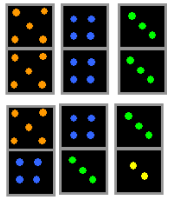
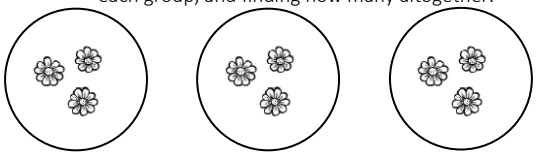
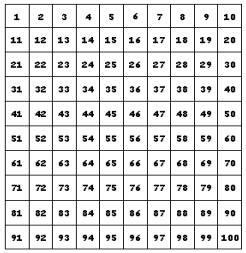
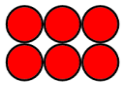
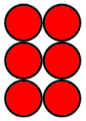
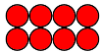
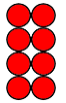
Multiplication

Foundation	Year 1	Year 2
• Children count reliably with numbers from 1 to 20. • They solve problems, including doubling, halving and sharing.	• solve simple one-step problems involving multiplication and division, calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher.	• recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers. • calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs. • show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot. • solve one-step problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts. • recognise and use the inverse relationship between multiplication and division in calculations.
• Counting in ones, twos, tens. • Introduce odd and even numbers. • Matching pairs e.g. socks.  • Songs and rhymes. • Finding doubles in dominoes.  • Repeated addition in practical contexts. • Groups of objects with the same number, counting how many in each group, and finding how many altogether.  • Use Numicon with an emphasis on doubling to reinforce all of the above visually.	• Counting in twos, fives and tens. • Knowing doubles of numbers to 10. • Finding patterns of numbers using 100 square. • Recognise odd and even numbers.  • Understand the operation of multiplication as repeated addition or as describing an array. E.g. This array represents 2 x 3 or 3 + 3  This array represents 3 x 2 or 2 + 2 + 2  • Repeated addition of sets of objects, teacher modelling, e.g. 3+3+3= 9. • Use coins for repeated addition  • Find simple fractions (½ or ¼) of objects, numbers, quantities and shapes. • Solve simple problems using resources and drawings/pictorial representations to support, e.g. *There are 5 kennels with 2 dogs in each. How many dogs are there altogether?*	• Learn 2x, 5x and 10x tables by heart. • Practice counting in 3s. • Connect the 10 times table to place value and the 5 times table to clock face divisions. • Know doubles of all numbers up to 10 and doubles of multiples of 10 to 100. • Continue to reinforce meaning of multiplication using manipulatives (arrays and repeated addition)  2 x 4 or 4 + 4  4 x 2 or 2 + 2 + 2 + 2 • Recognise that division is the inverse of multiplication. • Know that multiplication is commutative, e.g. 3 x 5 = 15 and 5 x 3 = 15. • Begin to use other times tables facts and derive related division facts. E.g. 7 x 2 = □ □ = 2 x 7 7 x □ = 14 14 = □ x 7 □ x 2 = 14 14 = 2 x □ 14 ÷ 2 = 7 14 ÷ 7 = 2 • Solve one-step problems involving multiplication using resources and pictorial representations to support, e.g. *6 children each buy 10 stickers. How many stickers did they buy in total?* • Find fractions (1/3, ¼, ½ or 3/4) of objects, numbers, quantities and shapes.