



WHITCHURCH  
COMBINED SCHOOL

# Addition & Subtraction



## A guide for parents

If you were brought up on pages of 'hard sums' you may think maths is difficult and boring. Worse than that you may think you're not very good at it!

At Whitchurch we believe that maths is a fun subject and an understanding and "love" of numbers come from practical activities and a clear progression in the recording methods used across the school.

If what you remember as maths is pages of calculations you may sometimes feel confused when your child's maths book contains writing, pictures, diagrams, jottings or blank number lines and not many 'formal calculations'. This is because written calculations are not the ultimate aim: the aim is for children to do calculations in their heads and, if the numbers are too large, to use a way of writing them down that helps their thinking.

Here we try, as simply as possible, to help you to help your children. We will take you through the ideas relating to children's number development from the earliest counting and mental skills to their recording of calculations to support thinking.

## Reception

In reception we aim to foster an understanding of numbers and where they sit in relation to each other.

**Addition** will take the form of:



Practical activities and discussions



Finding one more than a number from 1 to 10



Using vocabulary associated with addition

**Subtraction** will take the form of:



Practical activities and discussion



Finding one less than a number from 1 to 10



Begin to relate subtraction to 'taking away'

When written all digits should be started from the top.

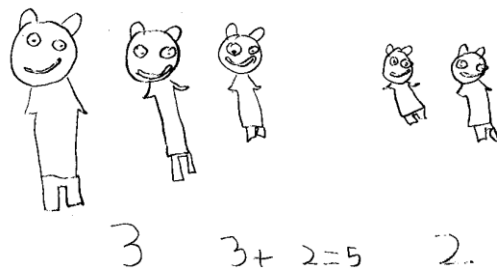
## Year 1




The children have a daily mixture of practical, mental and oral work including lots of counting, talking about numbers and using numbers in real life activities.

They begin to record what they've done with pictures and numbers. These recordings will help them to understand what is happening and to show how they've worked something out.

**Addition** will take the form of:

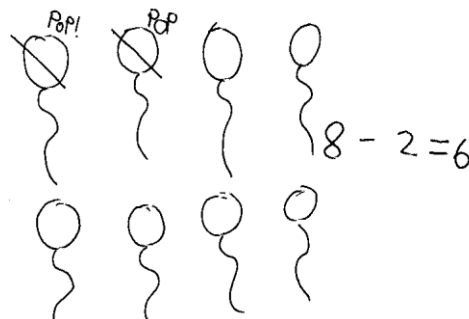
*Jane had 3 bears. She was given 2 more. How many does she have now?*





-  Begin to use the + and = sign to record mental calculations
-  Know by heart all number bonds to 10
-  Use knowledge to know that addition can be done in any order to do mental calculations more efficiently

**Subtraction** will take the form of:

*There were 8 balloons. Two popped. How many are left?*

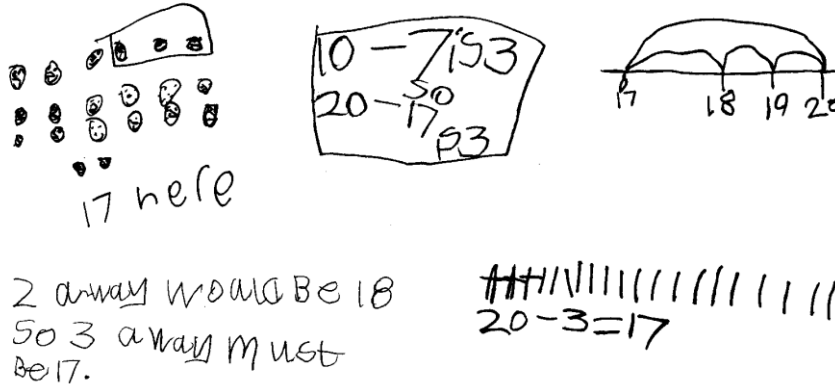


-  Begin to use the – and = sign to record mental calculations
-  Know by heart all subtraction facts to 10







## Year 2

In year 2 the children will use a mixture of drawings and numbers as they progress through the year. An example is shown below.

