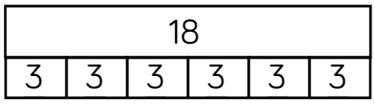
Chaucer Junior School Calculation Policy—Multiplication

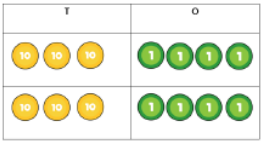
(based on the White Rose curriculum)

Year 3

The concept of equal groups and repeated addition is explored first, using a range of visual and practical resources, including the bar method to become familiar with counting in 3s, 4s and 8s.

Partitioning and experience of practical multiplication is the primary goal in Y3. This is used <u>alongside</u> the written method to develop vocabulary and working knowledge of the method:





Practicals heavily used to aid written method

T O
3 4
X 2
6 8

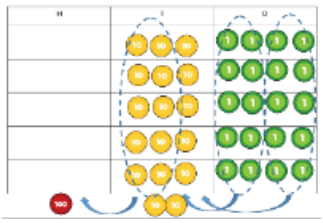
"Two lots of four ones gives eight ones."

"Two lots of three tens is six tens."

Year 4

A range of visual and practical methods (including place value counters and bar method) are used to explore x/÷10 and 100, as well as the 6, 9 and 7 times table. The commutative relationship between e.g. 3x10 and 10x3 is also explored.

Place value counters are heavily used to develop a working knowledge of an expanded written method (with exchanging), which then leads into the standard written method, up to 3 digits x 1 digit.



	3	4		
	×	5		
	2	0	(5 × 4)	
1	5	0	(5 × 30)	

T O
3 4
X 5
1 7 0
2

"Five lots of four ones is twenty ones...which is the same as two tens."

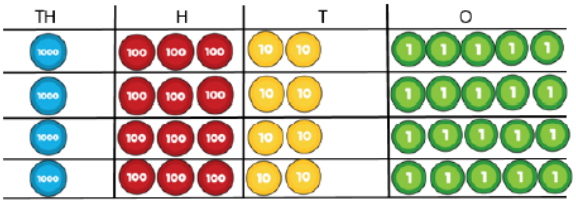
Year 5

Children develop their knowledge of number properties including factors, multiples, prime, square and cube numbers.

They must secure an understanding of x10/100/1000 and then multiples of these (e.g. x20; x500).

They use this knowledge, alongside place value counters, to develop the written method for:

4 digits x 1 digit:



1 3 2 4
X 4
5 2 9 6
1 1

And for 4 digits x 2 digits:

1 3 2 4
X 3 4
5 2 9 6
1 1
3 9 7 2 0
1
4 5 0 1 6
1 1 1

Children can articulate why there is a zero necessary.

Year 6

In Year 6, children consolidate their learning of the written method, up to 4 digits by 2 digits.

They also consolidate prior learning of factors, multiples, primes, squares and cubes.

Additionally, children use mental strategies that can speed up some calculations, e.g. 50x16x2