <p>add and subtract numbers using concrete objects, pictorial representations, and mentally, including: ♣ a two-digit number and ones ♣ a two-digit number and tens ♣ two two-digit</p>	<p>48-7</p>	<p>Children to represent the base 10 pictorially.</p>		
				$20 - 4 = 16$
	<p>34-13 = 21</p> <p>Use Dienes to show how to partition the number when subtracting without regrouping.</p>	<p>Children draw representations of Dienes and cross off.</p> <p>43-21 = 22</p>	$43 - 21 = 22$	

numbers ♣ adding three one-digit numbers	 <p>34—28</p> <p>Use a bead bar or bead strings to model counting to next ten and the rest.</p>	 <p>76 80 90 93</p> <p>'counting on' to find 'difference'</p> <p>Use a number line to count on to next ten and then the rest.</p>	$93 - 76 = 17$
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Year 3 Subtraction (+ refer to previous year group expectations)			
National Curriculum objective	Concrete	Pictorial	Abstract
add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction	<p>Column method using base 10.</p> <p>48-7</p> 	<p>Children to represent the base 10 pictorially.</p> 	<p>Column method or children could count back 7.</p> 
	<p>Column method using base 10 and having to exchange.</p> <p>41 - 26</p> 	<p>Represent the base 10 pictorially, remembering to show the exchange.</p> 	<p>Formal column method. Children must understand that when they have exchanged the 10 they still have 41 because $41 = 30 + 11$.</p> 
<p>estimate the answer to a calculation and use inverse operations to check answers</p> <p>solve problems, including missing number</p>			

problems, using number facts, place value, and more complex addition and subtraction.	Column method using place value counters. $234 - 88$ 	Represent the place value counters pictorially; remembering to show what has been exchanged. 	Formal column method. Children must understand what has happened when they have crossed out digits. $\begin{array}{r} 234 \\ - 88 \\ \hline 156 \end{array}$
		$\square = 391 - 186$ $\begin{array}{r} 391 \\ - 186 \\ \hline \end{array}$ What is 186 less than 391?	Missing digit calculations $\begin{array}{r} 39\square \\ - \square\square 6 \\ \hline \square 05 \end{array}$

Year 4 – 6 Subtraction (+ refer to previous year group expectations)			
National Curriculum objective	Concrete	Pictorial	Abstract
Year 4 subtract with up to 4 digits. Introduce decimal subtraction through context of money	$234 - 179$ <p>Model process of exchange using Numicon, base ten and then move to PV counters.</p>	Children to draw pv counters and show their exchange—see Y3	

Year 5 and 6
 Subtract with
 at least 4
 digits,
 including
 money and
 measures.
 Subtract with
 decimal
 values,
 including
 mixtures of
 integers and
 decimals and
 aligning the
 decimal

$$\begin{array}{r} 28'08'6 \\ - 2128 \\ \hline 28,928 \end{array}$$

Use zeros
 for place-
 holders.

$$\begin{array}{r} 67'69'0 \\ - 372'5 \\ \hline 6796'5 \end{array}$$

$$\begin{array}{r} 89'949 \\ - 28'189 \\ \hline 60,750 \end{array}$$

$$\begin{array}{r} 10'5'9 \text{ kg} \\ - 36'08'0 \text{ kg} \\ \hline 69'339 \text{ kg} \end{array}$$