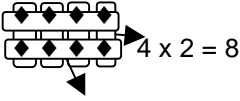
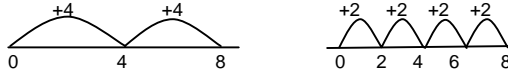
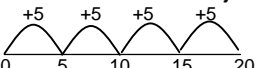
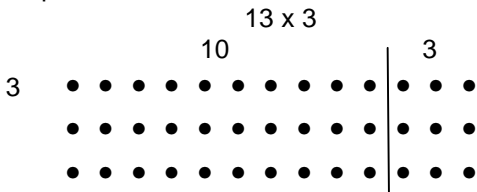


Progression in Multiplication- 2009
St. Michael's CE(C) Primary School.

The staff agreed to use the everyday language of 'groups of', 'lots of', 'sets of' or 'times' when teaching 2x5 as 5 + 5.

Year	What will multiplication look like?	Notes						
R	Jumping along number tracks in steps of.... 100 square to look at patterns of multiples. Grouping. Use of counting stick (track) to count in different steps.	Primary Framework for literacy and mathematics page 92 and 94 and PSRN (foundation stage) Counting in steps of 2 and 10						
1	Grouping. Pictorial repeated addition, arrays. Use of counting stick to count in different step, recording on a number line.	Primary Framework for literacy and mathematics page 94 Counting in 2s, 5s and 10s begin steps of 3 Doubles to 10 introduced						
2	Introduce the x symbol. Doubles as x2. Vocabulary of double, groups of, lots of, times etc. Use of arrays.  Use of number lines to record jumps 	Primary Framework for literacy and mathematics page 92 and 94 Repeated addition as concept of multiplication Arrays, describing an array $2 \times 4 = 8 = 4 \times 2$ understanding the images are different but the answer the same Discuss which is quickest 4×2 or 2×4 Derive and recall multiplication facts for the 2, 5 and 10 times table, Doubles to 20 and as x2. Use knowledge of number facts and operations to estimate and check answers						
3	Recalling facts. $4 \times 5 = 20$ and $5 \times 4 = 20$. ($5+5+5+5$) ($4+4+4+4+4$) Access to unknown facts from the known, eg 7×8 can be accessed from knowing 5×8 and 2×8 . Use of number lines to record jumps  $4 \times 5 = 20$ Move towards larger arrays to introduce area multiplication  $15 \times 5 = 10 \times 5$ and 5×5 or <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td>x</td><td>10</td><td>5</td></tr><tr><td>5</td><td>50</td><td>25</td></tr></table>	x	10	5	5	50	25	Primary Framework for literacy and mathematics page 92 and 94 Derive and recall multiplication facts for the 2, 3, 4, 5, 6 and 10 times tables Multiply by 10 / 100, understanding the shift in the digits Know what each digit represents, partition a three digit number Understand and apply commutative law. Use practical and informal written method to multiply a 2-digit number by a 1-digit number Understand multiplication and division are inverse operations and use this to derive and record related number sentences Approximate , calculate & check
x	10	5						
5	50	25						

