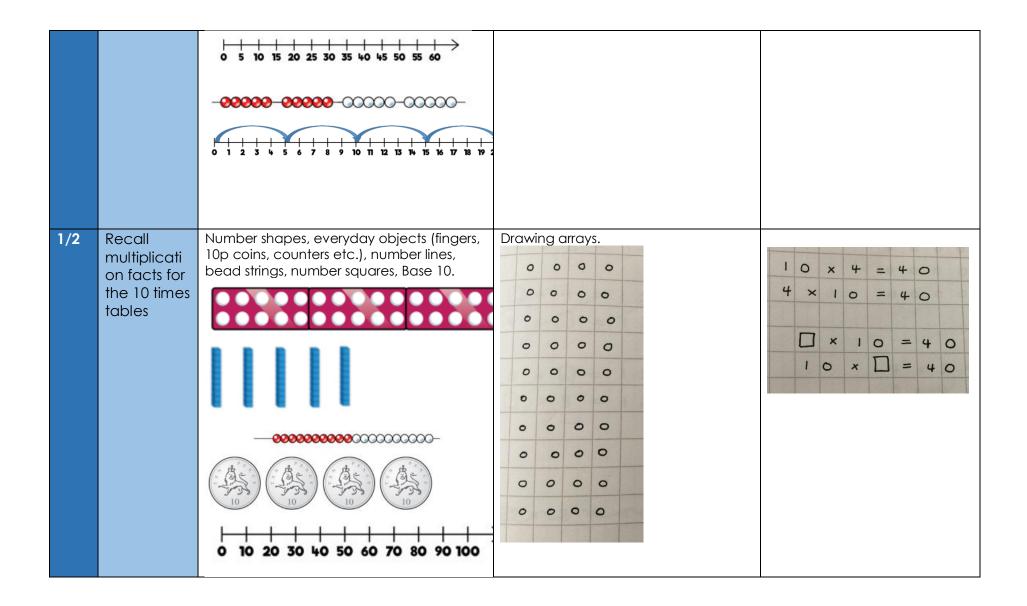
## Calculation policy: Multiplication

Key language: double, times, multiplied by, the product of, groups of, lots of, equal groups.

Year Group	Skill	Concrete	Pictorial	Abstra	ct		
Multi	plication To	ables		1			
F2	Counting in 2s, 5s and 10s	Counting sticks, number squares, number lines, number shapes, bead strings, everyday objects.	Drawing arrays.				
1/2	Recall multiplicati	Number shapes, everyday objects (pairs of socks, 2p coins, counters etc.), number	Drawing arrays.	Writing nu	umber	sente	ences.
	on facts for the 2 times	lines, bead strings, number squares.	• • • • • •	2 ×	4	=	8
	tables			4 x	2	=	8
			• •	2		=	0
				2 ×	U	-	8
		11       12       13       15       15       17       18       19       20         21       20       23       25       29       27       29       29       29         31       33       33       35       39       37       39       39       40         41       43       45       44       47       49       59		×□	2	=	8

		0 2 4 6 8 10 12 14 16 18 20 22 24		
1/2	Recall multiplicati on facts for the 5 times tables	Number shapes, everyday objects (fingers, 5p coins, counters etc.), number lines, bead strings, number squares.	Drawing arrays.	$5 \times 3 = 15$ $3 \times 5 = 15$ $5 \times \Box = 15$ $\Box \times 5 = 15$



		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       65       66       67       68       69       70         71       72       73       74       75       76       77       78       79       30         81       82       83       84       85       86       87       88       89       30         91       92       93       94       95       96       97       98       99       00       0	
2/3/ 4	Recall multiplicati on facts for the 3 times tables	Everyday objects (cubes, triangles, counters etc.), number lines, number squares. 1 2 3 4 5 6 7 8 9 10 1 2 3 4 5 6 7 8 9 10 1 2 3 4 5 6 7 8 9 10 1 2 3 4 5 6 7 8 9 10 1 2 2 2 3 2 2 5 2 6 2 2 8 2 9 3 3 3 2 3 3 4 3 5 3 6 3 7 3 8 3 9 40 4 1 4 2 4 3 4 4 4 5 4 6 4 7 4 8 4 9 50 0 3 6 9 12 15 18 21 24 27 30 33 36	$3 \times 4 = 12$ $4 \times 3 = 12$ $3 \times \Box = 12$ $\Box \times 3 = 12$

