How to support your child in Maths in Year 3

The main focus of mathematics teaching in Year 3 is to ensure that pupils become increasingly fluent with whole numbers and the four operations, including number facts and the concept of place value. This should ensure that pupils develop efficient written and mental methods and perform calculations accurately with increasingly large whole numbers.

Number and Place value

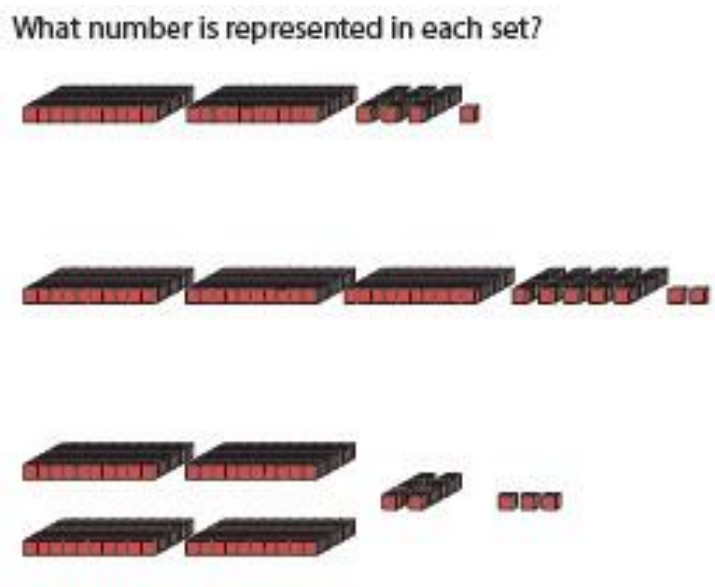
Children should already be able to:

- *count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward*
- *recognise the place value of each digit in a two-digit number (tens, ones)*
- *identify, represent and estimate numbers using different representations, including the number line*
- *compare and order numbers from 0 up to 100; use <, > and = signs*
- *read and write numbers to at least 100 in numerals and in words*
- *use place value and number facts to solve problems.*

New learning:

- *Recognise the place value of each digit in a three-digit number (hundreds, tens, ones)*
- *Find 10 or 100 more or less than a given number*
- *Count from 0 in multiples of 100*
- *Count from 0 in multiples of 4, 8 and 50*
- *Count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10*

Example of deeper understanding:



Mental and written calculations

Addition and subtraction

Children should already be able to:

- *Add and subtract multiples of 10 and 100*
- *Add a single digit, bridging through boundaries (e.g. across 10s)*
- *Partition second number to add*
- *Know pairs of 100*
- *Use near doubles to add*
- *Add near multiples of 10 and 100 by rounding and adjusting*
- *Partition and recombine*
- *Subtract a single digit by bridging through boundaries*
- *Partition second number to subtract*
- *Find the difference between two numbers*
- *Subtract near multiples of 10 and 100 by rounding and adjusting*

New learning:

- *Check addition calculations using subtraction and addition and subtraction calculations using rounding*
- *Mentally add and subtract numbers including a three-digit number with ones, tens or hundreds*
- *Add and subtract amounts of money to give change, recording £ and p separately*

How we teach it

Addition

Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction

$$\begin{array}{r} 423 \\ +\ 88 \\ \hline 511 \\ 1\ 1 \end{array}$$

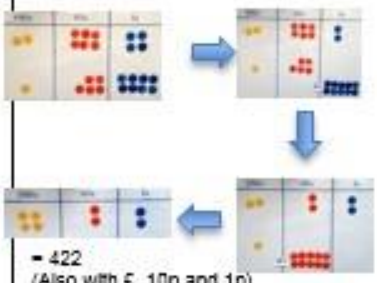
Number line: 264 + 158 efficient jumps

40 + 80 = 120 using 4 + 8 = 12
So 400 + 800 = 1200

243 + 198
by +200 then -2
(Round and adjust)

Pairs that make 100
23 + 77

Place value counters, 100s, 10s, 1s
264 + 158



= 422
(Also with £, 10p and 1p)

Subtraction

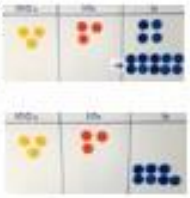
Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction

$$\begin{array}{r} {\scriptstyle 2\ 3\ 1} \\ 3\not{4}\not{4} \\ -\ 187 \\ \hline 157 \end{array}$$

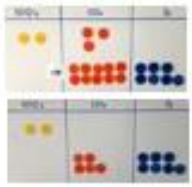
Taking away and exchanging, 344 – 187
Place value counters

Where's the one hundred and eighty and seven?

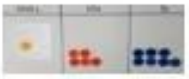
Exchange to create three hundred and thirty and fourteen. Now take away the 'seven'



Exchange to create two hundred, thirteen tens and seven Now take away the 'eighty'



Now take away the 'one hundred'

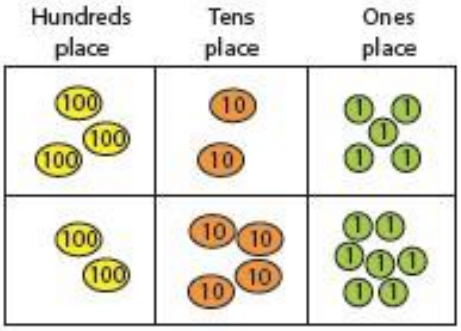


Add and subtract numbers mentally, including:

- a three-digit number and ones
- a three-digit number and tens
- a three-digit number and hundreds

Example of deeper understanding:

Solve calculations using a place value grid and equipment alongside a column method to demonstrate understanding.



$$\begin{array}{r} 325 \\ +\ 247 \\ \hline \\ \hline \end{array}$$

Sam has completed these calculations, but he is incorrect.
Explain the errors he has made.

$$\begin{array}{r} 325 \\ +\ 247 \\ \hline 581 \\ \hline \end{array} \qquad \begin{array}{r} 355 \\ -\ 247 \\ \hline 112 \\ \hline \end{array}$$

Multiplication and Division

Children should already be able to:

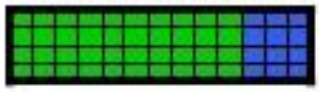
- *Know 2x, 5x and 10x and division facts*
- *4x table and division facts*
- *Double two digit numbers*
- *8 x table and division facts*
- *3 x table and division facts*
- *Halve two digit numbers* *New learning:*
- *Calculate mentally using multiplication and division facts for the 3, 4 and 8 multiplication tables, including two-digit numbers times one-digit numbers*
- *Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables*
- *Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one- digit numbers, using mental and progressing to formal written methods*

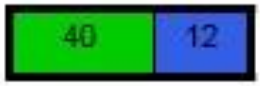
How we teach it:

Multiplication *Division*

If I know 10 x 8 = 80 then ...

So 13 x 4 = 10 x 4 + 3 x 4

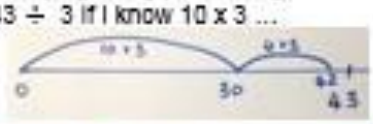




Build tables on counting stick

Grouping using partitioning

43 ÷ 3 if I know 10 x 3 ...



Use language of division linked to tables

How many 3s?

Example of deeper understanding:

Complete the following:

$3 \times \square = 12$ $4 \times \square = 20$

$\square \times 3 = 15$ $8 \times \square = 24$