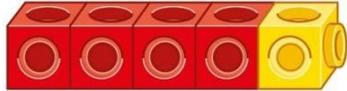
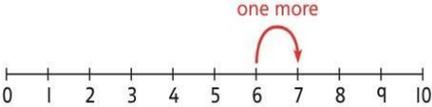
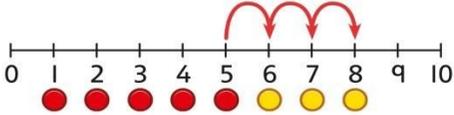
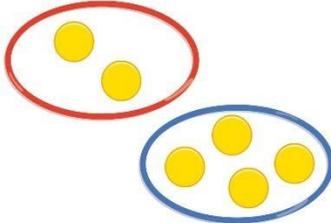
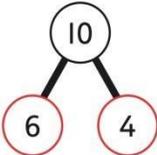




Ottery St Mary Primary School  
Year 1 Calculation Policy



Year 1 Calculation Policy

	Concrete	Pictorial	Abstract
<b>Year 1 Addition</b>	<b>Counting and adding more</b> Children add one more person or object to a group to find one more.	<b>Counting and adding more</b> Children add one more cube or counter to a group to represent one more.   <i>One more than 4 is 5.</i>	<b>Counting and adding more</b> Use a number line to understand how to link counting on with finding one more.   <i>One more than 6 is 7. 7 is one more than 6.</i>  Learn to link counting on with adding more than one.  $5 + 3 = 8$
	<b>Understanding part-part-whole relationship</b> Sort people and objects into parts and understand the relationship with the whole.	<b>Understanding part-part-whole relationship</b> Children draw to represent the parts and understand the relationship with the whole. 	<b>Understanding part-part-whole relationship</b> Use a part-whole model to represent the numbers.  $6 + 4 = 10$



The parts are 1 and 5. The whole is 6.

$$+ 4 = 10$$

The parts are 2 and 4. The whole is 6.

**Knowing and finding number bonds within 10**  
Break apart a group and put back together to find and form number bonds.

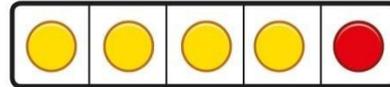


$$3 + 4 = 7$$

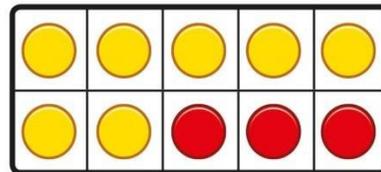


$$6 = 2 + 4$$

**Knowing and finding number bonds within 10**  
Use five and ten frames to represent key number bonds.



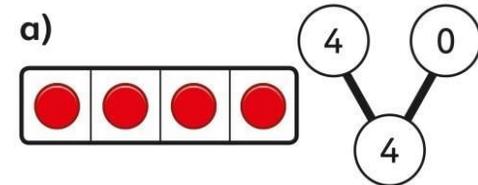
$$5 = 4 + 1$$



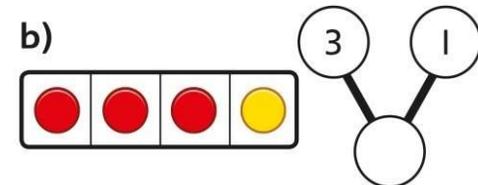
$$10 = 7 + 3$$

**Knowing and finding number bonds within 10**  
Use a part-whole model alongside other representations to find number bonds. Make sure to include examples where one of the parts is zero.

a)

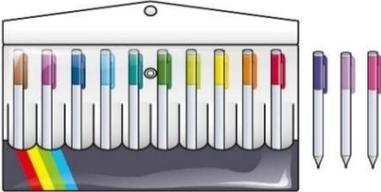
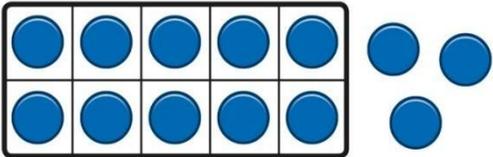
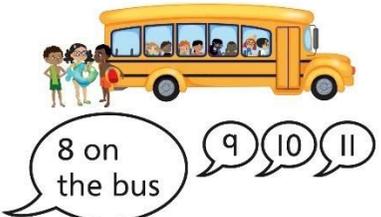
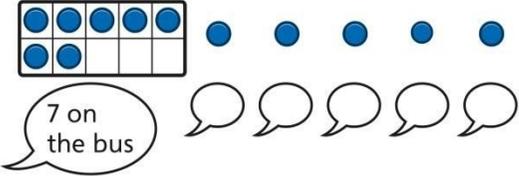
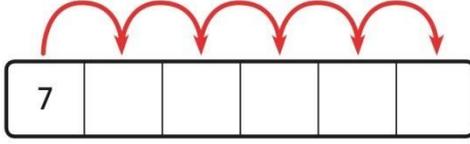
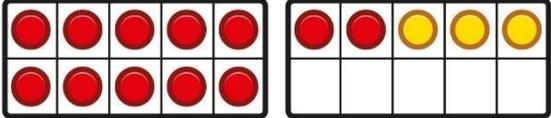