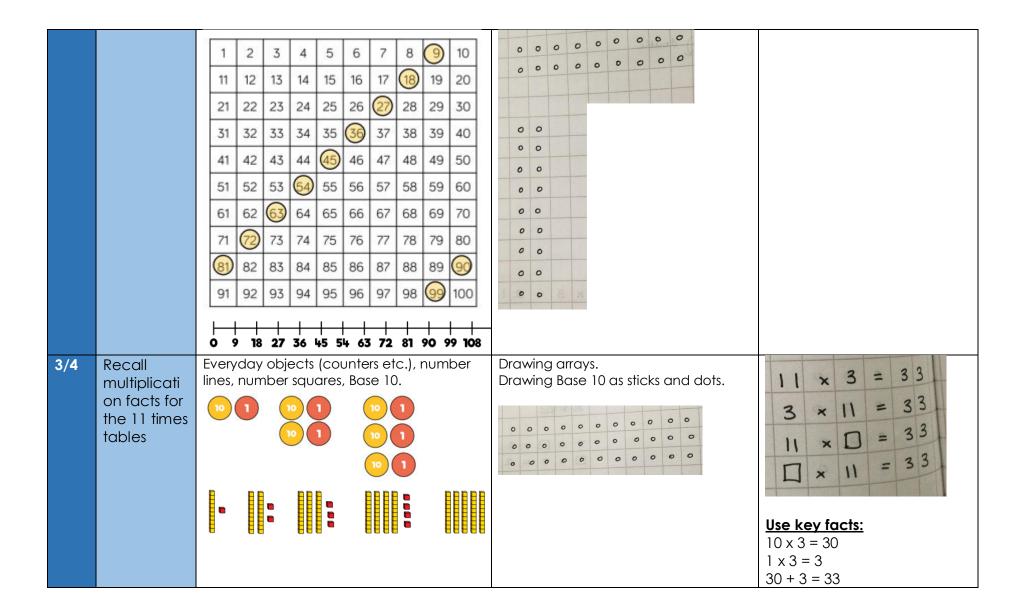
		$ \begin{array}{c}                                     $	0 0 0	0 0 0	0 0 0								
			0 0 0	0 0 0	0 0 0	0 0 0							
2/3/ 4	Recall multiplicati on facts for the 4 times tables	Everyday objects (counters, square tiles etc.), number lines, number squares.	Drawi Drawi Drawi patte	ng sc ng ta	bles,	notin 2 2	ng number 16 20 36 40 56 60	4 3 4 x 3 ? x 2	× × 2 = 12 4 = 12	4	1 1	2	

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		21 22 2	3 🙆 25	5 26 2	27 28	29	30	0	0	0									
		31 32 3	3 34 35	5 36 3	37 38		10	0	0	0									
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3/4	Recall	Everyday o						Draw					8	×	6	=	4	8	
	multiplicati on facts for	counters et squares.	c.j, numc	ber lines	, num	Der		patte			es io	o identify number	6	×	8	=	4	8	
	the 8 times	1 2 3	4 5	6 7	8	9 10													
	tables	11 12 13	14 15	16 17	18 1	9 20							8	×		=	4	8	
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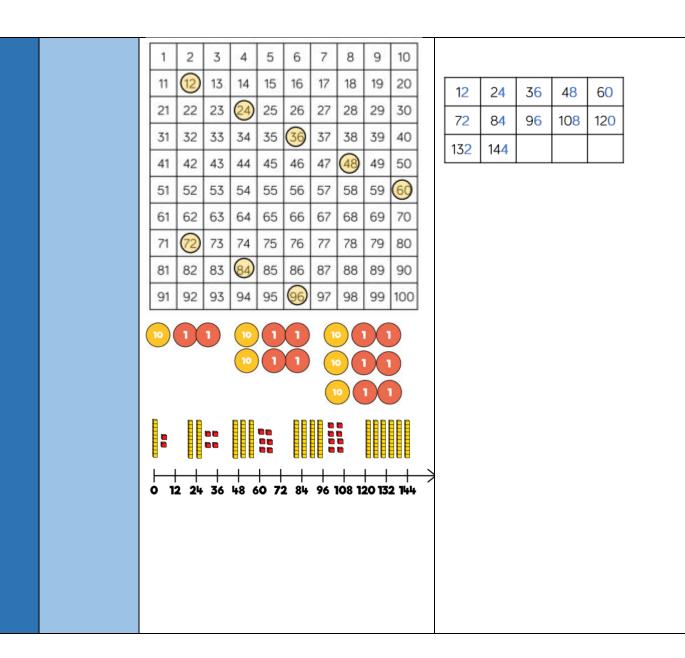
		8 16 24 32 + + + + + + + + + + + + + + + + + + +	0       0							
3/4	Recall multiplicati on facts for the 6 times tables	Everyday objects (dice, counters etc.), number lines, number squares.	Drawing arrays.         Drawing tables to identify number patterns.         6       12       18       24       30         36       42       48       54       60         66       72       78       84       90	6 8 6	× × !	8 6	H H H	4 4 4	8	

