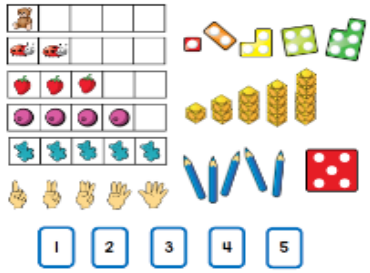
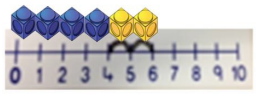
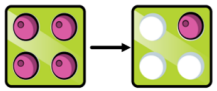
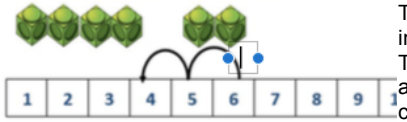
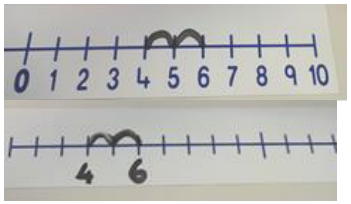
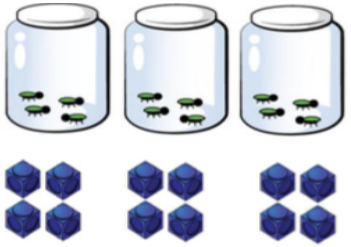
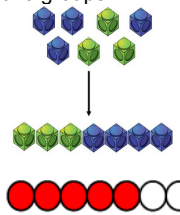
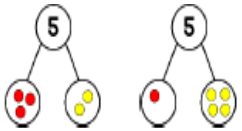
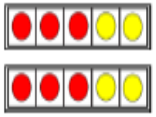
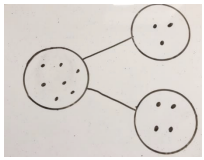
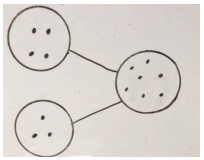
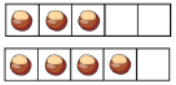
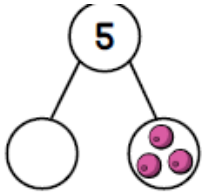
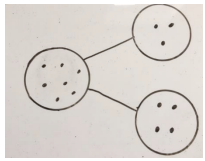
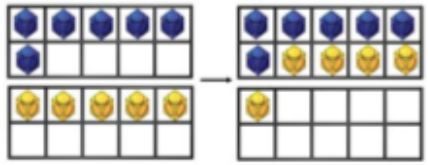
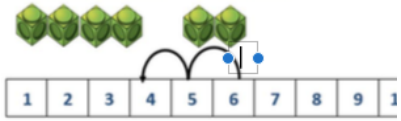
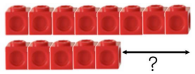
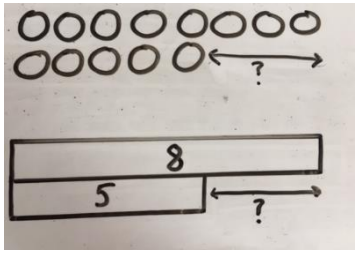
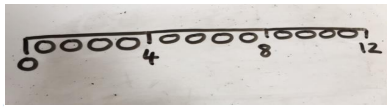
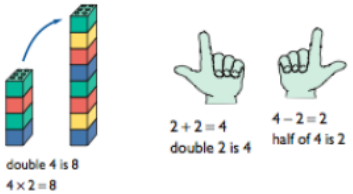
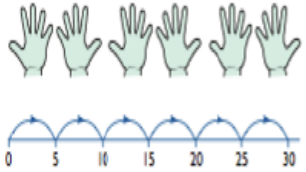
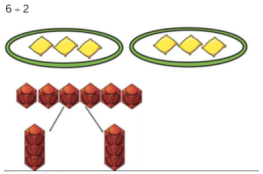
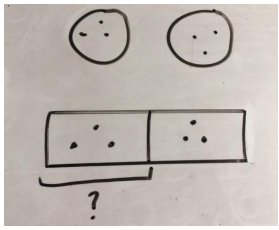
	Addition to be taught alongside each other Subtraction		Multiplication to be taught alongside each other Division	
Foundation – Using numbers to 20	Teachers should model addition using a range of practical resources. Children should use fingers to count, with open palms, counting from left to right.  The concept of counting one more is the initial approach to addition. This could be by counting on one more in their head, on a number line or one more object to a group of objects. Children understand when counting, the numbers have to be said in a certain order. They will understand they can count things they cannot touch, such as sounds (claps) and movements (jumps). Children will count on, using cubes, number lines or numicon. They will experience counting from zero and from a larger number.   Children will experience counting in steps of tens,	Teachers should model subtraction using a range of practical resources . Pupils will begin to relate subtraction by showing 1 less, then counting how many object are left. Children will also be expected to find 1 less by verbally counting backwards.   Children will be taught how to count backwards from different starting positions and to track this on a number line or track.  Children will understand the different vocabulary used relating to subtraction, such as 10 subtract 1 equals 9/ 1 less than 10 is 9 / 10 take away 1 equals 9/ the different between 10 and 9 is Children are encouraged to develop a mental picture of the calculation and to demonstrate different ways of recording it.	Children will experience equal groups of objects and count the whole amount.  They begin to count in steps of 2s, 10s and later in 5s. They will be provided with practical opportunities and visual images eg: counting pairs of socks or counting in tens to find out how many fingers five children would have.  They will work on practical problem solving activities involving equal sets or groups.  5 10 15 20 "Four hands of 5 fingers is the same as 20 fingers."	Children will understand equal groups and share items out in play and problem solving.  Children will experience halving in context, halving apples and sandwiches etc. Children will have opportunities to practice finding half of a number to 10 in practical activities. Children will explore division by sharing objects out equally "One for you, one for me…"

