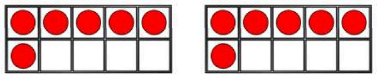
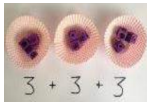
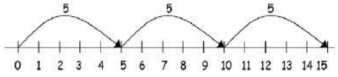
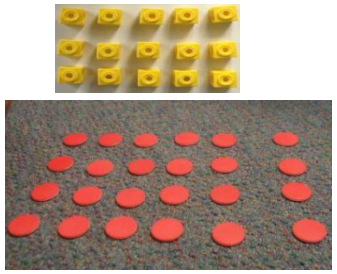
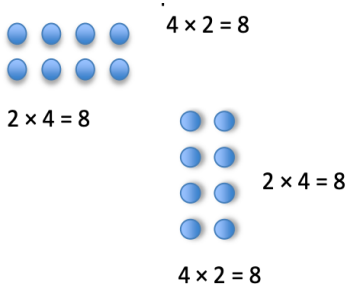
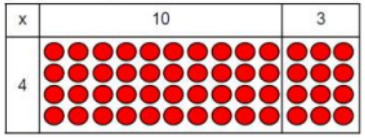
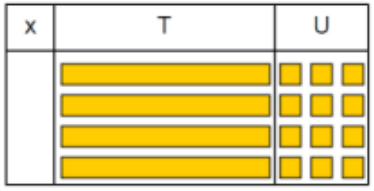
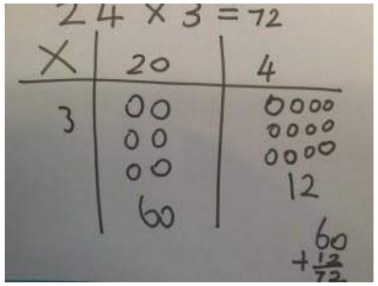
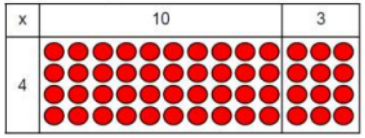
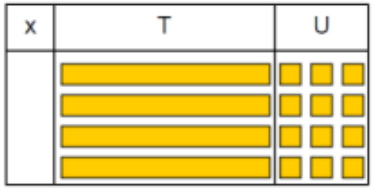
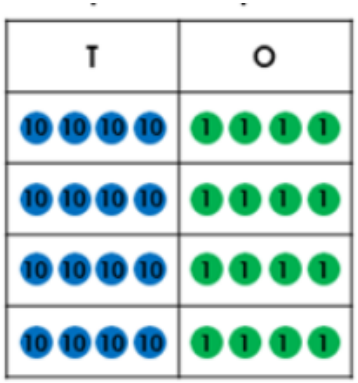
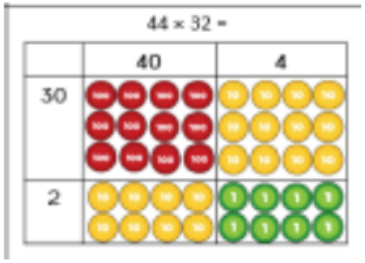
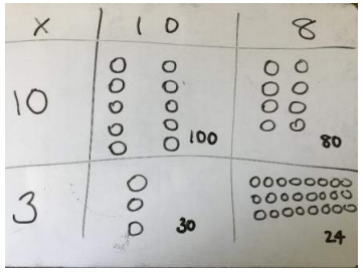
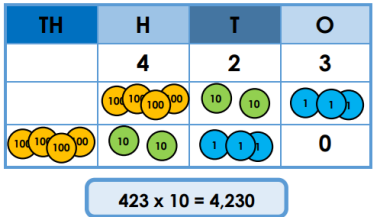
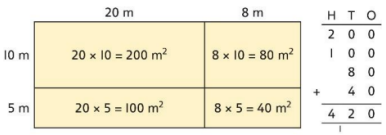
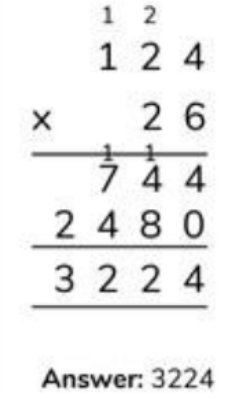
Multiplication Calculation Policy

	Concrete	Pictorial	Abstract	Vocabulary
EYFS Be able to explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed evenly.	Use of matching objects such as socks to group in twos equally.  Use of resources to share out equally, such as fruit at circle time.	Use of similar representations for the children to build familiarity with. Finding matching pairs.  	Use of written stem sentences to show calculations. 10 socks shared between 5 children is 2. 5 groups of 2 is 10	Sharing Matching Groups of Equal/Unequal Fair
Year 1	Using familiar objects to look at groups of and repeated addition.   	Using repeated addition alongside a number line to show the deeper understanding of what multiplication is.  2 + 2 + 2 = 6  5 + 5 + 5 = 15	Use of written stem sentences to show calculations. 3 groups of 2 is 6. 2 X 3 = 6	Sharing Matching Groups of Equal/Unequal Fair Repeated
Year 2	Using familiar objects, the children should continue to look at repeated additions with the introduction to arrays.	Using repeated addition, the children can make the connection to arrays.	Use of written stem sentences to show calculations. 3 groups of 2 is 6.	Sharing Matching Groups of

			2 X 3 = 6	Equal/Unequal Fair Repeated Array Column
Year 3	Show the link with arrays to first introduce the grid method. 4 rows of 10 4 rows of 3  Move on to using Base 10 to move towards a more compact method. 	Represent using place value counters 	Expanded grid method Start with multiplying by one digit numbers and showing the clear addition alongside the grid. **Grid method** **20 3** **X3 60 9** **60 + 9 = 69** Formal written method 6 x 23 = 23 × 6	multiplication product repeated addition factors multiple commutative inverse operation (to check calculations)

Year 4	Show the link with arrays to first introduce the grid method. 4 rows of 10 4 rows of 3  Move on to using Base 10 to move towards a more compact method.  	 24 x 4	Expanded column method 42 x 6 12 (2 x 6) 240 (40 x 6) 252 Formal written method	multiplication product repeated addition factors multiple commutative inverse operation (to check calculations)
Year 5	Using counters on a place value chart  	Children to draw counters on whiteboard to pictorially represent multiplication calculation  	Multiplying by 10, 100 and 1000  Area model then add the part.	factor multiple common prime number square number squared cube number cubed multiplication formal written method

			28 × 15 = ?  *28 × 15 = 420* When children are confident move towards the formal written method of multiplication  Answer: 3224	
Year 6	Refer to year 5 strategies if children are not confidently with abstract	Refer to year 5 strategies if children are not confidently with abstract	124 x 26 becomes  **Answer:** 3224	factor multiple common prime number square number squared cube number cubed multiplication formal written method