# Staples Road Primary School - Multiplication Calculation Progression

**Stages**

## STAGE 1

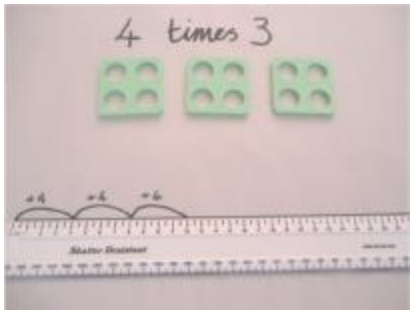
Develop multiplication as repeated grouping (repeated addition of sets of the same size) using practical apparatus and diagrams.

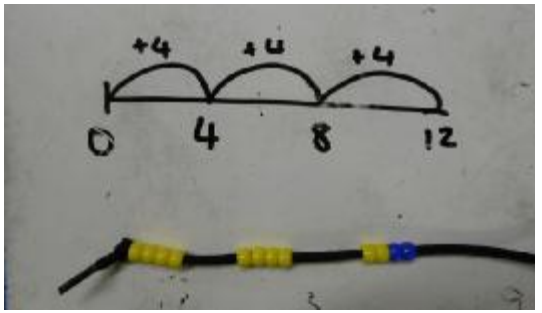


## STAGE 2

Develop an understanding of multiplication using arrays and number lines showing repeated groups.

Use number lines to show repeated grouping (repeated addition of sets of the same size).

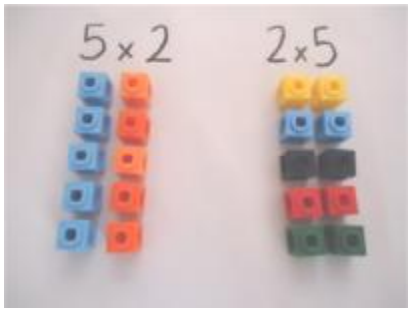


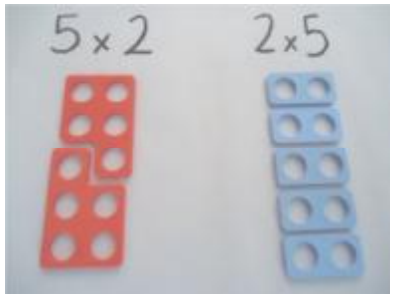
# STAGE 3

Develop the use of x and = symbols to record calculations horizontally.

Use arrays and other practical apparatus to illustrate commutativity (that multiplication calculations can be carried out in any order) e.g. 2 x 5 arrives at the same product as 5 x 2.
Begin to derive new facts from known facts
e.g. 3 x 2 = 6 (known fact)
30 x 2 = 60
300 x 2 = 600 etc.







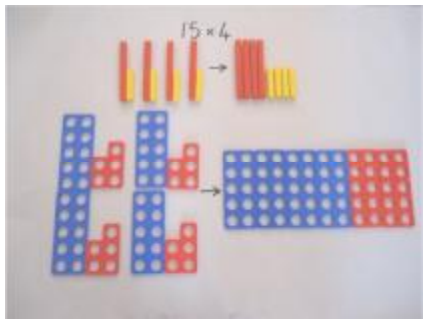

# STAGE 4

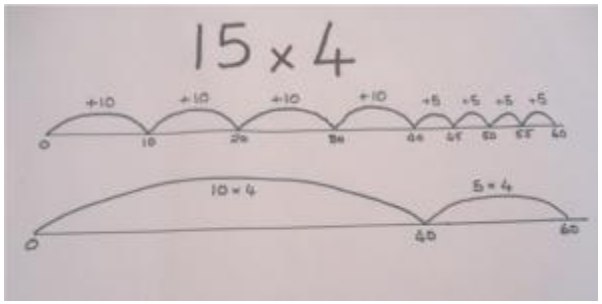
Begin to use understanding of place value and partitioning to carry out multiplication of two- digit by one -digit numbers

