







Addition

Reception			
Early Learning Goals Using quantities and objects, add two single-digit numbers.			
Strategy	Examples/representations		
Counting on (number lines)	Concrete 	Pictorial 	Abstract "1 more than 7 is 8" $7+1=8$
Five and ten frames			$4+1=5$
Adding 2 numbers together			$8+1=9$

Year 1

National Curriculum Objectives

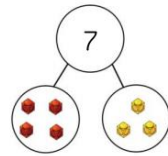
Add 1- and 2-digit numbers to 20, including 0.

Strategy

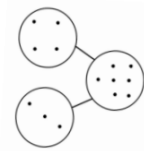
Examples/representations

Part-part whole

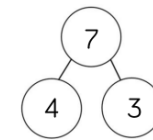
Concrete



Pictorial



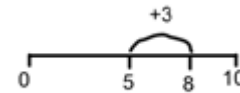
Abstract



$$7 = 4 + 3$$

$$7 = 3 + 4$$

Counting on (number lines)



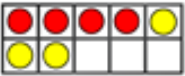
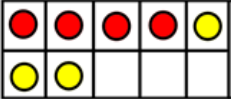



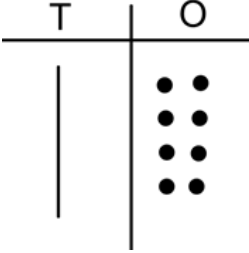


$$5 + 3 = 8$$

Number Shapes (Numicon)



$$7 = 3 + 4$$

Cubes			$7 = 4 + 3$ $7 = 3 + 4$
Ten Frames			$4 + 3 = 7$ $3 + 4 = 7$
Grouping by 10			$7 + 6 = 10 + 3 = 13$
Base 10			$14 + 4 = 18$

National Curriculum Objectives

Add 2 digit numbers and ones.

Add 2 digit number and tens.

Add two 2 digit numbers.

Add three 1 digit numbers.

Strategy

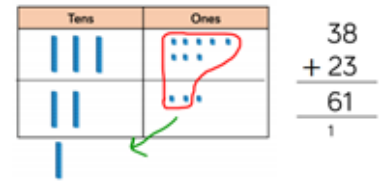
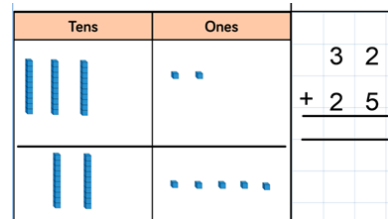
Counting on (using number line)

Column method (base ten)

Column method with regrouping (base 10)

Examples/representations

Concrete



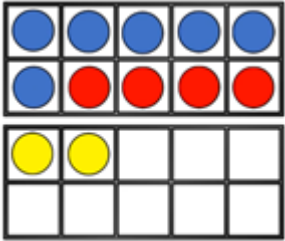
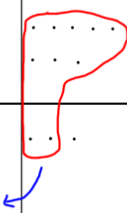
Pictorial

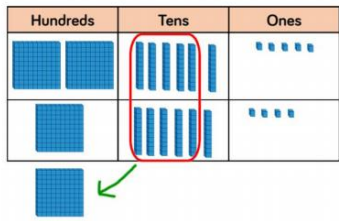
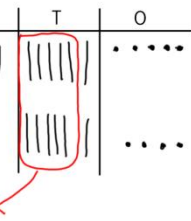


