

**Unit 10**  
**Understanding addition and subtraction and mental calculation strategies**

Five daily lessons

**Merseyside Consultants'**  
**Cluster Group**

**Year 1**  
**Summer term**

**Unit Objectives**

**Year 1**

To add 2 or more numbers

Use number facts to add/subtract a pair of numbers within the range 0 to 20

Add 9 to a single digit number by adding 10 and subtracting 1

Bridge through 20 when adding a single digit number

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This Unit Plan is designed to guide your teaching.

You will need to adapt it to meet the needs of your class.

**Resources needed to teach this unit:**

Class number line  
Whiteboards  
Individual number lines  
100 square (class and individual)  
Number fans  
Coloured pencils

**Link Objectives**

**Reception**

Begin to find how many have been removed from a group of objects by counting up from a number.  
Work out by counting how many more are needed to make a larger number.

**Year 2**

Extend understanding of addition and subtraction.  
Use number facts to add/subtract a pair of numbers in the range 0 to 20.  
Add/subtract 19 or 21 by adding 20 then adjusting.  
Bridge through a multiple of 10 when adding a single digit number.

(Key objectives in bold)



Planning sheet	Day Two	Unit 10 <i>Understanding addition and subtraction and mental calculation strategies</i>	Term: <i>Summer</i>	Year Group: 1
Oral and Mental		Main Teaching		Plenary
Objectives and Vocabulary	Teaching Activities	Objectives and Vocabulary	Teaching Activities	Teaching Activities/ Focus Questions
		<p>Use number facts to add a pair of numbers in the range 0 - 20</p> <p>VOCABULARY How many more is ... than ...? Ten more</p> <p>RESOURCES 100 square - individual/class Number line</p>	<p>Using class number line ask a child to come and demonstrate finding the answer to <math>6 + 3</math>.</p> <p><b>Q</b> If we know <math>6 + 3 = 9</math> what else do we know?</p> <p>Children discuss with partners and teacher takes responses eg</p> <p><math>3 + 6 = 9</math> <math>9 - 3 = 6</math> <math>9 - 6 = 3</math></p> <p>Teacher writes on the board</p> <p><math>6 + 13</math></p> <p><b>Q</b> How could we work this out?</p> <p>Take children's ideas eg 13 count on 6</p> <p><math>6 + 3 + 10</math></p> <p><b>Q</b> What is the answer?</p> <p>Children to use number fans to show answer 19.</p> <p>Write on board</p> <p><math>6 + 3 = 9</math> <math>16 + 3 = 19</math></p> <p><b>Q</b> What do you notice about these calculations?</p> <p>Take children's responses. Explain - using 100 square that 19 is 10 more than 9 and 16 is 10 more than 6. 10 more in the question leads to 10 more in the answer.</p> <p><b>Q</b> If we know <math>2 + 6 = 8</math> then what is <math>12 + 6 = ?</math></p> <p>Show this on a 100 square.</p> <p>Activities. Give children addition fact to 10 on a card eg <math>4 + 3 = 7</math>. Children to work out other addition calculations from this known fact based on 10 more.</p>	<p>Write on board</p> <p><math>6 + 3 = 9</math> <math>16 + 3 = 19</math> <math>26 + 3 = ?</math></p> <p>Children to talk to partners to find solution.</p> <p>Take responses and show on number square. So if we know</p> <p><math>6 + 3 = 9</math> <math>16 + 3 = 19</math> <math>26 + 3 = 29</math> <math>? + 3 = 39</math></p> <p><b>Q</b> What goes in the box?</p> <p><b>Q</b> Can we use this to find any more calculations?</p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p><b>By the end of the lesson children should be able to:</b></p> <p><b>Use known number facts to find an unknown number</b></p> <p>(Refer to supplement of examples, section 5, page 37)</p> </div>

Planning sheet	Day Three	Unit 10 <i>Understanding addition and subtraction and mental calculation strategies</i>	Term: <i>Summer</i>	Year Group: 1
<b>Oral and Mental</b>		<b>Main Teaching</b>		<b>Plenary</b>
<b>Objectives and Vocabulary</b>	<b>Teaching Activities</b>	<b>Objectives and Vocabulary</b>	<b>Teaching Activities</b>	<b>Teaching Activities/ Focus Questions</b>
		<p>Use number facts to add/subtract a pair of numbers within the range 0 to 20.</p> <p>VOCABULARY</p> <p>RESOURCES 100 square Number fans</p>	<p>Remind children of the work they did yesterday</p> <p><math>6 + 3 = 9</math></p> <p><b>Q</b> What is <math>16 + 3</math>? Children to show answers using number fans.</p> <p>Teacher to write calculation</p> <p><math>16 + 3 = 19</math></p> <p><b>Q</b> What is <math>6 - 3</math>? Children to show answers using number fans.</p> <p>Write <math>6 - 3 = 3</math></p> <p><b>Q</b> What is <math>16 - 3</math>? Children to talk to partners and show answer on number fans. Show solution using number square.</p> <p><b>Q</b> What is <math>9 - 4</math>? Children respond quickly showing answers on number fans.</p> <p>If we know <math>9 - 4 = 5</math></p> <p><b>Q</b> What is <math>19 - 4</math>? Again children discuss with partners and show answers. Demonstrates solution using number square.</p> <p>Give children subtraction fact cards up to 10 eg <math>9 - 1</math>, <math>7 - 3</math>. Children to work out other subtraction calculations from this known fact based on 10 more.</p>	<p>Teacher writes on board</p> <p><math>7 - 2 = 5</math> <math>17 - 2 = 15</math> <math>27 - 2 = ?</math></p> <p>Children to talk to partners and find solution - take responses and show on number square. So if we know</p> <p><math>7 - 2 = 5</math> <math>17 - 2 = 15</math> <math>27 - 2 = 25</math> <math>? - 2 = 35</math></p> <p><b>Q</b> What goes in the box? Can we use this to find any more calculations.</p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p><b>By the end of the lesson children should be able to:</b></p> <p><b>Use known number facts to work out the value of an unknown number.</b></p> <p>(Refer to supplement of examples, section 5, page 37)</p> </div>





Planning sheet	Day Five (Cont'd)	Unit 10 <i>Understanding addition and subtraction and mental calculation strategies</i>	Term: <i>Summer</i>	Year Group: 1
<b>Oral and Mental</b>		<b>Main Teaching</b>		<b>Plenary</b>
Objectives and Vocabulary	Teaching Activities	Objectives and Vocabulary	Teaching Activities	Teaching Activities/ Focus Questions
			<p>and show on number line</p> $  \begin{array}{ccccccc}  & & +5 & & +2 & & \\  & & \underbrace{\hspace{1.5em}} & & \underbrace{\hspace{1.5em}} & & \\  15 & & 20 & & 22 & &   \end{array}  $ <p>Activities. Children work on either bridging through 10/20, depending on ability, adding single digit number, using either partitioning or number line.</p>	