15 x 4
10 5

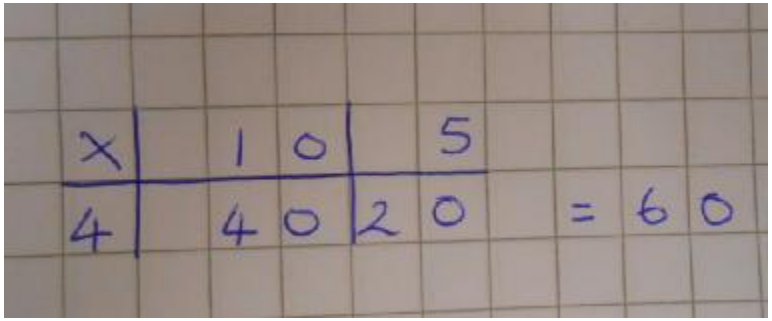
10 x 4 = 40
5 x 4 = 20

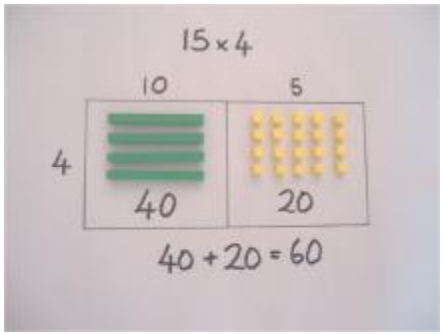
40 + 20 = 60



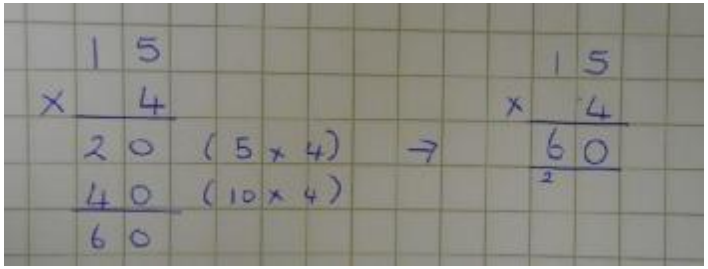



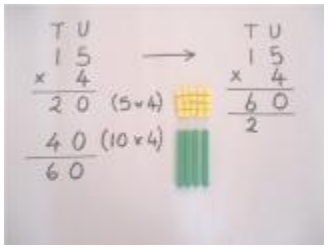
Use grid approaches to illustrate as appropriate using practical apparatus to support.




Develop expanded recording in columns and then move to formal written method, using practical apparatus to support as required.

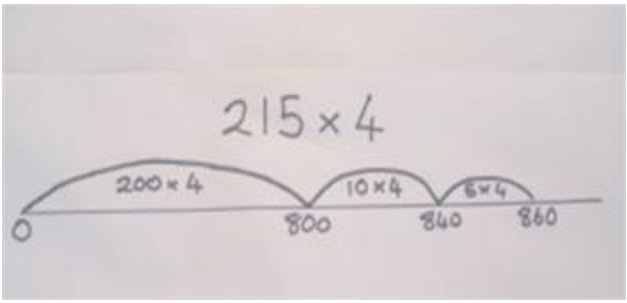


# STAGE 5

Extend written approaches to HTU x U, then to ThHTU x U

Illustrate using partitioning approaches as required

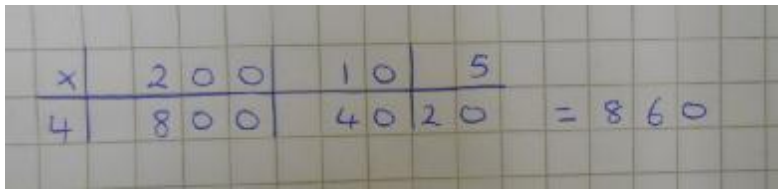


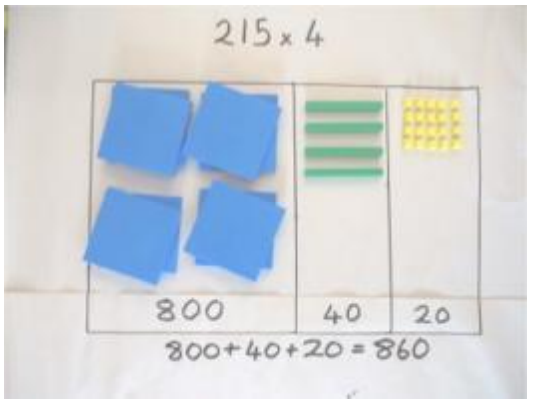

215 x 4

200 10 5

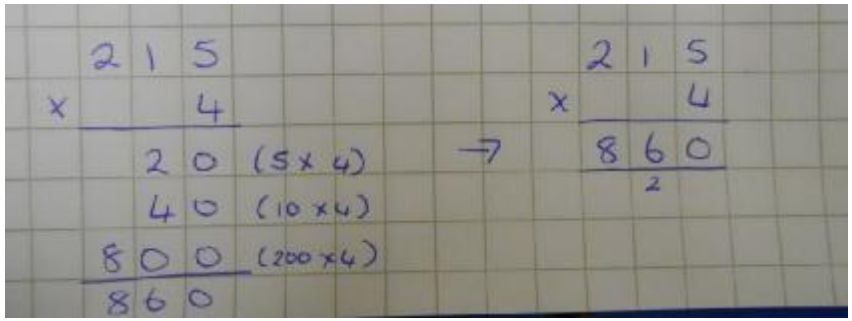
200 x 4 = 800
10 x 4 = 40
5 x 4 = 20
800 + 40 + 20 = 860

