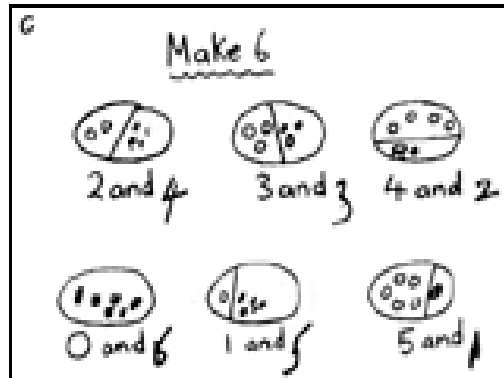


PROGRESSION THROUGH CALCULATION FOR ADDITION

Stage One

Children are encouraged to add by combining sets of objects. They will use different objects in different situations to get used to adding in a variety of contexts.



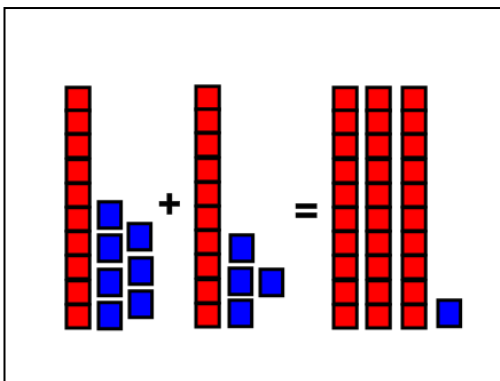
Stage 2

Children will learn the meaning of =. They will write their own number sentences for the addition calculations they have completed.

$$2 + 3 = 5 \text{ and } 2 + 3 = 1 + 4$$

Stage 3

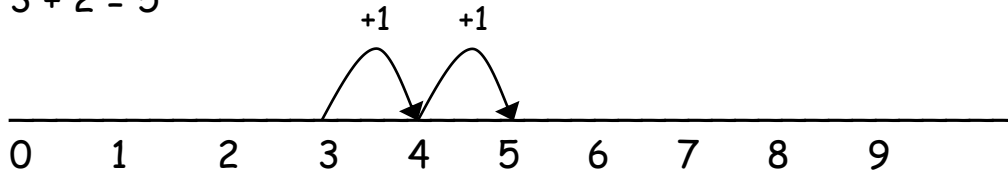
Children will develop an understanding of the concept of exchange. They will become aware that when they combine two sets with a total larger than 10, they make a number with tens and ones.



Stage 4

Children will use number lines to count on. They will learn to start at the larger number and jump on to find the total.

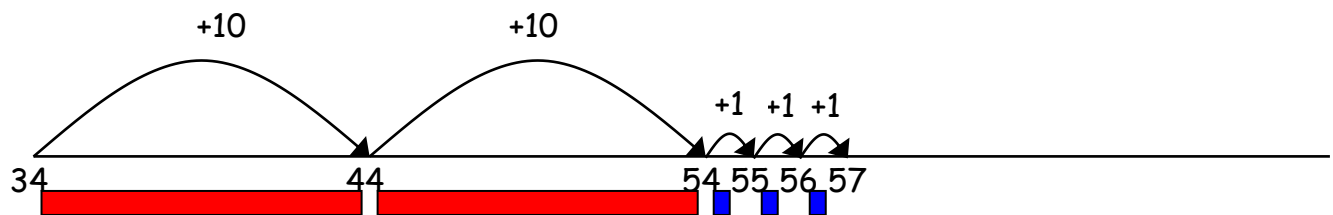
$$3 + 2 = 5$$



Stage 5

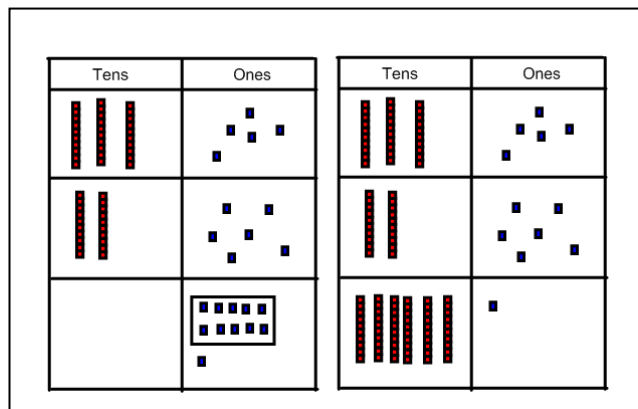
Children then begin to use empty number lines to support their own calculations starting with the larger number and then adding by counting on in ones and then in steps. Dienes can be used to show the value of each jump to reinforce place value.

$$34 + 23 = 57$$



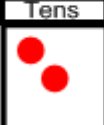
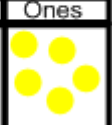

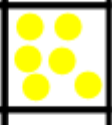
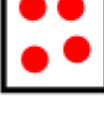
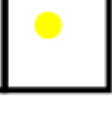
Stage 6

Children will begin to use columns to add. They will use Dienes to support this. Numbers can be written alongside, but practical resources must be used. Dienes will be used so children can see the value of each object.



Stage 7

Children will continue to use columns. They will use counters to represent digits. They will begin to make links between this and formal column addition.

Tens	Ones
	
	
	

$$\begin{array}{r} 25 \\ + 16 \\ \hline 41 \\ \hline 1 \end{array}$$

Stage 8

Children should use the formal column method for addition.

$$\begin{array}{r} 7648 \\ + 1486 \\ \hline 9134 \\ \hline 111 \end{array}$$

$$\begin{array}{r} 6584 \\ + 5848 \\ \hline 12432 \\ \hline 111 \end{array}$$

$$\begin{array}{r} 42 \\ 6432 \\ 786 \\ 3 \\ + 4681 \\ \hline 11944 \\ \hline 121 \end{array}$$

Addition vocabulary

All vocabulary can be used throughout all year groups and a range must be used. Posters to display vocabulary need be accessible for children in all classrooms.

Add, Addition, More, Plus, Increase, Sum, Total, Altogether, How many more?