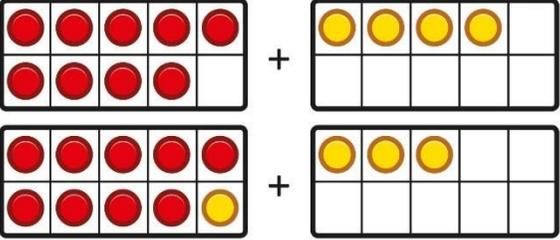
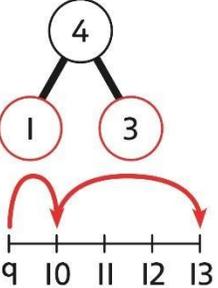
b)

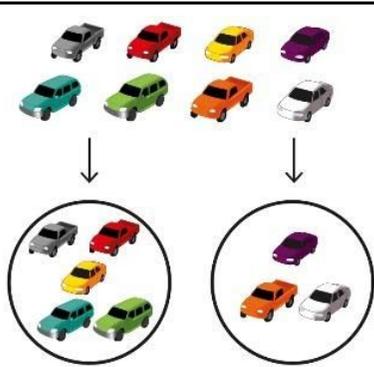


$$4 + 0 = 4$$

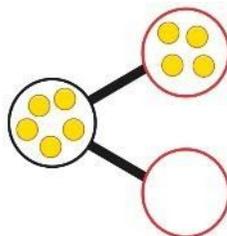
$$3 + 1 = 4$$

	<p><b>Understanding teen numbers as a complete 10 and some more</b> Complete a group of 10 objects and count more.</p>  <p><i>13 is 10 and 3 more.</i></p>	<p><b>Understanding teen numbers as a complete 10 and some more</b> Use a ten frame to support understanding of a complete 10 for teen numbers.</p>  <p><i>13 is 10 and 3 more.</i></p>	<p><b>Understanding teen numbers as a complete 10 and some more.</b></p> <p><i>1 ten and 3 ones equal 13.</i> <math>10 + 3 = 13</math></p>
	<p><b>Adding by counting on</b> Children use knowledge of counting to 20 to find a total by counting on using people or objects.</p> 	<p><b>Adding by counting on</b> Children use counters to support and represent their counting on strategy.</p> 	<p><b>Adding by counting on</b> Children use number lines or number tracks to support their counting on strategy.</p>  <p><math>7 + 5 = \square</math></p>
	<p><b>Adding the 1s</b> Children use bead strings to recognise how to add the 1s to find the total efficiently.</p>  <p><math>2 + 3 = 5</math> <math>12 + 3 = 15</math></p>	<p><b>Adding the 1s</b> Children represent calculations using ten frames to add a teen and 1s.</p>  <p><math>2 + 3 = 5</math></p>	<p><b>Adding the 1s</b> Children recognise that a teen is made from a 10 and some 1s and use their knowledge of addition within 10 to work efficiently.</p> <p><math>3 + 5 = 8</math> So, <math>13 + 5 = 18</math></p>

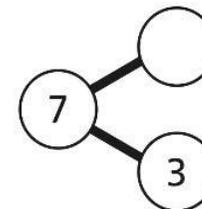
	<p><b>Bridging the 10 using number bonds</b> Children use a bead string to complete a 10 and understand how this relates to the addition.</p>  <p><i>7 add 3 makes 10. So, 7 add 5 is 10 and 2 more.</i></p>	<p><math>12 + 3 = 15</math></p> <p><b>Bridging the 10 using number bonds</b> Children use counters to complete a ten frame and understand how they can add using knowledge of number bonds to 10.</p> 	<p><b>Bridging the 10 using number bonds</b> Use a part-whole model and a number line to support the calculation.</p>  <p><math>9 + 4 = 13</math></p>
<p><b>Year 1 Subtraction</b></p>	<p><b>Counting back and taking away</b> Children arrange objects and remove to find how many are left.</p>  <p><i>1 less than 6 is 5. 6 subtract 1 is 5.</i></p>	<p><b>Counting back and taking away</b> Children draw and cross out or use counters to represent objects from a problem.</p>   <p><math>9 - \square = \square</math> There are <input type="text"/> children left.</p>	<p><b>Counting back and taking away</b> Children count back to take away and use a number line or number track to support the method.</p>  <p><math>9 - 3 = 6</math></p>
	<p><b>Finding a missing part, given a whole and a part</b> Children separate a whole into parts and understand how one part can be found by subtraction.</p>	<p><b>Finding a missing part, given a whole and a part</b> Children represent a whole and a part and understand how to find the missing part by subtraction.</p>	<p><b>Finding a missing part, given a whole and a part</b> Children use a part-whole model to support the subtraction to find a missing part.</p>



$$8 - 5 = ?$$



$$5 - 4 = \square$$



$$7 - 3 = ?$$

Children develop an understanding of the relationship between addition and subtraction facts in a part-whole model.

