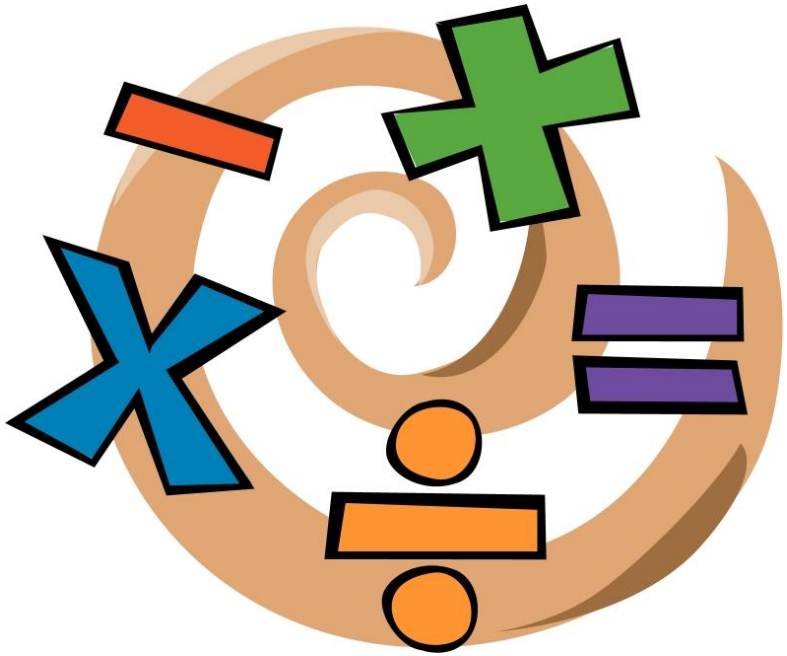
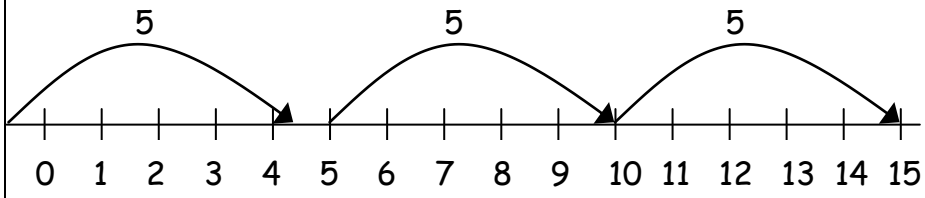
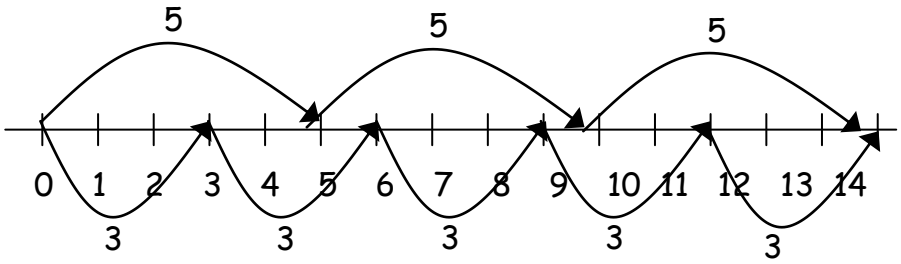
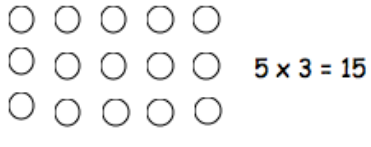
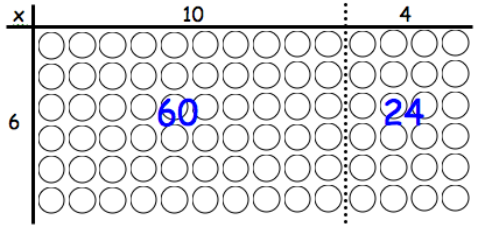
Progression in Multiplication Methods



Yr Grp	Progression	What it Looks like…	Further Guidance
Yr 1	Children will use practical experience to create equal groups of objects (2s, 10s and 5s), arrays and number patterns.	**Mostly pictorial representations:** X X X X X X How many groups of 2 are there?	
Yr 2	**Repeated Addition** – children should understand multiplication as repeated addition on a number line.	3 times 5 is 5 + 5 + 5 = 15 or 3 lots of 5 or 5 x 3 Shown on a number line: 	
	Commutativity -Children should know that 3 x 5 has the same answer as 5 x 3.		
	Arrays - children should understand multiplication as repeated addition as shown in arrays.	 3 x 5 = 15	*This knowledge will support the development of the grid method.*
Yr3	Children will use their knowledge of arrays, to start to use **grid method,** TU x U.	 (6 x 10) + (6 x 4) 60 + 24 84	*Children also develop an understanding of using symbols to stand for unknown numbers and complete equations using inverse operations:* ☐ x 5 = 20 3 x △ = 18 ☐ x O = 32

Yr4	**Grid Method** – TU x U	E.g. 23 x 8 x | 20 | 3 8 | 160 | 24 160 + 24 184	
	Grid Method - HTU x U	346 x 9 x | 300 | 40 | 6 9 | 2700 | 360 | 54 2700 + 360 + 54 3114	
	Then children need to begin using the **expanded short version of written method** - TU x U and HTU x U.	23 X 7 21 (3x7) 140 (20x7) 161 leading to 23 x 7 161 2	*Children should be aware that the calculation should be done starting with the smallest number first (in line with addition policy)*
Yr5	**Formal written method** – Th HTU x U and Th HTU x TU	346 X 35 1 730 (346 x 5) 2 3 10 380 (346 x 30) 1 1 12 1 10	*The bracket section is not necessary but can be used to help remind children of the steps.* *When confident, they can remove.*
Yr6	**Formal written method** – Th HTU x U and Th HTU x TU	1265 x 34 1265 X 34 5060 1 2 2 37950 1 1 43010 1 1 1	

	Formal written method – Multiply decimals with up to 2 decimal places by whole numbers.	6.32 x 15 X 100 632 x 15 632 X 15 3 160 1 1 1 6320 9480 9480 ÷ 100 = 94.8 (using inverse)	

Children should not be made to go onto the next stage if: they are not ready or they are not confident.
Once children have mastered strategies for their appropriate year group, they should not be moved onto the next year group but instead develop breadth of understanding through rich tasks that require application of knowledge and skills.