Welcome to the parent's workshop about addition and subtraction from Years 3-6

23.9.14

Vocabulary

Addition

Plus
And
Total of
Altogether Increased By
Combined Add Sum
Together More Than
Added To
In All
Make

Subtraction

Subtract Gave Take Away
Decrease By Fewer Minus
Shared Fewer Than Less Than
Difference Less

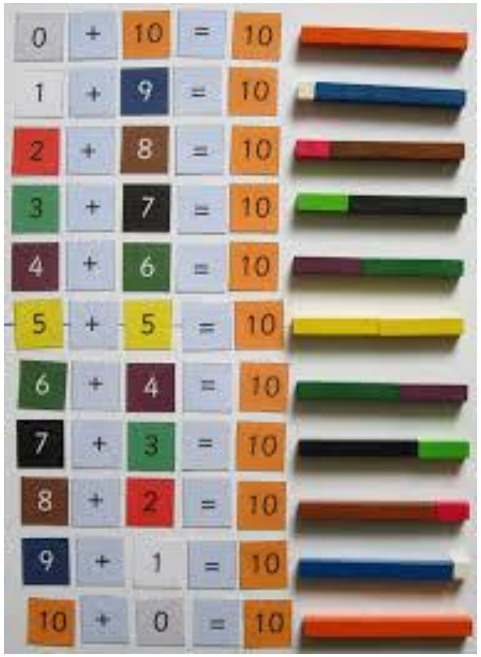
When solving a word problem children need to identify 'key words' that help them decide whether they should add or subtract.

Mental before Written

Early practical, oral and mental work lays the foundation by providing children with a good understanding of addition and subtraction.

In the Infants, there is more of a focus on counting strategies, understanding place value and knowing number facts *(e.g. all addition and subtraction facts to 10).*

Number bonds



Number bonds in all forms are vital!

7 + 3 = 10

10 = 3 + 7

10 – 3 = 7 etc.

A secure knowledge of number bonds will help children to cope with, and feel confident with larger numbers.

e.g. 70 + 30 = 100

Now let's look at some games!

	12		14	15
21	22			
		43		45
51				55

Adding/subtracting multiples of 10

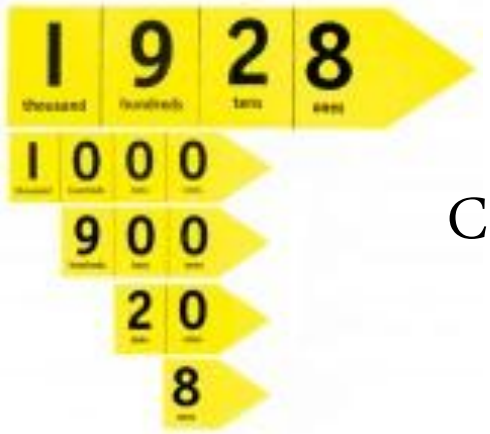
When children count forwards and backwards in tens from any given number, they should recognise that the tens digit will change, while the units digit remains the same.

23 + 30 = 53

Then, they will progress to crossing the hundreds boundary.

46 + 60 = 106

- Start at 3
- Count in 10s
- What number do you get to in 1 minute?



Place Value

Children need to recognise what each digit in a number represents.

Partition – splitting a number up

e.g. 1928 =

Recombine – putting a number back together

e.g. 1000 + 900 + 20 + 8 =

Bridging through 10

Children will begin by adding/ subtracting single digit numbers below 10,

e.g. 3 + 5, 9 - 4

...then start crossing over 10 (bridging)

e.g. 8 + 7, 13 – 5

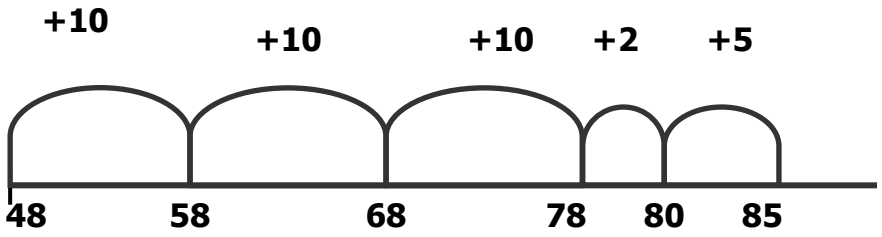
...finally crossing over multiples of 10

