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| **Understanding the concept of multiplication:**   * Repeated addition * Can be represented as an array * It is the inverse of division * It is commutative * It is associative | | | | | |
|  | **Doubling** | **Repeated Addition** | **Arrays** | **Arrays using known facts** | **Grid Method** |
| **Skill – Practical/Fluency** | e.g. 3 + 3  3 + 3 = 6 or Double 3 is 6 | e.g. 2 + 2 + 2  6  4  2  Children should then be encouraged to use the language of multiplication to enable them to correctly write multiplication number sentences  **e.g. 3 lots of 2 = 6**  This can be modelled as equal jumps on a number line too | e.g. 3 x 4  1 group of 3    4 groups of 3  3 groups of 3  2 groups of 3  3 + 3 + 3 + 3 =  3 x 4 = 12  This array would be 3 x 4 not 4 x 3  3 x 4 should be spoken as 3, 4 times not 3 lots of 4 as that would be wrote 4 + 4 + 4. | e.g. 5 x 13   |  | | --- | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  |   Use known facts (5 x 10) = 50  (5 x 3) = 15 | e.g. 24 x 5   |  |  |  | | --- | --- | --- | | **x** | **20** | **4** | | **5** | 100 | 20 |   Then add up 100 and 20 to find the total  e.g. 24 x 5 = 120 |
| **Vocabulary** | Double  Same  Equal | Double  Same  Equal  Repeat  Lots of | Array  Times  Lots of  Groups of  Row  Column  Repeat  Representation  Multiply | Array  Times  Lots of  Groups of  Multiply  Row  Column  Facts  Repeat  Product  Multiple  Factor | Grid  Multiply  Product  Multiple  Factor  Column  Row  Partition |
| **Skill – Knowledge**  **(Address this knowledge through taught input and diagnostic questioning)** | * Understanding the meaning of the language ‘same’ * Understanding basic equivalence | * Understanding of counting in 2’s, 5’s and 10’s * Understanding equal groups of 2, 5 and 10 | * Understanding the difference between a row and a column * Understanding of the x symbol | * Double any multiple of 10 up to 100 * Understanding that doubling is adding any number to itself * Understanding that doubling is multiplying by 2 * Recall multiplication tables | * Understanding of partitioning a 2 digit number into tens and ones * Understanding the language of multiplication |
| **Skill - Evaluation** | Evaluate learning through REACH questioning and evidence of mathematical vocabulary in pupil voice and responses | | | | |