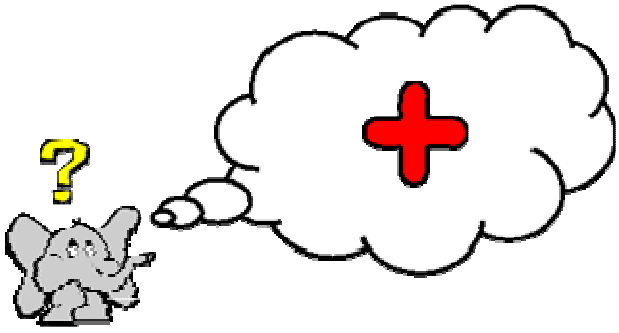
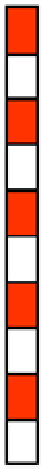
Progression in Teaching Addition

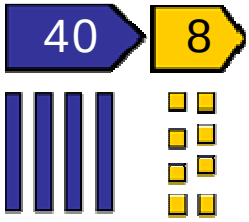
Mental Skills

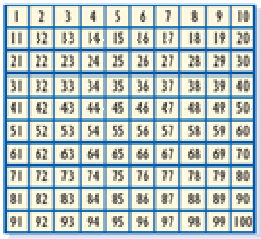


Recognise the size and position of numbers
Count on in ones and tens
Know number bonds to 10 and 20
Add multiples of 10 to any number
Partition and recombine numbers
Bridge through 10

Models and Images



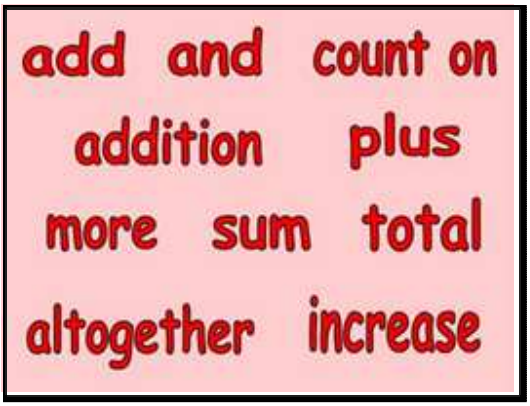




Counting apparatus
Place value apparatus
Place value cards
Number tracks
Numbered number lines
Marked but unnumbered number lines
Empty number lines
Hundred square
Counting stick
Bead string
Models and Images charts
ITPs – Number Facts, Ordering Numbers, Number Grid, Counting on and back in ones and tens

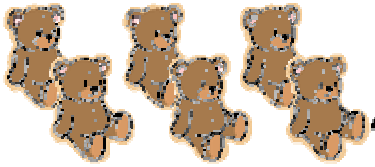
Key Vocabulary

add
addition
plus
and
count on
more
sum
total
altogether
increase



Recognise numbers 0 to 10

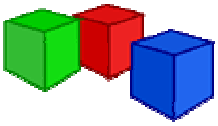
0 1 2 3 4 5 6 7 8 9 10



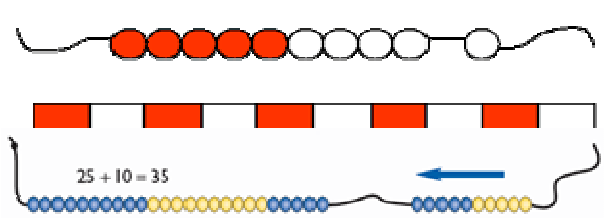
1, 2, 3, 4, 5, 6 …thereare6 teddies

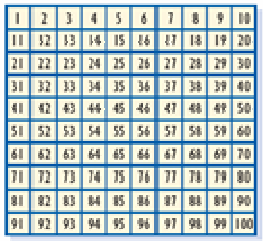
Count reliably up to 10 everyday objects

Find one more than a number



One more than three is four

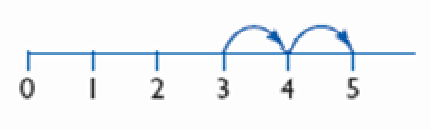




Count in ones and tens

Begin to relate addition to combining two groups of objects

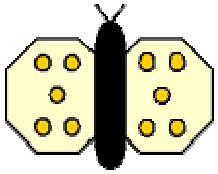
3 + 2 = 5



Count along a number line to add numbers together

Begin to use the + and = signs to record mental calculations in a number sentence

