

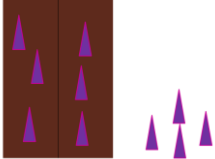
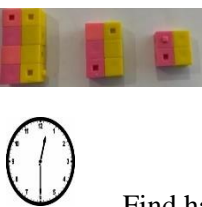

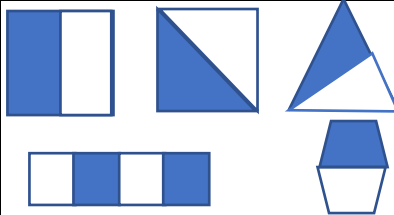
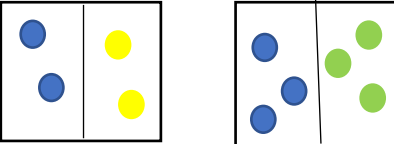

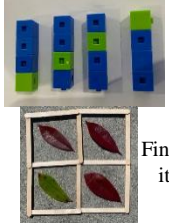


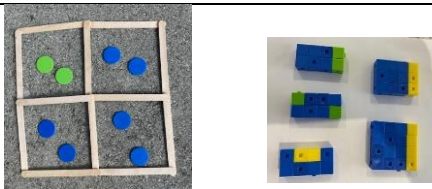
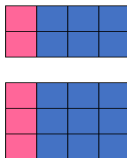
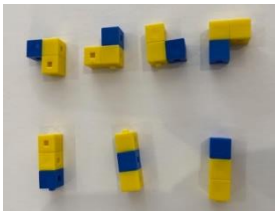


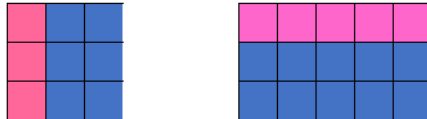

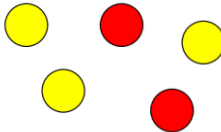




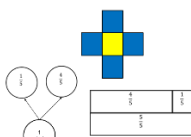
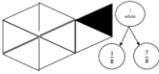


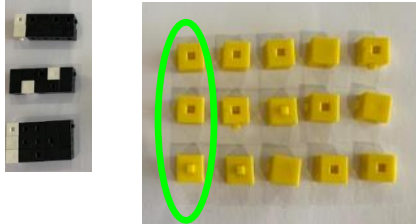
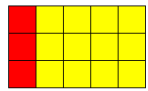





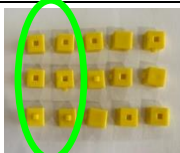
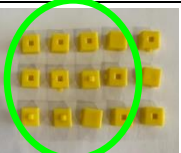
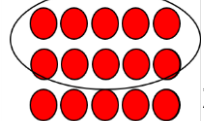

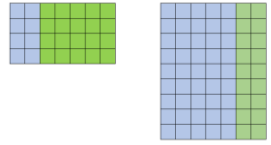
Highfield Primary School

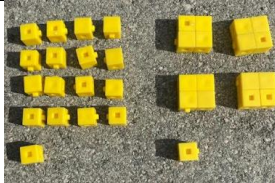





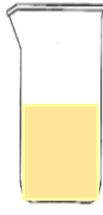
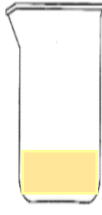
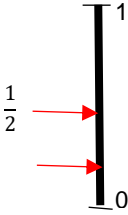
Fractions Policy


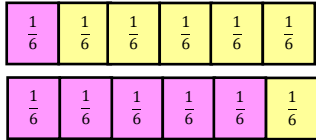
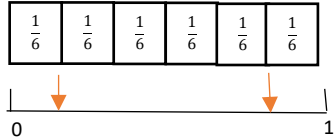

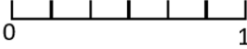
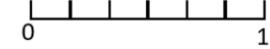
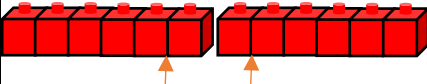
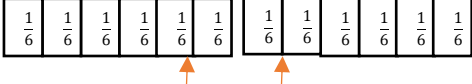
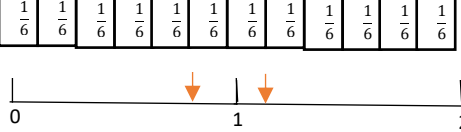

