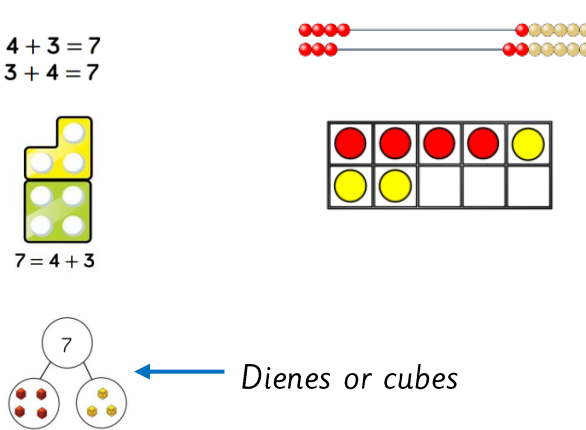
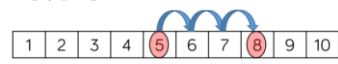
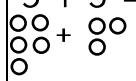
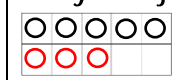
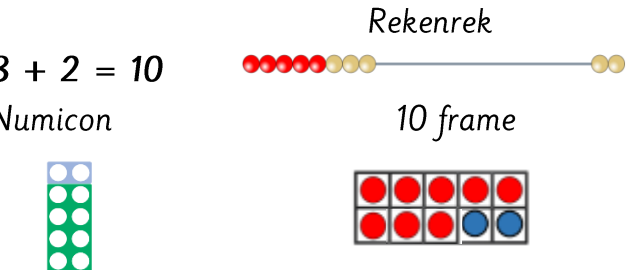

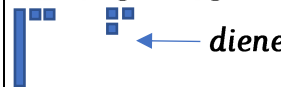
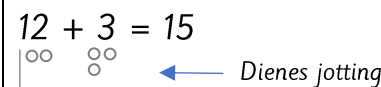
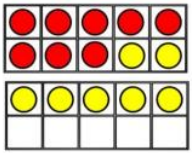
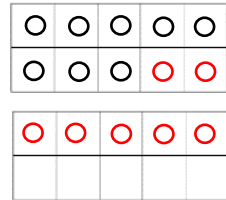




YEAR 1	Addition	
<b>Vocabulary:</b> Addition, add, plus, forwards, put together, make, more than, total, altogether, equals, same as, greater than, most, pattern, odd, even, digit, counting on, part, whole, number bond, numeral, number, commutativity, inverse, systematic.		
Concrete	Pictorial	Abstract
<p><b>Add numbers within 10</b></p> <p><math>4 + 3 = 7</math> <math>3 + 4 = 7</math></p> <p></p> <p>Dienes or cubes</p>	<p><b>Add numbers within 10</b></p> <p><b>Numeral track (counting on):</b></p> <p><math>5 + 3 = 8</math></p> <p></p> <p><b>Dienes jottings (preferred method):</b></p> <p><math>5 + 3 = 8</math></p> <p></p> <p><b>Including the part whole model</b></p> <p><b>Ten frame jottings preferred method</b></p> <p></p>	<p>Mental facts to 10</p> <p><b>Number facts</b></p> <p>Recall and use addition facts to 10 fluently</p> <p>the total of 6 and 3    6 plus 2    4 more than 5</p> <p><b>Near doubles:</b></p> <p>Instantly recall doubles to 10 and use this to calculate near doubles.</p> <p><math>4 + 5 = 4 + 4 + 1</math>    OR <math>4 + 5 = 5 + 5 - 1</math></p> <p><b>One and two more:</b></p> <p>Of numbers up to 10.</p> <p><math>8 + 1 = 9</math> (consecutive numbers) <math>5 + 2 = 7</math> (Consecutive odd or even numbers) <math>4 + 2 = 6</math></p>
<p><b>Number bonds to 10:</b></p> <p><math>8 + 2 = 10</math></p> <p>Numicon</p> <p></p> <p>Rekenrek</p> <p>10 frame</p>	<p><b>Number bonds to 10:</b></p> <p><math>8 + 2 = 10</math></p> <p></p>	<p><b>Instant recall of facts</b></p> <p><b>Number bonds to 10:</b></p> <p><math>0 + 10 = 10</math> <math>1 + 9 = 10</math> <math>2 + 8 = 10</math> <math>3 + 7 = 10</math> <math>4 + 6 = 10</math> <math>5 + 5 = 10</math> <math>6 + 4 = 10</math> <math>7 + 3 = 10</math> <math>8 + 2 = 10</math> <math>9 + 1 = 10</math> <math>10 + 0 = 10</math></p>

<p><b>Add numbers within 20:</b></p> <p><math>12 + 3 = 15</math></p> 	<p><b>Add numbers within 20 including number bonds to 20:</b></p> <p><math>12 + 3 = 15</math></p> 	<p>Mental facts to 20</p> <p><b>Partitioning (bridging through 10):</b></p> <p><math>5 + 7</math>  <math>5 + 5 + 2</math> (partition 7 into 5 and 2) OR  <math>7 + 3 + 2</math> (partition 5 into 3 and 2)</p> <p><b>Using known facts and place value</b></p> <p><math>15 + 4</math>  <math>5 + 4 = 9</math> so <math>15 + 4 = 19</math></p>
<p><b>Crossing ten</b></p> <p><math>8 + 7 = 15</math></p> 		<p><b>Number facts</b></p> <p>Know number pairs with a total of 20</p> <p><math>16 + \square = 20</math>      <math>20 = 3 + \square</math></p>
<p><b>Counting on:</b></p> <p><b>Cubes</b></p> <p><math>8 + 7 = 15</math></p> 		<p><b>One and two more:</b></p> <p>Of numbers up to 20.</p> <p><math>18 + 1 = 19</math> (consecutive numbers)  <math>15 + 2 = 17</math> (Consecutive odd or even numbers)  <math>14 + 2 = 16</math></p> <p><b>Instant recall of facts:</b></p> <p><b>Number bonds to 20</b></p>
<p><b>Number bonds to 20:</b></p> <p><math>16 + 4 = 20</math>  <math>4 + 16 = 20</math></p> <p><b>Rekenrek (beginning systematically moving one each time)</b></p> 		<p><b>Redistribution:</b></p> <p><math>12 + 5</math> redistributes to <math>10 + 7</math>.</p> <p><b>Commutativity and Inverse</b></p> <p><math>16 + 4 = 20</math>      <math>20 - 16 = 4</math>  <math>4 + 16 = 20</math>      <math>20 - 4 = 16</math></p> <p><b>Missing Number/Inverse</b></p> <p><math>\square - 5 = 12</math>      <math>12 - \square = 4</math></p>