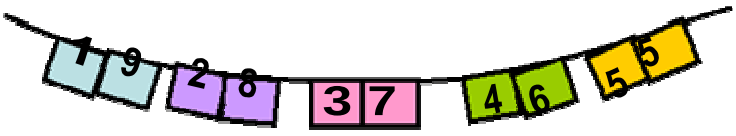
6 + 4 = 10

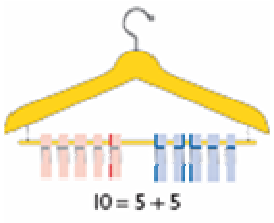


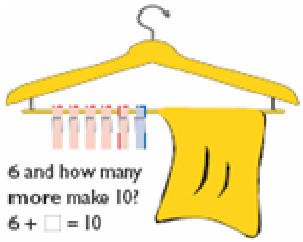
5 + 5 = 10

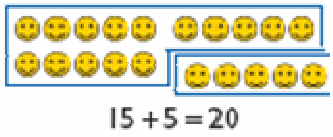
Know doubles of numbers

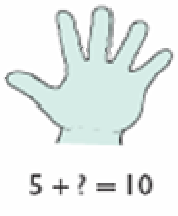
Know by heart all pairs of numbers with a total of 10 and 20

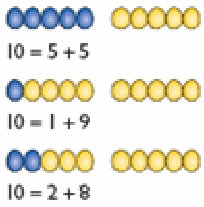


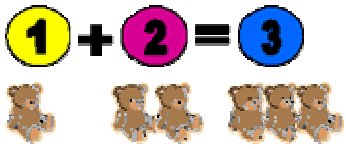


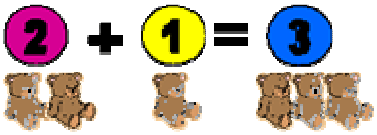


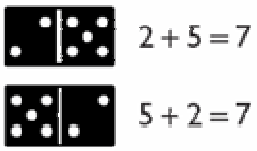


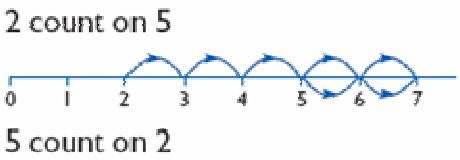






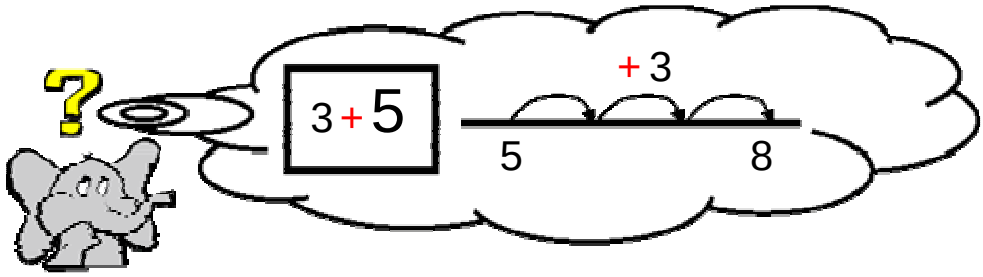


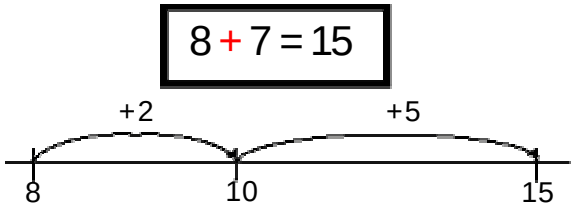




Know that addition can be done in any order

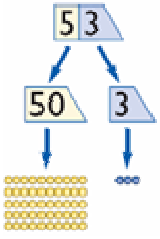
Put the biggest number first and count on