Illustrate using grid approaches as required



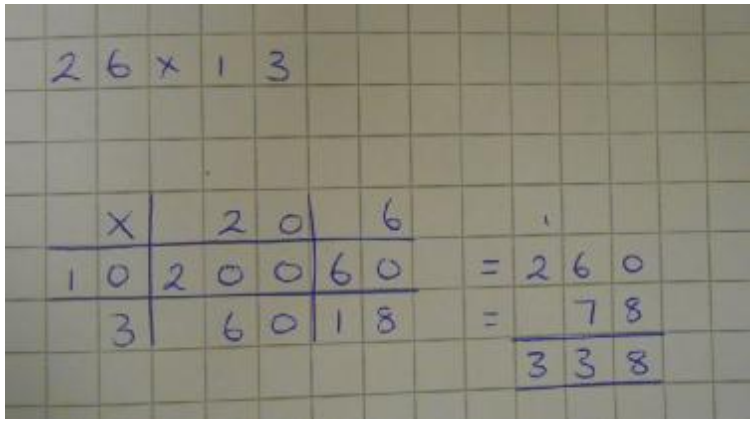

Develop expanded recording in columns and then move to formal written method, using practical apparatus to support as required.



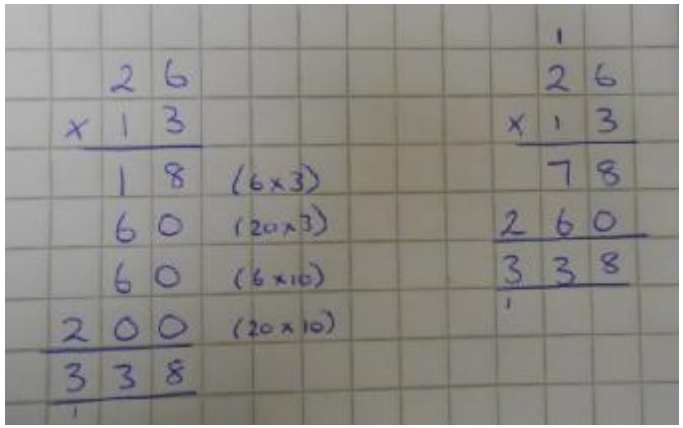
# STAGE 6

Extend written approaches to TUxTU and  HTU x TU and ThHTU x TU

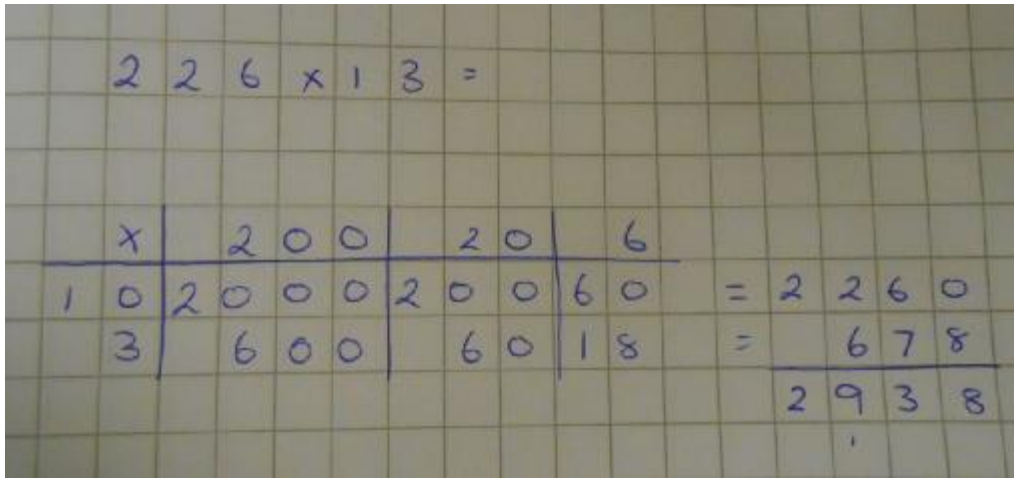
Illustrate using grid approaches as required




Develop expanded recording in columns and then move to formal written method of long m ultiplication, using practical apparatus to support as required.




Illustrate using grid approaches as required




Develop expanded recording in columns and then move to formal method of long multiplication, using practical apparatus to support as required.