3/4       Recall multiplicatii on facts for subsection of the						1								_										
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3/4       Recall multiplication on facts for the 7 times tables       Everyday objects (counters etc.), number lines, number squares.       Drawing arrays.	= 12	=8	2	×	6								60					55	64			(*)		
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	on facts for the 9 times																							2	×	9	-	11	8	
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3/4	Recall	Every								ers e	tc.),	Drawing place value charts with base	
	multiplicati on facts for	num	oer li	nes,	num	nber	squ	ares	•			10 as dots, sticks and squares. Drawing tables to identify number	
	the 12 times											patterns. $12 \times 10 = 12$	0
	tables											(-12) 120-12=	100
												H T O	
												$12 \times 9 = 108$	
												1 0 8 1 0 8	
												$100 + 0 + 8 = 108$ $\Box \times 12 = 108$	



Mult	iplication			
1/2	Solve one step problems. (e.g. one bag holds 5 apples, how many apples do 4 bags hold?)	Everyday objects, number shapes, counters, number lines.	Drawing arrays. Drawing pictures in groups. Drawing number lines.	5+5+5+5=20 $4 \times 5 = 20$ $5 \times 4 = 20$
3/4	Multiply 2- digit by 1- digit numbers. (e.g. 34 x 5)	Place value counters in a place value chart.	Drawing place value charts and dots to represent counters.	Expanded written method first to help aid understanding, then followed by short written method.

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		0000	00	+	1	5	0	(5 ×	30)
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							3	4	
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					1		7	0	
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4/5/ 6	Multiply 3 and 4-digit	Place value counters in a place value chart.	Drawing place value charts and dots to represent counters.	Form multip			neth	od foi	~
	numbers by 1-digit.	Thousands         Hundrets         Ters         Desc           Image: Constraint of the state of t	Th H T O		Th	Н	т	0	
	(e.g. 1,826		0 0000000 0 0 000000		1	8	2	6	
	(e.g. 1,626 x 3)		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	×				3	
					5	4	7	8	
			5,000 + 400 + 70 + 8 - 5,475		2		1		

5/6	Multiply 2- digit by 2-	Place value counters in a grid.	Drawing	the grid	metho	od.	Form	al writ	ten r	nethoo	d.
	digit numbers.		×	20	2	2		н	Т	0	)
	(e.g. 22 x		30	600	6	0			2	2	!
	31)		1	20	2	2	×		3	5 1	
									2	2	?
								6	6	6 O	)
								6	8	3 2	!
5/6	Multiply 3	Place value counters in a grid, though	Drawing	the grid	metho	od.	Form	al wri	ten r	nethoo	<u> </u>
	and 4-digit numbers by	pupils should be using just the formal written method at this stage. If they are still	×	200	30	4					
	2-digit	struggling, it may be best to move back to 2-digit x 2-digit multiplication problems.	30	6,000	900	120	Th	Н	Т	0	
	numbers.		2	400	60	8		2	3	4	
	(e.g. 234 x						×		3	2	
	32)							4	6	8	
							17	10	2	0	
							7	4	8	8	