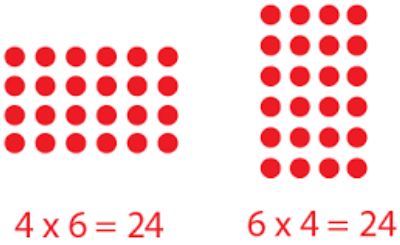
Multiplication

Year R (EYFS)

As children explore doubling they can be introduced to the idea of having 2 groups of an amount to begin to introduce children to the idea of multiplication being number of groups.

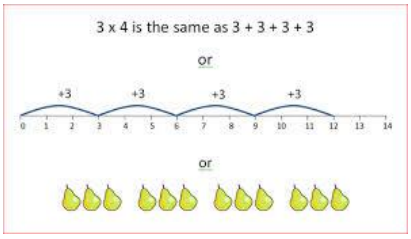
Year 1

Children can explore multiplication practically and pictorially by considering groups of an amount and how many altogether in all of the groups. With adult support the children arrange objects into arrays and begin to record multiplication as arrays.



Year 2

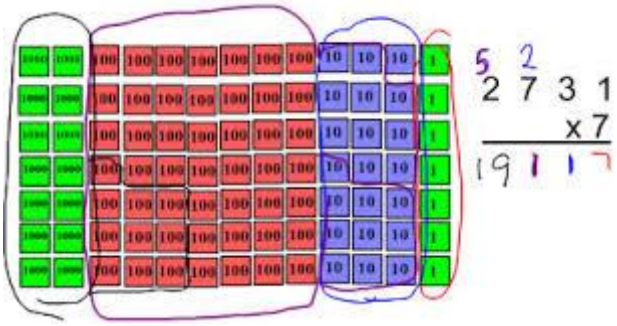
Children write multiplication calculations using the symbols "x" and "=". They come to know that multiplication can be done in any order (commutative); this can be explored using arrays (see example above). The children use arrays more independently moving on to thinking of multiplication as repeated addition.



The children should continue to develop their understanding of the theory of multiplication by thinking about and using the language of grouping and "groups of…"

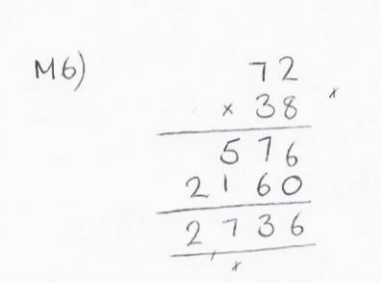
Year 3

The children are introduced to formal short multiplication through the use of manipulatives. Place value charts and dienes can be used to allow the children to physically create groups of a number and then regroup the total amount into tens and ones etc. The children will be able to use the short multiplication method to solve TU x U.



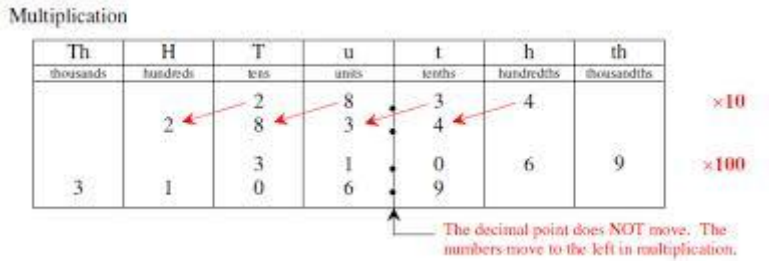
Year 4

The children continue to develop their use of the formal short multiplication method for TU x U and then move on to HTU x U.



They use dienes or place value counters to continue developing understanding in a concrete way before moving on to working more abstractly.

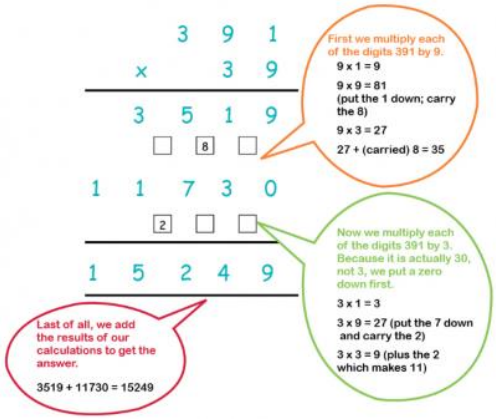
When converting between units of measure and multiplying by 10, 100 and 1000, the children will use their knowledge of place value and use place value charts to move digits.



Year 5

Children will be expected to apply the short multiplication method to multiplying four-digit numbers by a single-digit number. They will also learn the long multiplication method for TU xTU. Place value counters will continue to be used especially to explain long multiplication and the need for place holders.

NB: When working on long division start with the smallest value digits to ensure that this is consistent with other column methods. Where children need to regroup this should be done at the bottom also.



When converting between units of measure and multiplying by 10, 100 and 1000, the children will use their knowledge of place value and use place value charts to move digits.

Year 6

In Year 6 the children will continue to develop their use of the long multiplication method for THTU x TU in addition to practising the short multiplication method. When converting between units of measure and multiplying by 10, 100 and 1000, the children will use their knowledge of place value and use place value charts to move digits. The children will also begin to multiply numbers with up to two decimal places by a single digit number. The

children will be able to use the short multiplication method for this but may need reinforcement of place value and the positioning of the decimal point.