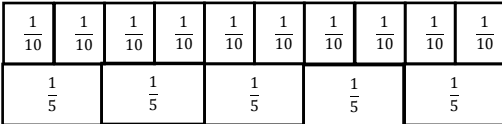
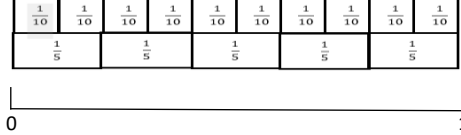

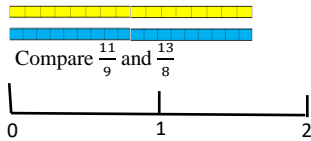
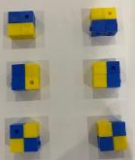




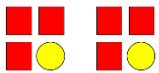
L Talbot
July 2020

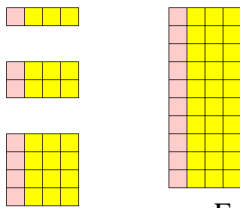
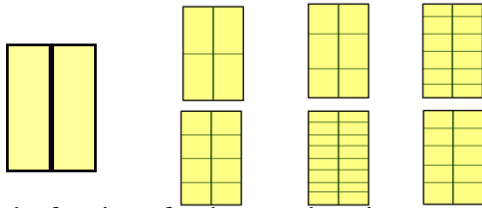
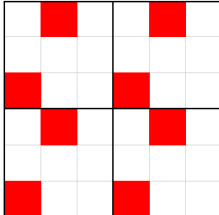
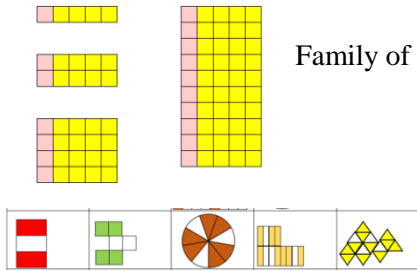


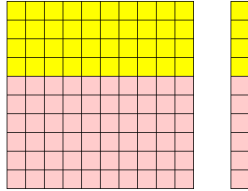
	Concrete	Pictorial	Abstract
EYFS			
To solve problems including halves	  <p>Halves of fruit or drinks and other common items</p>	 <p>Half and share images E.g. put half of the purple spikes on the Gruffalo</p>	
Key Stage 1			
To find $\frac{1}{2}$ of a shape	  <p>Find half using cubes or everyday items</p>	 <p>Find half of variety shapes in different ways</p>	
To find $\frac{1}{2}$ of a number	 <p>Find half using cubes or counters</p>	 <p>Find half using cubes or counters</p>	$\frac{1}{2}$ of 8 = 4 $\frac{1}{2}$ of 10 = 5
To find $\frac{1}{4}$ of a shape To find $\frac{3}{4}$ of a shape	  <p>Find quarter using cubes or everyday items and show in different ways</p>	 <p>Find quarter using pictures and show in different ways</p>	

<p>To find $\frac{1}{4}$ of a number</p> <p>To find $\frac{3}{4}$ of a number</p>	 <p>Find quarter using cubes or everyday items and show in different ways</p>	 <p>Find quarter using pictures and show in different ways</p>	<p>$\frac{1}{4}$ of 8 = 2</p> <p>$\frac{1}{4}$ of 12 = 3</p> <p>Find quarter using abstract form</p>						
<p>To find $\frac{1}{3}$ of a shape</p>	 <p>Find third using cubes or everyday items and show in different ways</p>	 <p>Find third using pictures and show in different ways</p>							
<p>To find $\frac{1}{3}$ of a number</p>	 <p>Find third using cubes and show in different ways</p>	 <p>Find third using pictures and show in different ways</p>	<p>$\frac{1}{3}$ of 9 = 3</p> <p>$\frac{1}{3}$ of 15 = 5</p> <p>Find third using abstract form</p>						
<p>Key Stage 2</p>									
<p>Recognise, find, and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators</p>	 <p>What fraction are apples? Pears? Limes?</p>	<p>What fraction is red?</p>  <p>What fraction are square? Circles?</p> 	<p>What fraction are multiples of 3?</p> <table><tr><td>27</td><td>13</td><td>23</td></tr><tr><td></td><td>9</td><td>21</td></tr></table>	27	13	23		9	21
27	13	23							
	9	21							