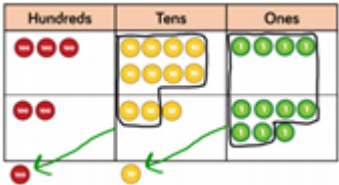
Abstract

$$\begin{array}{r} 21 \\ + 4 \\ \hline \end{array}$$

$$\begin{array}{r} 32 \\ + 25 \\ \hline \end{array}$$

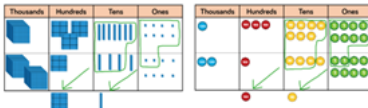
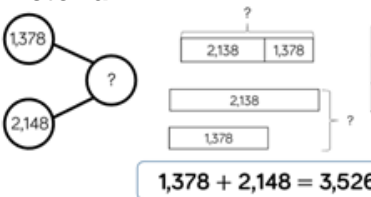
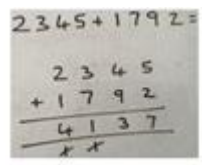
Tens frames		<table border="1" style="margin: auto; border-collapse: collapse;"> <thead> <tr style="background-color: #f2f2f2;"> <th style="padding: 2px;">Tens</th> <th style="padding: 2px;">Ones</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">. . . .</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">. . . .</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">. . . .</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">. . . .</td> </tr> </tbody> </table> <p style="text-align: center; margin-top: 5px;">  </p>	Tens	Ones		<table style="margin: auto; border-collapse: collapse;"> <tr> <td style="text-align: right; padding-right: 10px;">38</td> <td style="text-align: right; padding-right: 10px;">38</td> </tr> <tr> <td style="text-align: right; padding-right: 10px;">+ 23</td> <td style="text-align: right; padding-right: 10px;">+ 23</td> </tr> <tr> <td style="border-top: 1px solid black; border-bottom: 1px solid black; width: 20px;"></td> <td style="border-top: 1px solid black; border-bottom: 1px solid black; width: 20px;"></td> </tr> </table> <p style="text-align: right; margin-top: 20px; font-size: 1.2em;">6 + 4 + 2 = 12</p>	38	38	+ 23	+ 23		
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Year 3																			
National Curriculum Objectives																			
Add numbers with up to 3 digits, using the formal written method of column addition.																			
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	Concrete 	Pictorial <table style="margin: auto; border-collapse: collapse;"> <thead> <tr> <th style="padding: 2px;">H</th> <th style="padding: 2px;">T</th> <th style="padding: 2px;">O</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">□ □</td> <td style="text-align: center;"> </td> <td style="text-align: center;">. . . .</td> </tr> <tr> <td style="text-align: center;">□</td> <td style="text-align: center;"> </td> <td style="text-align: center;">. . . .</td> </tr> <tr> <td style="text-align: center;">□</td> <td style="text-align: center;"> </td> <td style="text-align: center;">. . . .</td> </tr> </tbody> </table> <p style="text-align: center; margin-top: 5px;">  </p>	H	T	O	□ □		□		□		Abstract <table style="margin: auto; border-collapse: collapse;"> <tr> <td style="text-align: right; padding-right: 10px;">265</td> </tr> <tr> <td style="text-align: right; padding-right: 10px;">+ 164</td> </tr> <tr> <td style="border-top: 1px solid black; text-align: right; padding-right: 10px;">429</td> </tr> <tr> <td style="border-top: 1px solid black; text-align: right; padding-right: 10px;">1</td> </tr> </table>	265	+ 164	429	1
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<p>Column addition - formal written method (place value counters and base ten)</p>			
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Year 4

National Curriculum Objectives
Add numbers with up to 4 digits, using the formal written method of column addition.

<p>Strategy</p> <p>Column addition - formal written method (place value counters and base ten)</p>	<p>Examples/representations</p>		
	<p>Concrete</p> 	<p>Pictorial</p> 	<p>Abstract</p> 

Year 5

National Curriculum Objectives
Add whole numbers with more than 4 digits, using the formal written method of column addition.

<p>Strategy</p>	<p>Examples/representations</p>		
	<p>Concrete</p>	<p>Pictorial</p>	<p>Abstract</p>

<p>Column addition - formal written method (place value counters)</p>	<p>Place Value Grid</p> <table border="1"> <thead> <tr> <th>TTh</th> <th>Th</th> <th>H</th> <th>T</th> <th>O</th> </tr> </thead> <tbody> <tr> <td>10000</td> <td>1000 1000 1000 1000 1000 1000</td> <td>100</td> <td>10 10</td> <td>1</td> </tr> <tr> <td>10000</td> <td>1000 1000 1000 1000</td> <td>100</td> <td>10</td> <td>1 1</td> </tr> <tr> <td>10000 10000</td> <td>1000</td> <td>100 100</td> <td>10 10 10</td> <td>1 1 1</td> </tr> </tbody> </table>	TTh	Th	H	T	O	10000	1000 1000 1000 1000 1000 1000	100	10 10	1	10000	1000 1000 1000 1000	100	10	1 1	10000 10000	1000	100 100	10 10 10	1 1 1	<p>Place Value Grid</p> <table border="1"> <thead> <tr> <th>TTh</th> <th>Th</th> <th>H</th> <th>T</th> <th>O</th> </tr> </thead> <tbody> <tr> <td>○</td> <td>○ ○ ○ ○ ○ ○</td> <td>○</td> <td>○ ○</td> <td>○</td> </tr> <tr> <td>○</td> <td>○ ○ ○ ○</td> <td>○</td> <td>○</td> <td>○ ○</td> </tr> <tr> <td>○</td> <td>○ ○</td> <td>○ ○</td> <td>○ ○</td> <td>○ ○</td> </tr> <tr> <td>○ ○</td> <td>○</td> <td>○ ○</td> <td>○ ○</td> <td>○ ○</td> </tr> </tbody> </table>	TTh	Th	H	T	O	○	○ ○ ○ ○ ○ ○	○	○ ○	○	○	○ ○ ○ ○	○	○	○ ○	○	○ ○	○ ○	○ ○	○ ○	○ ○	○	○ ○	○ ○	○ ○	$ \begin{array}{r} 16121 \\ + 15112 \\ \hline 21233 \\ \hline 1 \end{array} $
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Year 6			
National Curriculum Objectives			
Add whole numbers with more than 4 digits, using the formal written method of column addition.			
Strategy	Examples/representations		
	Concrete	Pictorial	Abstract
Column addition - formal written method			

$$\begin{array}{r}
 23.361 \\
 9.08 \\
 59.77 \\
 + 1.3 \\
 \hline
 93.511 \\
 \begin{array}{l}
 2 \quad 1 \quad 2
 \end{array}
 \end{array}$$

$$\begin{array}{r}
 81,059 \\
 3,668 \\
 15,301 \\
 + 20,551 \\
 \hline
 120,579 \\
 \begin{array}{l}
 1 \quad 1 \quad 1 \quad 1
 \end{array}
 \end{array}$$