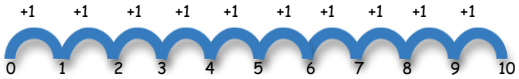
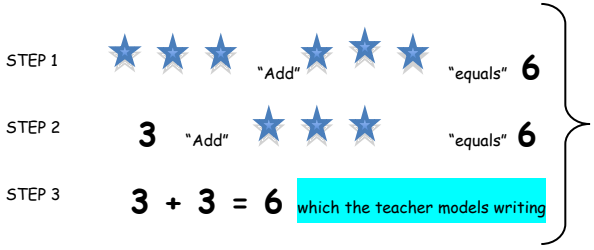
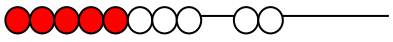
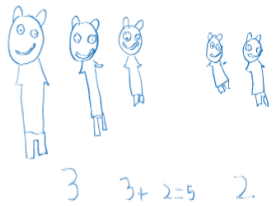
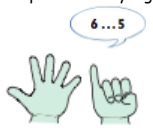
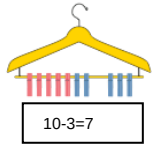
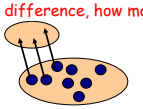
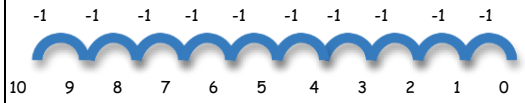
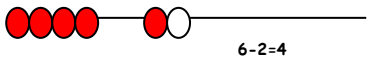
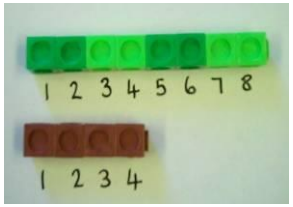
In order to encourage children to work mentally, calculations should always be presented horizontally so children can make decisions about how to tackle them.

	National Curriculum	Guidance	Addition To be taught alongside each other Subtraction	Vocabulary
Foundation 2 - Using numbers to 20	Children count reliably with numbers from one to 20, place them in order and say which number is one more or one less than a given number. Using quantities and objects, they add and subtract two single-digit numbers and count on or back to find the answer. They solve problems.	Within play and other practical situations, the child counts and orders numbers from 1-20 and finds one more or one fewer than a given number. Using every day and play objects, the child applies a range of strategies to add and subtract quantities involving two single-digit numbers such as counting on to add and counting back to subtract. In a range of practical and play contexts the child explores and solves problems involving doubling, halving and sharing, utilising his or her own methods.	**Addition** Teachers will model addition using a range of practical resources When using fingers to model counting always begin with open palms, 1= left thumb through to 10= right thumb.  6 is 5 and 1 more 6 = 5 + 1  10 = 7 + 3  4+3=7 When counting on, the link with calculating must be explicit:  +1 +1 +1 +1 +1 +1 +1 +1 +1 +1 0 1 2 3 4 5 6 7 8 9 10 0 add 1 equals 1, 1 add 1 equals 2, 2 add 1 equals 3… Children will also experience counting in tens, five and twos. Starting and finishing at different numbers is important as this will help them with addition calculations as they progress. First, children will 'count all' to combine two groups of objects. When this is secure, they will begin to count on. For example, when one group of objects is hidden. Then they will move on to full number sentences. Children should understand the = symbol as 'the same as'.  STEP 1 "Add" "equals" 6 STEP 2 3 "Add" "equals" 6 STEP 3 3 + 3 = 6 which the teacher models writing Begin to relate the addition of doubles to counting on as well as showing the **inverse e.g. 6 – 3 = 3** Bead strings or bead bars should be used to model addition.  8+2=10 As well as practical objects, children should use number tracks, progressing to number lines when understanding is secure. Children are encouraged to develop a mental picture of the number system in their heads to use for calculation. They develop ways of recording calculations using pictorial representations.  3 3+ 2=5 2. **Subtraction** Teachers will model subtraction using a range of practical resources. Begin to relate subtraction to taking away and counting how many are left. When using fingers to model counting back always use open palms; 10 represented by right thumb, to 1 on left thumb.  6…5  10-3=7 Understand the concept of subtraction by comparing two objects to find difference, how many more or less e.g.  *There are eight biscuits on this plate. Take three of the biscuits to eat. How many biscuits are left on the plate?*  *What is the difference between the number of grey rabbits and the number of white rabbits?*  *I have 6 toy cars but wanted to have seven. How many more cars do I need to make seven?* When counting back, the link with calculating must be explicit:  -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 10 9 8 7 6 5 4 3 2 1 0 Bead strings or bead bars can be used to illustrate subtraction:  6-2=4 10 subtract 1 equals 9/ 1 less than 10 / 10 take away 1 equals 9 Children will also experience counting in tens, five and twos. Starting and finishing at different numbers is important as this will help them with subtraction calculations as they progress. As well as practical objects, children should use number tracks, progressing to number lines when understanding is secure. Children are encouraged to develop a mental picture of the number system in their heads to use for calculation. They develop ways of recording calculations using pictorial representations. "This is 4 more than 4" "This is 4 less than 8"   1 2 3 4 5 6 7 8 1 2 3 4 Children will begin to experience the language of 'the difference' using daily routines as a context for learning. For example, comparing the blocks to see how many packed lunches/ school dinners there are on a given day.	add, more, and make, sum, total altogether score double one more, two more, ten more… how many more to make… ? how many more is… than…? take (away), leave how many are left/left over? how many have gone? one less, two less… ten less… how many fewer is… than…? difference between is the same as

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	National Curriculum	Guidance	Multiplication To be taught alongside each other	Division	Vocabulary
Foundation 2 - Using numbers to 20	**Early Years Foundation stage** **ELG 11 Numbers:** Children count reliably with numbers from one to 20, place them in order and say which number is one more or one less than a given number. Using quantities and objects, they add and subtract two single-digit numbers and count on or back to find the answer. They solve problems, including doubling, halving and sharing.	**Explanatory note:** *Within play and other practical situations, the child counts and orders numbers from 1-20 and finds one more or one fewer than a given number.* *Using every day and play objects, the child applies a range of strategies to add and subtract quantities involving two single-digit numbers such as counting on to add and counting back to subtract.* *In a range of practical and play contexts the child explores and solves problems involving doubling, halving and sharing, utilising his or her own methods.*	Children will experience equal groups of objects. They will count in 2s and 10s and begin to count in 5s. They should 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 should also be using doubling to compliment halving. "I have twice as many sweets". "Double the amount of coins you have"	Children will understand equal groups and share items out in play and problem solving. They will count in 2s and 10s and later in 5s.  Children should experience halving in context e.g. halving apples, sandwiches etc Children should have opportunities to practice finding halves of numbers to 10 in practical activities. Children should have opportunities to explore division by sharing objects out equally "One for you, one for me…" Equipment: Numicon Counters Beadstrings Cubes Numberlines Number tracks Number tiles Coat hangers & pegs Practical Counting equipment Dishes/hoops Socks/Gloves	Equal sets/groups Half/halve, double Share