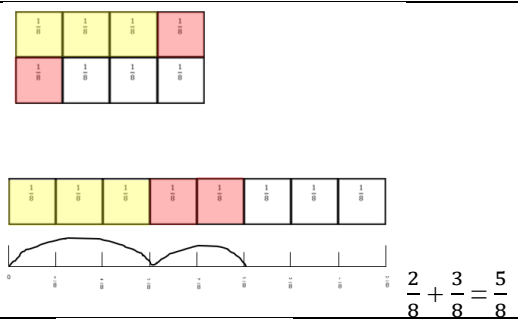
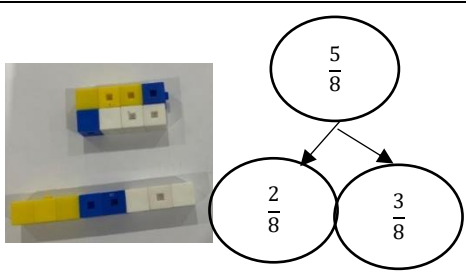
Find unitary fractions of shapes	 	  	
Find unitary fractions using cubes or everyday items and show in different ways	Find unitary fractions using cubes and show in different ways	Find unitary fractions using pictures and show in different ways	
Find unitary fractions of numbers		$\frac{1}{5}$ of 15 	$\frac{1}{5}$ of 25
Find unitary fractions of numbers	Find unitary fractions using cubes	Find unitary fractions using pictures	$\frac{1}{9}$ of 27
Find Non-unitary fractions of shapes	 	  	$\frac{1}{6}$ of 18
Find Non-unitary fractions of shapes	Use part whole models to record what you see	Use part whole models to record what you see	
Find Non-unitary fractions of numbers	 		$\frac{2}{3}$ of 15
Find Non-unitary fractions of numbers	Link the array to a part whole model used folded paper or practical resources	Link the array to a part whole model	$\frac{3}{5}$ of 25
Find increasingly difficult non unitary fractions	Find $\frac{3}{7}$ OF 42 and $\frac{5}{6}$ of 42 Comapre fraction of same number	Find $\frac{2}{7}$ of 28 and $\frac{5}{7}$ of 63 Compare fractions using same denominator	Compare fractions
Find increasingly difficult non unitary fractions			

		<table><tr><td>4</td><td>4</td><td>4</td><td>4</td><td>4</td><td>4</td><td>4</td></tr><tr><td>9</td><td>9</td><td>9</td><td>9</td><td>9</td><td>9</td><td>9</td></tr></table>	4	4	4	4	4	4	4	9	9	9	9	9	9	9	<table><tr><td>$\frac{3}{7}$</td><td>of</td><td>49</td><td><input type="text"/></td><td>$\frac{8}{28}$</td><td>\times</td><td>21</td></tr><tr><td>$\frac{2}{5}$</td><td>of</td><td>45</td><td><input type="text"/></td><td>$\frac{3}{5}$</td><td>\times</td><td>30</td></tr><tr><td>$\frac{3}{8}$</td><td>of</td><td>72</td><td><input type="text"/></td><td>$\frac{18}{24}$</td><td>\times</td><td>32</td></tr><tr><td>$\frac{1}{6}$</td><td>of</td><td>24</td><td><input type="text"/></td><td>$\frac{12}{18}$</td><td>\times</td><td>36</td></tr></table>	$\frac{3}{7}$	of	49	<input type="text"/>	$\frac{8}{28}$	\times	21	$\frac{2}{5}$	of	45	<input type="text"/>	$\frac{3}{5}$	\times	30	$\frac{3}{8}$	of	72	<input type="text"/>	$\frac{18}{24}$	\times	32	$\frac{1}{6}$	of	24	<input type="text"/>	$\frac{12}{18}$	\times	36
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$\frac{3}{7}$	of	49	<input type="text"/>	$\frac{8}{28}$	\times	21																																							
$\frac{2}{5}$	of	45	<input type="text"/>	$\frac{3}{5}$	\times	30																																							
$\frac{3}{8}$	of	72	<input type="text"/>	$\frac{18}{24}$	\times	32																																							
$\frac{1}{6}$	of	24	<input type="text"/>	$\frac{12}{18}$	\times	36																																							
Recognise mixed numbers and improper fractions	<div></div> <div></div> <div>$\frac{17}{4}$</div>	<table><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr></table>																					$\frac{17}{4} = 4\frac{1}{4}$																						
Use common factors to simplify fractions	<div></div> <div></div>	<table><tr><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td></tr></table> <div></div> <table><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>																			$\frac{6}{18}$ Find largest common factor of 6 and simplify to $\frac{1}{3}$																								
Compare and Order fractions																																													
Compare and order unit fractions	<div></div> <div></div>	<div></div> <div></div>	<div></div> <div>Compare $\frac{1}{6}$ and $\frac{5}{6}$</div>																																										