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<input type="text"/>	+	<input type="text"/>	=	<input type="text"/>
<input type="text"/>	-	<input type="text"/>	=	<input type="text"/>
<input type="text"/>	-	<input type="text"/>	=	<input type="text"/>

**Finding the difference**

Arrange two groups so that the difference between the groups can be worked out.



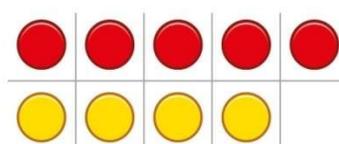
8 is 2 more than 6.

6 is 2 less than 8.

The difference between 8 and 6 is 2.

**Finding the difference**

Represent objects using sketches or counters to support finding the difference.

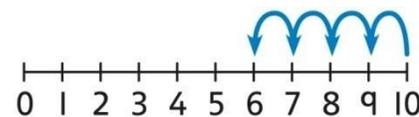


$$5 - 4 = 1$$

The difference between 5 and 4 is 1.

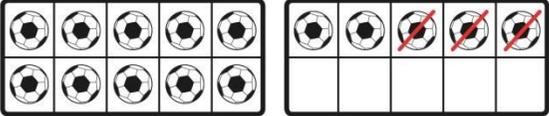
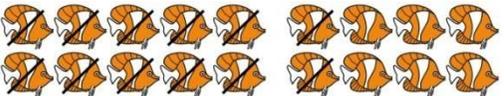
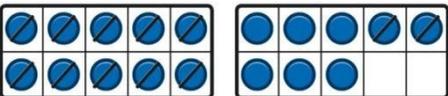
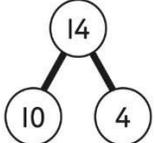
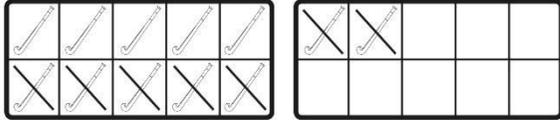
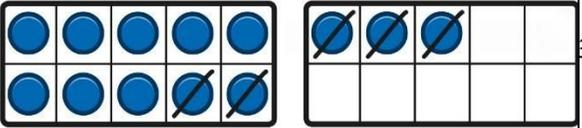
**Finding the difference**

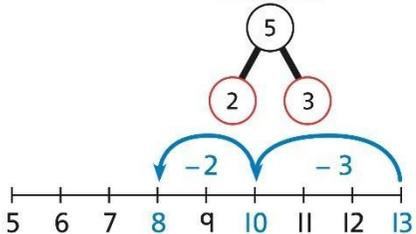
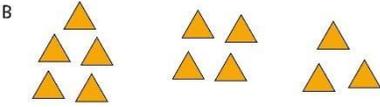
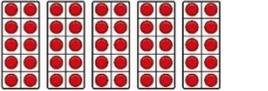
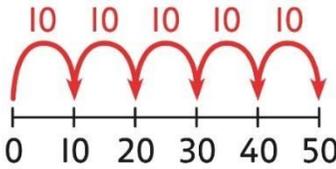
Children understand 'find the difference' as subtraction.



$$10 - 4 = 6$$

The difference between 10 and 6 is 4.

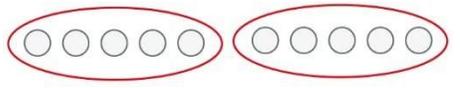
	<p><b>Subtraction within 20</b> Understand when and how to subtract 1s efficiently.</p> <p>Use a bead string to subtract 1s efficiently.</p>  $5 - 3 = 2$ $15 - 3 = 12$	<p><b>Subtraction within 20</b> Understand when and how to subtract 1s efficiently.</p>  $5 - 3 = 2$ $15 - 3 = 12$	<p><b>Subtraction within 20</b> Understand how to use knowledge of bonds within 10 to subtract efficiently.</p> $5 - 3 = 2$ $15 - 3 = 12$
	<p><b>Subtracting 10s and 1s</b> For example: <math>18 - 12</math></p> <p>Subtract 12 by first subtracting the 10, then the remaining 2.</p>  <p><i>First subtract the 10, then take away 2.</i></p>	<p><b>Subtracting 10s and 1s</b> For example: <math>18 - 12</math></p> <p>Use ten frames to represent the efficient method of subtracting 12.</p>  <p><i>First subtract the 10, then subtract 2.</i></p>	<p><b>Subtracting 10s and 1s</b> Use a part-whole model to support the calculation.</p>  $19 - 14$ $19 - 10 = 9$ $9 - 4 = 5$ <p>So, <math>19 - 14 = 5</math></p>
	<p><b>Subtraction bridging 10 using number bonds</b> For example: <math>12 - 7</math></p> <p>Arrange objects into a 10 and some 1s, then decide on how to split the 7 into parts.</p> 	<p><b>Subtraction bridging 10 using number bonds</b> Represent the use of bonds using ten frames.</p>  <p><i>For <math>13 - 5</math>, I take away 3 to make 10, then take away 2 to make 8.</i></p>	<p><b>Subtraction bridging 10 using number bonds</b> Use a number line and a part-whole model to support the method.</p> $13 - 5$