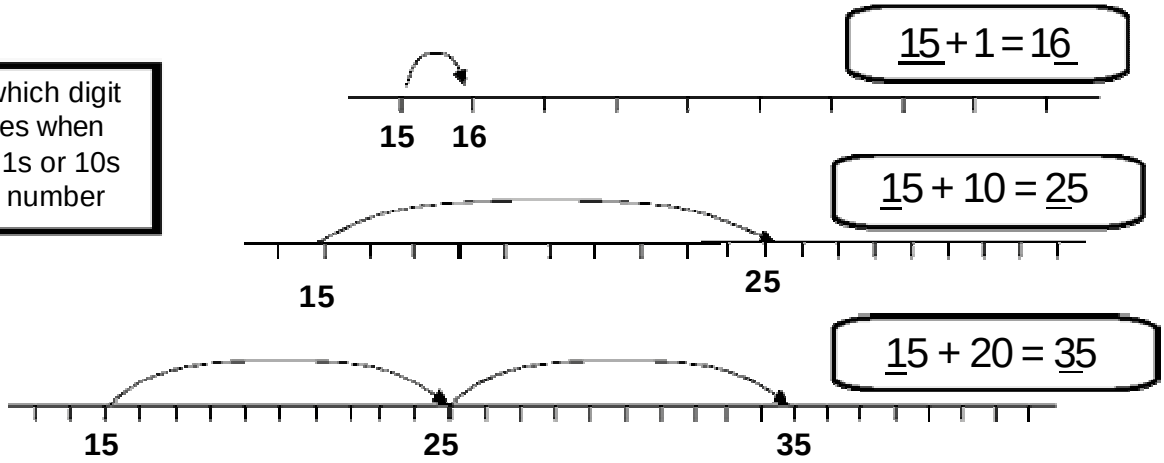


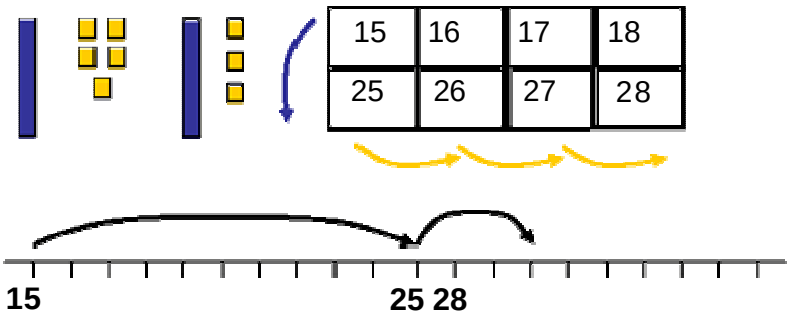
Add two single-digit numbers that bridge 10

Begin to partition numbers in order to add



Know which digit changes when adding 1s or 10s to any number



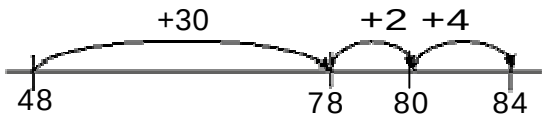


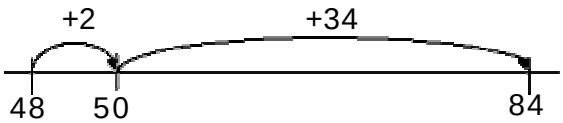
Adding two two-digit numbers (without bridging)

Counting in tens and ones

Partitioning and recombining

15 + 13 = 28



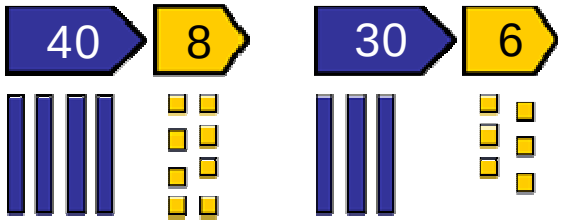


Adding two two-digit numbers (bridging through tens boundary)

Using a number line

OR

Using place value cards and place value apparatus to partition numbers and recombine



48 + 36 = 84

40 + 30 + 8 + 6

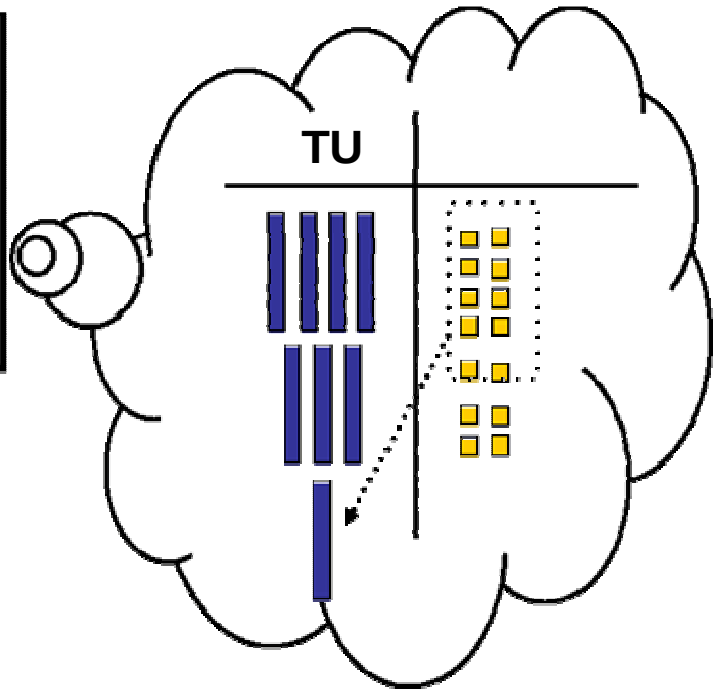
40 + 30 = 70

8 + 6 = 14

70 + 14 = 84

Expanded method

It is important that the children have a good understanding of place value and partitioning using concrete resources and visual images to support calculations. The expanded method enables children to see what happens to numbers in the standard written method.



48 + 36

48

\+ 36

40 + 8	48
30 + 6	+ 36
80 + 4	14 (8+6)
10	+ 70 (40+30)

4 8

\+ 3 6

1

Standard written method

The previous stages reinforce what happens to the numbers when they are added together using more formal written methods.