Compare and order fractions of the same denominator	<p>Compare $\frac{1}{6}$ and $\frac{5}{6}$</p> 	<p>Compare $\frac{1}{6}$ and $\frac{5}{6}$</p> 	
		  <p>Show both fractions ($\frac{1}{6}$ and $\frac{5}{6}$) on the number line</p>	
Compare and order fractions of the same denominator	 <p>Compare $\frac{5}{6}$ and $\frac{7}{6}$</p>	 <p>Compare $\frac{5}{6}$ and $\frac{7}{6}$</p>	
Compare and order fractions of the whose denominators are all multiples of the same number			
Compare and order fractions including fractions > 1		<p>Compare $\frac{6}{8}$ and $\frac{7}{9}$</p> 	 <p>Compare $\frac{11}{9}$ and $\frac{13}{8}$</p>
Equivalent Fractions			
Recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$			<p>$\frac{2}{4}$ and $\frac{1}{2}$</p>
Recognise and show, using diagrams, families of common equivalent fractions with small denominators	 	 	

	 <p>Family of $\frac{1}{4}$ and $\frac{3}{4}$</p>	 <p>Find a fraction of a shape and cut into equal groups in different ways</p>	<table><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></tr><tr><td>9</td><td>10</td><td>11</td><td>12</td><td>13</td><td>14</td><td>15</td><td>16</td></tr></table> <p>Use double number line</p>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16																																																
1	2	3	4	5	6	7	8																																																												
9	10	11	12	13	14	15	16																																																												
Recognise and show, using diagrams, families of common equivalent fractions	 $\frac{2}{9} = \frac{4}{18} = \frac{6}{27} = \frac{8}{36}$	 <p>Family of $\frac{1}{5}$ and $\frac{4}{5}$</p> <p>Family of $\frac{2}{3}$ and $\frac{1}{3}$</p>	<table><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></tr><tr><td>9</td><td>10</td><td>11</td><td>12</td><td>13</td><td>14</td><td>15</td><td>16</td></tr><tr><td>17</td><td>18</td><td>19</td><td>20</td><td>21</td><td>22</td><td>23</td><td>24</td></tr><tr><td>25</td><td>26</td><td>27</td><td>28</td><td>29</td><td>30</td><td>31</td><td>32</td></tr><tr><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></tr><tr><td>49</td><td>50</td><td>51</td><td>52</td><td>53</td><td>54</td><td>55</td><td>56</td></tr><tr><td>57</td><td>58</td><td>59</td><td>60</td><td>61</td><td>62</td><td>63</td><td>64</td></tr></table> <p>Use multiplication table</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	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64
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49	50	51	52	53	54	55	56																																																												
57	58	59	60	61	62	63	64																																																												
Identify name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths	 $\frac{12}{36} = \frac{1}{3}$  $\frac{24}{36} = \frac{2}{3}$	 $\frac{40}{100} = \frac{4}{10} = \frac{2}{5}$	<p>Write fractions that are equivalent to $\frac{3}{5}$</p> <table><tr><td>$\frac{30}{50}$</td><td>$\frac{60}{100}$</td><td>$\frac{120}{200}$</td></tr><tr><td>$\frac{15}{25}$</td><td>$\frac{21}{35}$</td><td>$\frac{27}{45}$</td></tr></table>	$\frac{30}{50}$	$\frac{60}{100}$	$\frac{120}{200}$	$\frac{15}{25}$	$\frac{21}{35}$	$\frac{27}{45}$																																																										
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Calculation Addition and Subtraction of fractions																																																																			

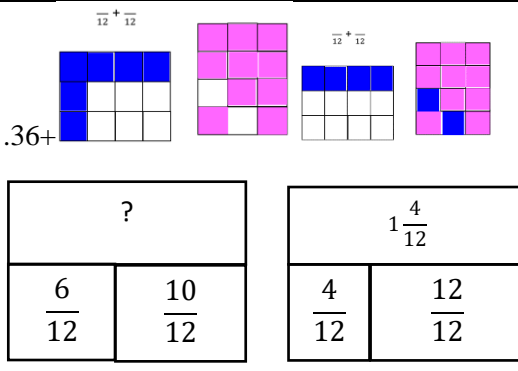
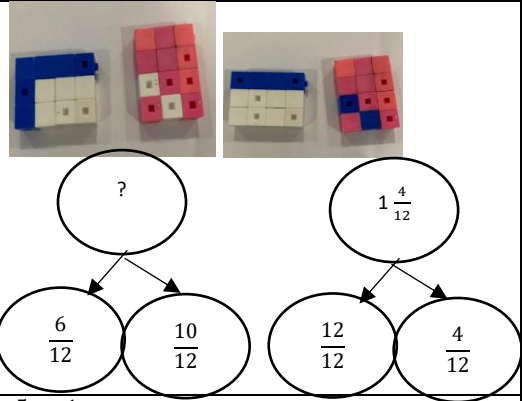
Add and subtract fractions with the same denominator within one whole



