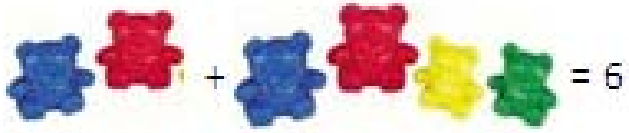
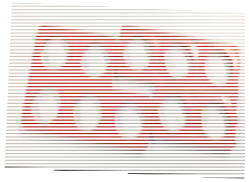
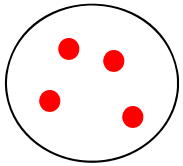
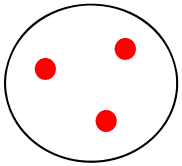
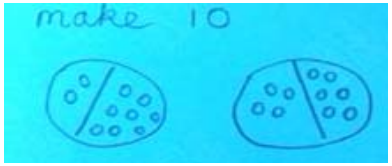
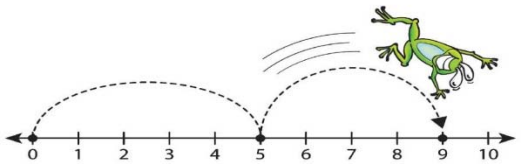
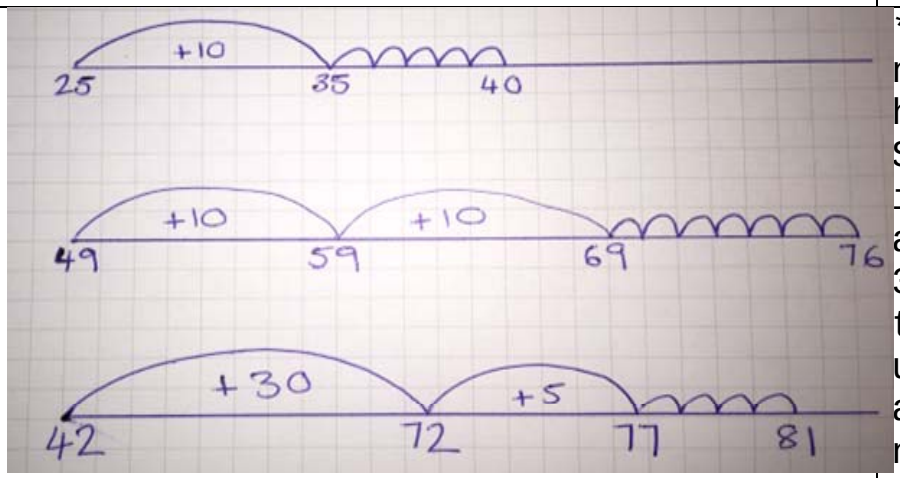
Calculation Strategies: Addition

Progression	Exemplification	Notes
Step 1 Counting objects	There are 4 tedd Ensure children physically move the objects as they are counting. This will support I have 4 teddies, if I add 3 more I will have 7 teddies. 	*Children need to develop confidence in counting objects or pictures; progression is by adding more objects and recounting. *Early addition is taught through number stories and rhymes. Use photographs and pictures to record evidence of learning at this stage.
Step 2 Introduction of the symbols of *add* and *equals.*	  5 + 5 =   4 + 3 = 3 4 + = 7 	*Ensure children understand and are fluent in using the language of addition. *Children need lots of practical experience of making sets of amounts to form a number sentence. *Ensure children have a secure understanding of equality; include number sentences which have the equals sign on the left, i.e __ = 6 + 5

<u>Step 3</u> Numbered lines	5 + 4 = 9  Start with children jumping in ones and then progress to a single	*Children use numbered lines to count on. *Teach children to put the largest number first and then count on the smaller number.
<u>Step 4</u> Empty number line and 100 squares	25 +15= 49 + 27=  	*Prior to adding two 2 digit numbers, children need to have secure place value. Start with calculations involving a 2 digit number added to a multiple of 10 (ie 32 + 20) Children can solve these calculations by jumping up and back on 100 squares and adding in tens on a number line. Progress to calculations which include *ones* digits (ie 34 + 25) *Demonstration and modelling of use of number lines is essential.

Step 5 Partition to add.	PROGRESSION 26+ 13 = 26 + 13 = 20 + 10 = 30 6 + 3 = 9 30 + 9 = 39 26 + 18 = 26 + 18 = 20 + 10 = 30 6 + 8 = 14 30 + 14 = 54	*Progress to crossing the tens boundary. * Children need to be taught to choose which strategy is most efficient, i.e. partitioning to add or column addition.
Step 7 Column addition	Column Addition 145 + 23 = 168 76 + 54 = 130 (1) 245 + 371 = 616 (1) 43.4 + 21.3 = 64.7 Ensure chn can convert horizontal addition number sentences into column	*Begin using calculations that do not require carrying. Children place the + symbol on the right of the calculation as a visual prompt to start with the ones. *Introduce carrying once children are accurate with layout and process of column addition. *The terminology is *carrying* and refer to the *carried over* digit