

Primary Mathematics

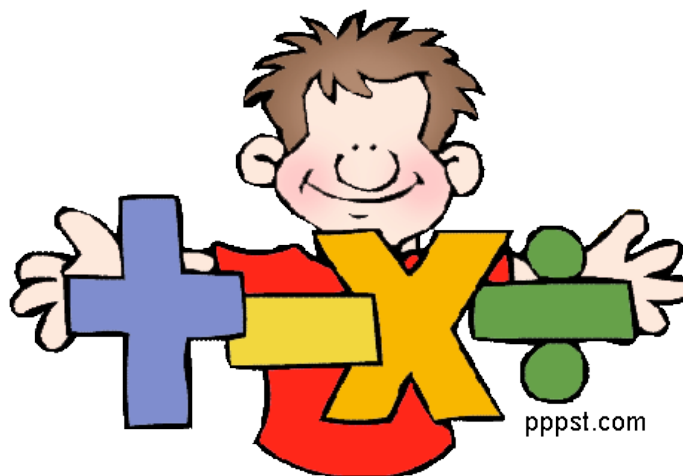
Mathematics in Primary Schools has developed and changed over the years and it continues to do so.

At Fingringhoe Primary School we have developed a policy for the progression of written methods used in the teaching and learning of the four rules of numbers (addition, subtraction, multiplication and division).

As your child progresses through our primary school, they will be taught written methods that will support their developing understanding of the four rules of number. All teachers on the staff have agreed on the methods taught and we believe these to be the most effective methods to support your child's development within this area of Maths.

Each method builds on the one before it, so within one class of children there may be several methods in use. No child is pressured to use a method that he or she doesn't feel comfortable with, or **more importantly** does not understand.

We hope you find the session today useful and as always, if you have any queries or concerns regarding your child's progress within Maths, please see your child's class teacher and/or the Mathematics Subject Leader (Mrs.Crowe).

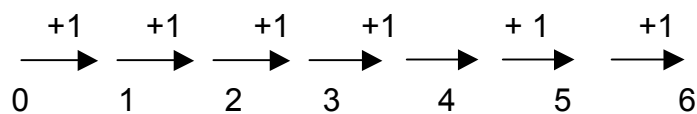


Addition:

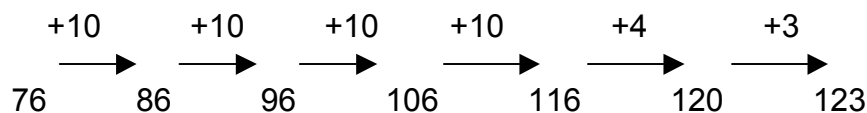
Your child will begin to learn about the concept of Addition through **practical play** and **exploration** e.g. grouping objects etc.

When they are ready they will be introduced to supporting their thinking by using simple number sentences and a number line:

Step 1:

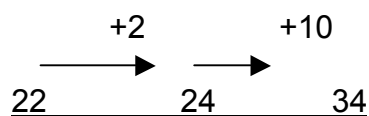


Step 2:



Step 3:

Example: $12+22 = (2+2) + (10+20)$ or
 $12+22 = (22+2) + 10$



Step 4:

$$\begin{array}{r} 47 \\ + 76 \\ \hline 13 \text{ - units} \\ 110 \text{ - tens} \\ \hline 123 \end{array}$$

Note: Children don't need to record the words "units" and "tens" unless they find this useful.

Step 5:

$$\begin{array}{r} 368 \\ + \underline{493} \\ 11 \\ + 150 \\ \underline{700} \\ 861 \end{array}$$

Step 6:

Example:	47	47
(1 carry) +	<u>26</u>	+ <u>26</u>
	13	<u>73</u>
+	<u>60</u>	1
	<u>73</u>	

Example	47	47
(2 carry) +	<u>76</u>	+ <u>76</u>
	13	<u>123</u>
+	<u>110</u>	11
	<u>123</u>	

Step seven:

Extending step six with larger numbers and decimal numbers. Pupils may need to initially revert to a more expanded layout before being confident and independent with the compact layout when adding larger numbers and decimals.

Subtraction:

Once your child is secure with addition his or her teacher will introduce subtraction.

Step one:

Count on and back in ones up to 10.

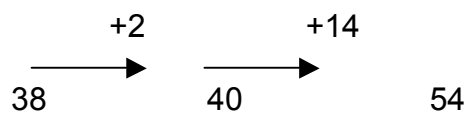
Find one more and one less using apparatus e.g. counters etc.

Respond to “*how many are left?*” questions e.g. relate subtraction to taking away: We ate 2 of our 6 jellybeans – how many are left? – Use apparatus to support.

Step two:

Build on the mental methods the children already have, including the comparison of addition and subtraction. Use empty number lines to **count on** from the smaller number to the **nearest ten**, then hundred if it is needed.

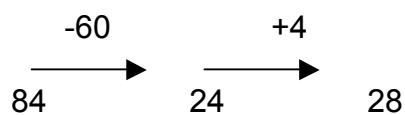
Example $54 - 38 = 16$



Step three:

Compensation: Taking off too much and then adding it back on e.g.

$84 - 56 = (84 - 60) + 4 = 28$



Step four:

Pupils now need to be shown decomposition to prepare them for transfer to secondary school. When pupils are secure at step three they can be shown decomposition. Pupils need to have a **sound understanding of place value**.

Experiencing the expanded method can help pupils to understand the process of decomposition.

Example:

$$663 - 37 =$$

$$\begin{array}{r} 600 + 60 + 3 \\ - \quad \quad 30 + 7 \\ \hline \end{array}$$

=

$$\begin{array}{r} 600 + 50 + 13 \\ - \quad \quad 30 + 7 \\ \hline \end{array}$$

=

$$\begin{array}{r} 500 + 150 + 13 \\ - \quad \quad 30 + 7 \\ \hline \\ 120 + 6 \end{array}$$

$$= 626$$

Step five:

Standard written method. This method can also be used with decimal numbers and is the **most efficient** written method. When introducing this method your child's teacher may encourage using decomposition alongside the standard written method so that it is clear for your child to see what is happening.

Example:

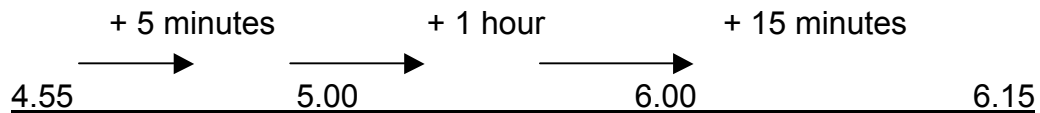
$$663 - 378 =$$

$$\begin{array}{r} 663 \\ - 378 \\ \hline \\ \hline \end{array}$$

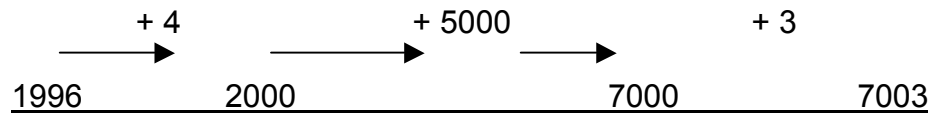
NOTE:

The empty number line is useful to use at any stage of development for the following areas:

Elapse time e.g. find the difference between 04.55 and 06.15



Numbers containing zeros e.g. $7003 - 1996 =$



Conversion in measure – capacity, length etc. e.g. $5\text{kg} - 375\text{g} =$