*There are 20 children in our class. Three are away today. How many are here?*



**Addition** will take the form of:

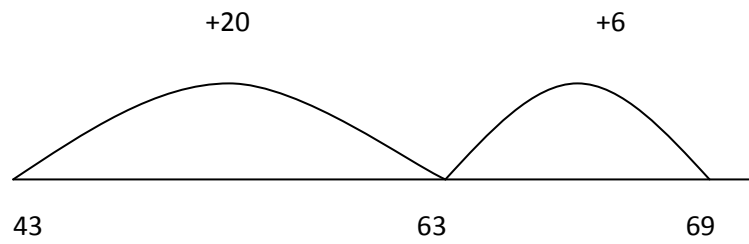
-  Adding three single digit numbers mentally
-  Know by heart all number bonds to 20
-  Use + and = to record mental calculations
-  Use a number line to make jottings
-  Use a number line to make informal jottings
-  Use partitioning to reflect mental methods Eg.  $47 + 78 = 40 + 70 + 7 + 8$

*In a school there are 43 boys and 26 girls. How many children are there altogether?*

Example 1       $43 + 26 =$

$$40 + 20 = 60$$
$$3 + 6 = 9$$
$$60 + 9 = 69$$

Example 2

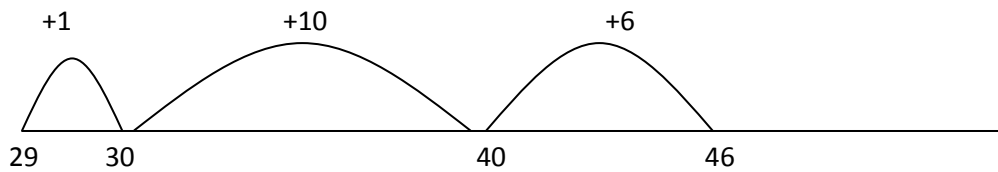


**Subtraction** will take the form of:



Know by heart all subtraction facts to 20

*One piece of rope is 46 metres long and the other is 29 metres long. How much longer is the first piece of rope?*



## Year 3

The children continue to use the number line and then some may progress onto vertical addition methods.

**Addition** will take the form of:



Using informal pencil and paper methods (jottings) and introducing vertical addition



Adding TU and TU moving into HTU using jottings (least significant digit first)

$$\begin{array}{r} 83 \\ + 42 \\ \hline 5 \\ + 120 \\ \hline 125 \end{array}$$

**Subtraction** will take the form of:

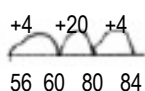


Using informal pencil and paper methods (jottings)



Use a number line to record complementary addition

$$84 - 56 = 28$$



=28

## Year 4

**Addition** will take the form of:



Vertical method starting with the least significant digit first, extended to bigger number

<p>The blue team's score of 287 points is increased by 145 points. What is the new score?</p> $  \begin{array}{r}  287 \\  + 145 \\  \hline  12 \\  120 \\  \hline  300 \\  432  \end{array}  $	<p>Explanation.....</p> <p>The language used is very important to help children understand the size of numbers being added</p> <p><i>(e.g. is it seven or seventy or seven hundred)</i></p> <p>seven plus five equals twelve</p> <p>eighty plus forty equals one hundred and twenty</p> <p>two hundred plus one hundred equals three hundred</p> <p>finally three hundred plus one hundred and twenty plus twelve equals four hundred and thirty two</p>
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These methods mean that children may have to write a little more at this stage but, because it helps and supports their understanding, it enables them to become much more confident and quicker in the long run.

**Subtraction** will take the form of:



Some children may continue to use the number line for larger numbers and decimals.



Partitioning; this method build on the mental methods they have learnt and should help children to understand what is happening. Here is an example of subtraction using partitioning. 563-248=

$$\begin{array}{r}
 500 + 60 + 3 \\
 - 200 + 40 + 8 \\
 \hline
 500 + 50 + 13 \\
 - 200 + 40 + 8 \\
 \hline
 300 + 10 + 5 \\
 563 - 248 = 315
 \end{array}$$



## Year 5

During year 5 children learn to shorten the decomposition methods that they have used previously, whilst still having a strong sense of each number's place value.

**Addition** will take the form of:



Some children may continue to use the number line for larger numbers and decimals



Children using the compact layout involving carrying

$$\begin{array}{r} 368 \\ + 491 \\ \hline 859 \end{array}$$

**Subtraction** will take the form of:



Decomposition extended to decimals and larger numbers



Contracted recording of decomposition

## Year 6

During Year 6 the children confidently apply the methods that work for them and becoming more accurate across large numbers and extended decimals.

**Addition** will take the form of:



Compact addition using carrying for thousands, hundreds, tens, units and decimals



Consolidation of methods used in year 5

**Subtraction** will take the form of:



Consolidation of methods used in year 5



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## NOTES OF CHANGES

Remember on year 5 page move the 1 on the addition

Show the decomposition on the subtraction