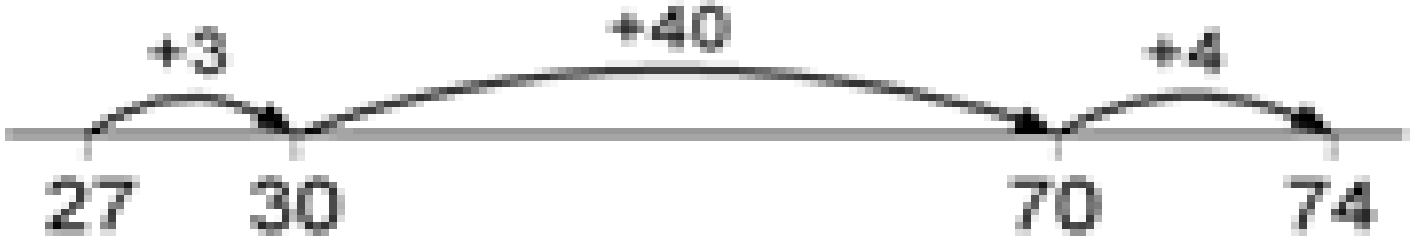
Informal method -

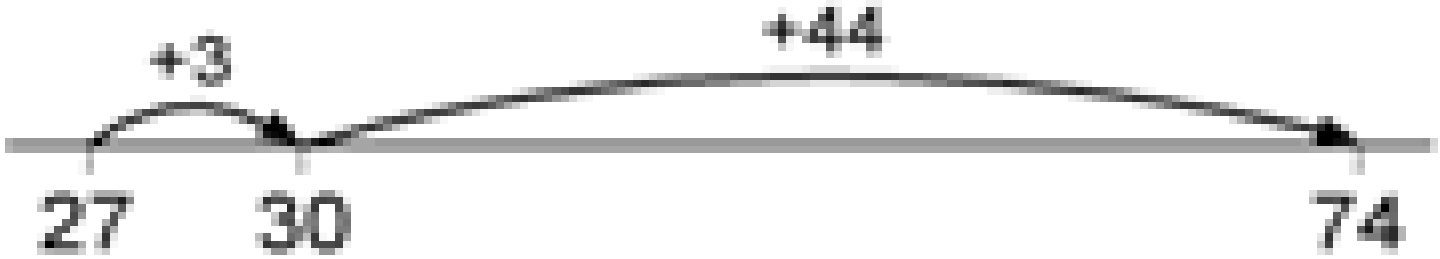
using a number line

(progress from labelled, marked, to empty)

The empty number line helps to record the steps needed on the way to calculating an answer. The steps often require partitioning and/or bridging through a multiple of 10.




+3
+40
+4
27
30
70
74


+3
+44
27
30
74


−20
−3
−4
47
67
70
74

Formal method –

Column addition and subtraction

Initially, we use calculations that don't involve carrying or exchanging so that children learn how to set their calculations out (using place value). This is extremely important!

Without carrying

	T	U
	5	4
+	2	3
	7	7

With carrying

	T	U
	3	8
+	2	9
	6	7
	1	

Without exchanging

	T	U
	7	4
-	2	3
	5	1

With exchanging

	T	U
	$6\not{7}^{1}$	8
-	2	9
	4	9

Please remember ...

- **that each child is an individual and all children develop their mathematical understanding at a different pace.**

- **you can help your child by:**

*trying to weave maths activities into everyday life

*show them how to do it (but don't do for them)

*ask them to explain how they worked it out

*be positive, give plenty of encouragement and let them know it's OK to make mistakes.

Useful resources

1. Place value chart
2. Place value arrow cards
3. Hundred Square
4. Labelled number line
5. Marked number line
6. Empty number line
7. Vocabulary

Useful websites

- http://www.ictgames.com/resources.html
- http://www.topmarks.co.uk/maths-games/5-7-years/addition-and-subtraction
- http://resources.woodlands-junior.kent.sch.uk/maths/numberskills.html
- http://resources.woodlands-junior.kent.sch.uk/maths/interactive/

Any questions?

Thank you very much for joining us!