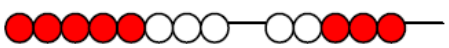
	five and twos. Children will learn to '**count on'** to find the total of two groups.    When this is secure, they will begin to use a part whole model and 5/10 frames to develop their understanding of number bonds to 5 and 10.   Children will then move on to completing full number sentences, using the appropriate symbol. Children should understand the '=' symbol as 'the same as' and 'equals to'. Children will develop ways of recording calculations using pictorial representations fir st then adding the number to a number sentence.  7= 3 + 4  4 + 3 = 7	The difference between 3 and 4 is ____ 1 less than 4 =  5- 3 = 		**<u>Equipment:</u>** Numicon Counters Bead strings Cubes Dice Number lines Number tracks Number tiles Coat hangers & pegs Practical counting equipment Dishes/hoops Socks/gloves 10 frames Base 10 Money- coins

	Addition to be taught alongside each other Subtraction		Multiplication to be taught alongside each other Division	
Year 1	Children will be expected to show a pictorial representation of their calculation.   The children will use number tracks and number lines marked out in jumps of one and practical resources to support calculation. 6 + 5  Children will use bead strings or bead bars to illustrate addition including bridging through ten by counting on 2 then counting on 3. e.g.8 + 5 = 8 + 2 + 3.  Numicon will also be used to model bridging through ten by counting on 2 and then counting on 3.  8 + 2 + 3 =13 8 + 5 = 8 + 2 + 3 = 10 + 3 Teachers will model the use of the number lines. Children will then begin to use number lines, counting on in ones, to support their own calculations. The link between the bead bar and number line must be made explicit.	Children will experience a range practical/ illustrated activities of 'taking away', that is finding how many are left from a collection of objects when some are removed.  There were 8 balloons, 2 popped. How many were left?  Children also experience practical activities of 'finding the difference', which involves making a comparison between the numbers of objects in two groups.   Children will be taught to use the language of 'more than/less than/ the difference between'	Children will experience putting objects into equal groups. There are 3 equal groups, with 4 in each group. 3 lots of 4 4 + 4 + 4 3 x 4 =  To also represent this on a number line.  Children will experience doubling in a range of contexts.  double 4 is 8 4 × 2 = 8 2 + 2 = 4 double 2 is 4 4 – 2 = 2 half of 4 is 2 Children will count in steps of 2s and 10s and 5s.  0 5 10 15 20 25 30	Children will begin by sharing items out in play and problem solving activities.  There 3 equal groups, with 4 in each group. '12 shared into 3 groups = 4 in each group'. '12 divide by 3 =4'  Children will also demonstrate their understanding of sharing pictorially.  Children should experience halving in a range of contexts (object, shape &  quantity). Children will experience finding, recognising and naming one half as one of two equal parts and one quarter as one of four equal parts. Make arrays to find division facts for ½ and ¼.

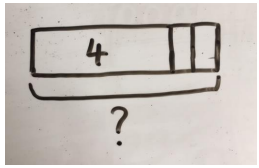
Begin to illustrate that addition can be done in any order and to recognise that more than two numbers can be added.

10 +7 = 17 7 + 10 = 17

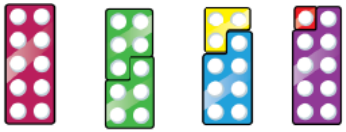
5 + 3 +2 =

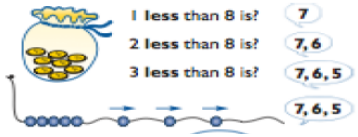


Children will be experience using the bar models to encourage counting on rather than counting all as an alternative strategy.

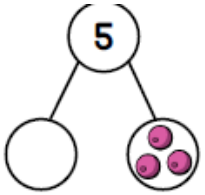


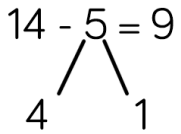
Children will build on their fluency of number bonds.





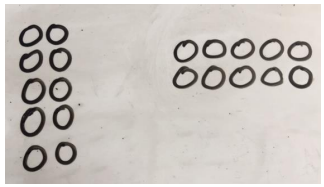
Children will begin to subtract by partitioning a number.



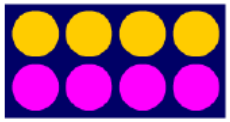


14 – 4 = 10 10 – 1 = 9

Children will begin to understand multiplication as repeated addition and as an array in context e.g. eggs in a box and cakes in a tin.



Children will understand relating vocabulary relating to multiplication.
e.g.
5 x 2
2 lots of 5
5 multiplied by 2
5 '2 times'
5+5 is the same as 2 x 5



Equipment:
Numicon
Counters
Bead strings
Cubes
Dice
Number lines
Number tracks
Number tiles
Coat hangers & pegs
Practical counting equipment
Dishes/hoops
Socks/gloves
10 frames
Base 10
Money- coins