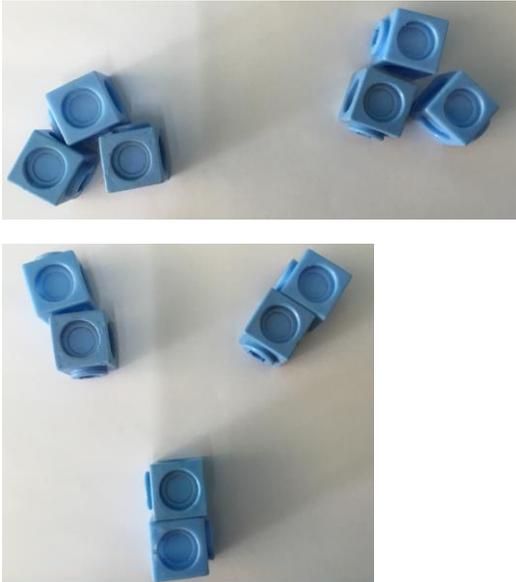


Multiplication

1. **Repeated addition.** This refers to the idea that multiplication means so many 'sets of' or 'lots of'. Language used includes: so many sets of, lots of, how many altogether, per and each.
2. **Scaling structure.** This refers to the idea that an amount increased by a scale factor. Language used includes: doubling, trebling, so many times bigger/longer/heavier than, so many times as much as.

	Concrete	Pictorial	Abstract																																										
<p>Repeated addition</p> <p><i>share between</i></p> <p><i>groups of</i></p> <p><i>multiply/times</i></p> <p><i>by</i></p> <p><i>lots of</i></p> <p><i>fact family</i></p>	<p>Counting in 2s, 5s and 10s is taught in CLIC.</p> <p>Coins may be used to help this.</p> <p>Setting out lots of objects e.g 2 lots of 3 and counting the total.</p> 	<p><i>Children encouraged to count in 2's, 5's and 10's where appropriate.</i></p> <p><i>3 lots of 2.</i></p> <table border="1"> <tr> <td>3</td> <td>x</td> <td>2</td> <td>=</td> <td>6</td> <td></td> </tr> <tr> <td>●</td> <td>●</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>●</td> <td>●</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>●</td> <td>●</td> <td></td> <td></td> <td></td> <td></td> </tr> </table> <p><i>2 lots of 3</i></p> <table border="1"> <tr> <td>2</td> <td>x</td> <td>3</td> <td>=</td> <td>6</td> <td></td> </tr> <tr> <td>●</td> <td>●</td> <td>●</td> <td></td> <td></td> <td></td> </tr> <tr> <td>●</td> <td>●</td> <td>●</td> <td></td> <td></td> <td></td> </tr> </table>	3	x	2	=	6		●	●					●	●					●	●					2	x	3	=	6		●	●	●				●	●	●				<p>Move on to written calculation.</p> <p>Show all stages with repeated addition and as a multiplication calculation.</p> <p>$2 + 2 + 2 = 6$</p> <p>$2 \times 3 = 6$</p> <p>$3 + 3 = 6$</p> <p>$3 \times 2 = 6$</p>
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