	<p>7 is 2 and 5, so I take away the 2 and then the 5.</p>																																																				
<p><b>Year 1 Multiplication</b></p>	<p><b>Recognising and making equal groups</b> Children arrange objects in equal and unequal groups and understand how to recognise whether they are equal.</p> <p>A  B  C </p>	<p><b>Recognising and making equal groups</b> Children draw and represent equal and unequal groups.</p> <p>A  B </p>	<p><b>Describe equal groups using words</b></p> <p>Three equal groups of 4. Four equal groups of 3.</p>																																																		
	<p><b>Finding the total of equal groups by counting in 2s, 5s and 10s</b></p>  <p>There are 5 pens in each pack ... 5...10...15...20...25...30...35...40...</p>	<p><b>Finding the total of equal groups by counting in 2s, 5s and 10s</b> 100 squares and ten frames support counting in 2s, 5s and 10s.</p>  <table border="1" data-bbox="943 1046 1211 1185"> <tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>10</td></tr> <tr><td>11</td><td>12</td><td>13</td><td>14</td><td>15</td><td>16</td><td>17</td><td>18</td><td>19</td><td>20</td></tr> <tr><td>21</td><td>22</td><td>23</td><td>24</td><td>25</td><td>26</td><td>27</td><td>28</td><td>29</td><td>30</td></tr> <tr><td>31</td><td>32</td><td>33</td><td>34</td><td>35</td><td>36</td><td>37</td><td>38</td><td>39</td><td>40</td></tr> <tr><td>41</td><td>42</td><td>43</td><td>44</td><td>45</td><td>46</td><td>47</td><td>48</td><td>49</td><td>50</td></tr> </table>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	<p><b>Finding the total of equal groups by counting in 2s, 5s and 10s</b> Use a number line to support repeated addition through counting in 2s, 5s and 10s.</p> 
1	2	3	4	5	6	7	8	9	10																																												
11	12	13	14	15	16	17	18	19	20																																												
21	22	23	24	25	26	27	28	29	30																																												
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41	42	43	44	45	46	47	48	49	50																																												
<p><b>Year 1 Division</b></p>	<p><b>Grouping</b> Learn to make equal groups from a whole and find how many equal groups of a certain size can be made.</p>	<p><b>Grouping</b> Represent a whole and work out how many equal groups.</p>	<p><b>Grouping</b> Children may relate this to counting back in steps of 2, 5 or 10.</p>																																																		

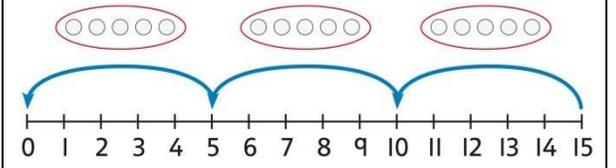
Sort a whole set people and objects into equal groups.



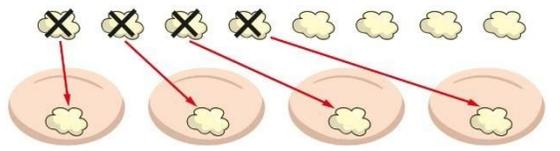
*There are 10 children altogether.  
There are 2 in each group.  
There are 5 groups.*



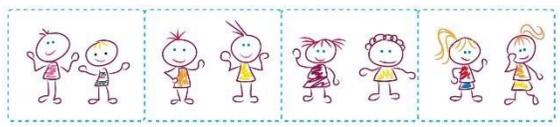
*There are 10 in total.  
There are 5 in each group.  
There are 2 groups.*



**Sharing**  
Share a set of objects into equal parts and work out how many are in each part.



**Sharing**  
Sketch or draw to represent sharing into equal parts. This may be related to fractions.



**Sharing**  
*10 shared into 2 equal groups gives 5 in each group.*