$$\frac{2}{8} + \frac{3}{8} = \frac{5}{8}$$

$$\frac{2}{8} + \frac{3}{8} + \frac{3}{8} = \frac{8}{8}$$

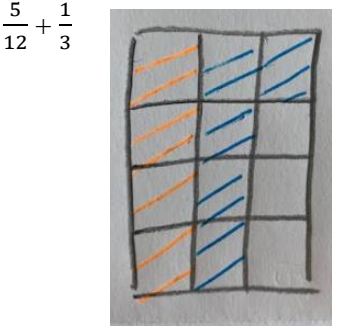
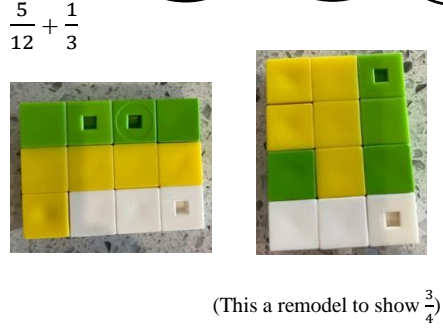
Add and subtract fractions with the same denominator



$$\frac{6}{12} + \frac{10}{12} = 1 \frac{4}{12}$$

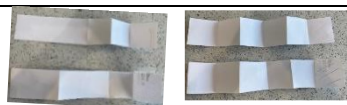
$$1 \frac{4}{12} = 1 \frac{1}{3}$$




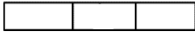

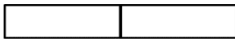
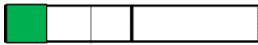
Add and subtract fractions with denominators that are multiples of the same number



$$\frac{5}{12} + \frac{1}{3} = \frac{8}{12} = \frac{2}{3}$$

<p>Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions</p>	<p>$\frac{1}{3} + \frac{1}{4}$</p> <div></div> <p>Find $\frac{1}{3}$</p> <div></div> <p>Find $\frac{1}{4}$ by turning paper</p> <div></div> <p>Show $\frac{1}{3}$</p> <div></div> <p>Show $\frac{1}{4}$</p> <p>Answer = $\frac{7}{12}$</p>	<div></div>	<p>$\frac{1}{3} + \frac{1}{4}$</p> <p>$\frac{4}{12} + \frac{3}{12} = \frac{7}{12}$</p>
<p>Calculation Multiplication and division</p>			
<p>Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams</p>	<p>$\frac{1}{4} \times 5$</p> <div></div>	<p>$\frac{1}{4} \times 5$</p> <div></div>	<p>$\frac{1}{4} \times 5$</p> <p>$\frac{1}{4} + \frac{1}{4} + \frac{1}{4} + \frac{1}{4} + \frac{1}{4} = \frac{5}{4}$</p> <p>$\frac{5}{4} = 1\frac{1}{4}$</p>
<p>Multiply pairs of proper fractions, writing the answer its simplest form</p>	<p>$\frac{1}{3} \times \frac{1}{2} = \frac{1}{6}$</p> <p>$\frac{1}{3}$ of $\frac{1}{2}$ $\frac{1}{2}$ of $\frac{1}{3}$</p>	<p>$\frac{1}{3} \times \frac{1}{2} = \frac{1}{6}$</p> <div></div>	<p>$\frac{1}{3} \times \frac{1}{2} = \frac{1}{6}$</p>



			
Divide proper fractions by whole numbers	$\frac{1}{3} \div 2$  $\frac{1}{2} \div 3$ 	$\frac{1}{3} \div 2$   $\frac{1}{2} \div 3$  	$\frac{1}{3} \div 2$ $\frac{1}{3} \div \frac{2}{1}$ $\frac{1}{3} \times \frac{1}{2} = \frac{1}{6}$ $\frac{1}{2} \div 3$ $\frac{1}{2} \div \frac{3}{1}$ $\frac{1}{2} \times \frac{1}{3} = \frac{1}{6}$