Maths Progression Document Multiplication and Division Year 3 and 4

	Reception Vocabulary Sharing, doubling, having, number patterns ***Year 1 Vocabulary*** Multiplication, multiply, multiplied by, multiple Division, dividing, grouping, array ***Year 2 Vocabulary*** groups of, times, once, twice, three times … ten times repeated addition divide, divided by, divided into, share, share equally, left, left over one each, two each, three each … ten each group in pairs, threes … tens equal groups of, row, column multiplication fact, division fact	
Key Vocabulary	***Year 3 Vocabulary*** Factor, product, remainder	***Year 4 Vocabulary*** Inverse, (consolidate factor and product)
Year group	***Year 3***	***Year 4***
Key skills	• *Count from zero in multiples of 4, 6, 8, 11, 50 and 100* • *Recall and use multiplication and division facts for the 4, **6,** 8 and **11** times tables.* • *Write and calculate mathematical statements for multiplication and division for the multiplication statements they know.* • *Calculate 2 digit by 1 digit multiplication calculations through first partitioning then using formal column method.* • *Calculate 2 digit by 1 digit division calculation through the partitioning method and using a bar model.* • *Introduce remainders when dividing in a practical context.* • *Solve problems for multiplication and division including missing number problems.* • *Solve scaling and correspondence problems*	• *Recall and use multiplication and division facts for multiplication tables up to 12 x 12.* • *Count in multiples of 7, 9, 12, 25 and 1000.* • *Multiply and divide mentally by 1 and 0.* • *Multiply and divide whole numbers by 10 and 100.* • *Recognise and use factor pairs and commutivity in mental calculations.* • *Multiply 3 single digit numbers together.* • *Multiply 2 and 3 digit numbers using formal column method.* • *Calculate 2 and 3 digit by 1 digit division calculations through first partitioning then introducing the formal bus stop method, including with remainders(short division).* • *Solve problems involving multiplication and division including missing number problems.* • *Solve more complex scaling and correspondence problems.*

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What it looks like in models and images. Note – this is not exhaustive, guidance should be taken from our calculation policy as well as WR Maths small steps guidance.

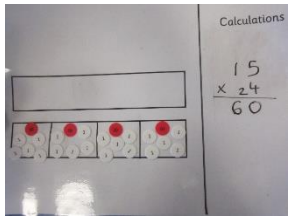
Children to be encouraged to show the steps they have taken

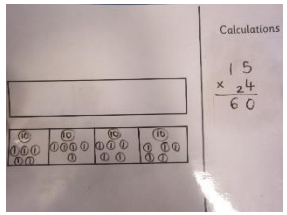
4 x 15
10 5

4 x 5 – 20
4 x 10 = 40
40 + 20 = 60

This is a step before formal written method.

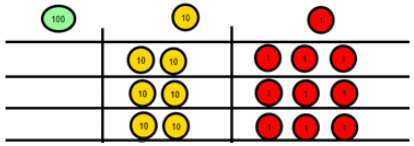
Introduce 2 digt by 1 digit through partitioning on bar model



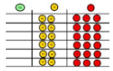


Formal column method with place value counters or base 10 (at the first stage- no exchanging) 3 x 23

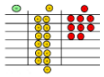
Make 23, 3 times. See how many ones, then how many tens



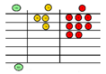
6 x 23



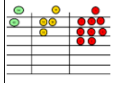
Step 1: get 6 lots of 23



Step 2: 6 x 3 is 18. Can I make an exchange? Yes! Ten ones for one ten....



Step 3: 6 x 2 tens and my extra ten is 13 tens. Can I make an exchange? Yes! Ten tens for one hundred...

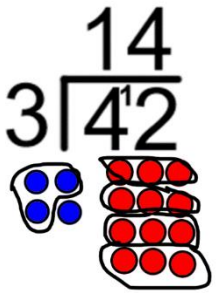


Step 4- what do I have I each column?

As year three but extending to 3 digits also

After continued practise of practical and bar model methods, introduce formal short division using bus stop with counters to group initially, before drawing counters and then abstract when able.

Division using bus stop showing grouping method below.



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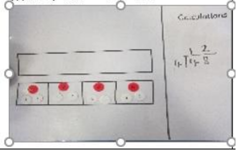
Division

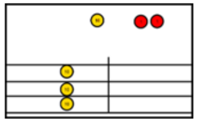
2d divided by 1d using place value counters (no remainders) SHARING done on a bar model. 48 ÷ 4 = 12

Start with the tens and show calc alongside using bus stop method.

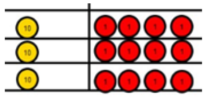


Sharing using place value counters on a HTO grid

42 ÷ 3= 14



1. Make 42. Share the 4 tens between 3. Can we make an exchange with the extra 10? Exchange the ten for 10 ones and share out 12 ones



As these steps are taken show how this looks on the written calculation of bus stop method.

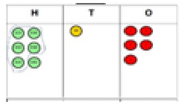
Use of the 'bus stop method' using grouping and counters.

Key language for grouping- how many groups of X can we make with X hundreds'

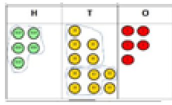
615 ÷ 5

Step 1 make 615

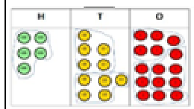
Step 2 Circle your groups of 5 in hundreds.



Step 3: Exchange left over hundred for 10 tens and circle groups of 5 in the tens.



Step 4: Exchange left over ten for 10 ones and circle groups of 5.



ALWAYS show how this would look on written bus stop alongside every step that is taken with the counters.

$$\begin{array}{r|l} & 1\;2\;3 \\ \hline 5 & 6\,{}^{1}1\,{}^{1}5 \end{array}$$