Mental calculations that children should be able to recall quickly:

- Addition and subtraction facts for all numbers to 20
- All pairs of multiples of 100 with a value of 1000, e.g. 300+700
- All pairs of multiples of 5 with a value of 100 e.g. 35+65
- Multiplication facts for the 2, 3, 4, 5, 6 and 10 times tables and the associated division facts

Useful websites

Carr Hill Community Primary School

Ofsted Outstanding 2010|2011

Supporting Mathematics in Year 3

This booklet has been written to support parents and children in maths. It explains the different methods we use to solve +, -, x and ÷ calculations. It also includes some useful websites and activities to do at home.

Working Together for our Children
Carr Hill Community Primary School

Addition methods in Year 3

- Children may begin by partitioning numbers into hundreds, tens and units:

264 + 125 =

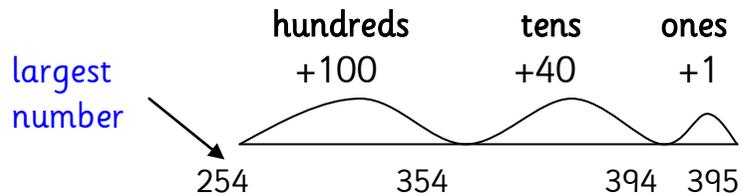|	
200 + 100 = 300	first add the hundreds
60 + 20 = 80	next add the tens
4 + 5 = 9	then add the units
300 + 80 + 9 = 389	find the total

Partitioning of 264
264 =
200 + 60 + 4

- They may then use a blank number line by starting with the largest number, then adding the hundreds, tens and the ones from the second number.

254 + 141 = 395

hundreds   tens   ones
+100   +40   +1

largest number

254   354   394   395

- Children are also introduced to column addition, where they add the tens and then the units together.

68+23 = 91

```
    68
  + 23
    80      first, add the tens, 60+20
    11      next, add the units, 8+3
    91      finally, find the total, 80+11
```

Fun activities to do at home

Money

- Ask children to recognise the different coins/notes
- Ask which combinations of coins could be used to make different amounts of money
- Ask children to add sums of money and work out change
- Allow children to experience the use of real money

Measures and shape

- Point out the time at different times of the day eg lunch, bed time.
- Ask questions such as: What time will it be in …. ? How long is it until ….?
- Can children tell the time? Link to TV programmes.
- Use a mirror to see whether shapes are symmetrical
- Look for right angles (square corners) around the house. See if they can identify 10 right angles in each room.
- Play shape bingo. At home or on a journey, how many circles, squares etc. can they spot? Give them different point values.
- When cooking encourage children to estimate different measures? Do they know what 10 grams/10 ml/1 kilogram looks/feels like?

Fun activities to do at home

Games

- Play games like snakes and ladders, ludo, skittles, bingo that involve counting and opportunities for addition and subtraction.
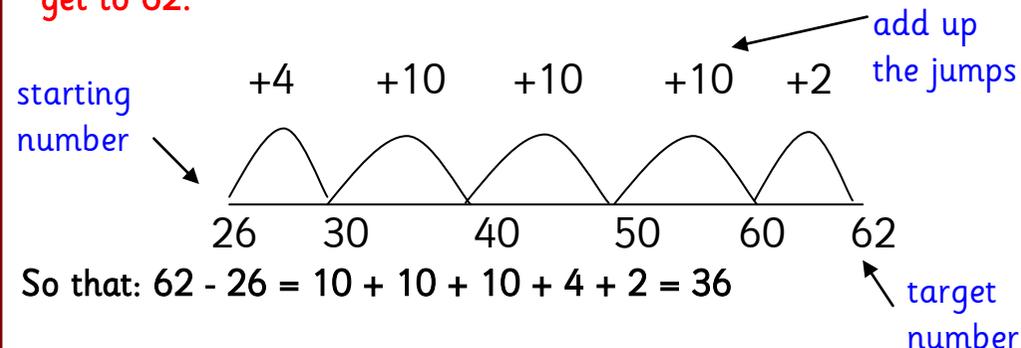- Play card games that require and practise mental maths.

Number

Practise:

- Counting in 2's, 3's, 4's, 5's, 6's, 10's and 100's (while out walking count on or back in steps of 10,100 etc).
- Number bonds to 10 and 20 (e.g. 18+2, 3+17 etc)
- Doubles and halves of numbers to 30 (Double 15 and Half of 30)
- Addition and subtraction facts to 20 (also in worded questions such as: There were 19 sweets, I ate 15 how many are there left?)
- x2, x3, x4, x5, x6 and x10 times tables
- Make a card game (multiplication table on one card, answer on another) and match up the cards.
- Writing and reading numbers to 1000
- Draw and colour in a half, a quarter and three quarters of different shapes. Allow children to carry out practical activities such as cutting cakes, pizzas, pies etc into
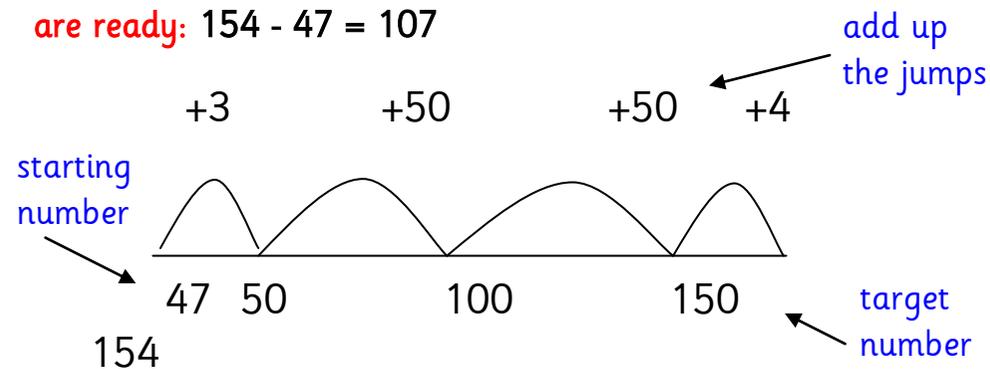
Subtraction methods in Year 3

- First children may begin by using a blank number line. Here we solve 62 - 26 = 36 by counting up in appropriate jumps. We start on 26 and then count up the number of jumps it takes to get to 62.

add up the jumps

starting number

+4   +10   +10   +10   +2

26   30   40   50   60   62

target number

So that: 62 - 26 = 10 + 10 + 10 + 4 + 2 = 36

- Next children extend this method to include hundreds when they are ready: 154 - 47 = 107

add up the jumps

starting number

+3   +50   +50   +4

47 50   100   150

154

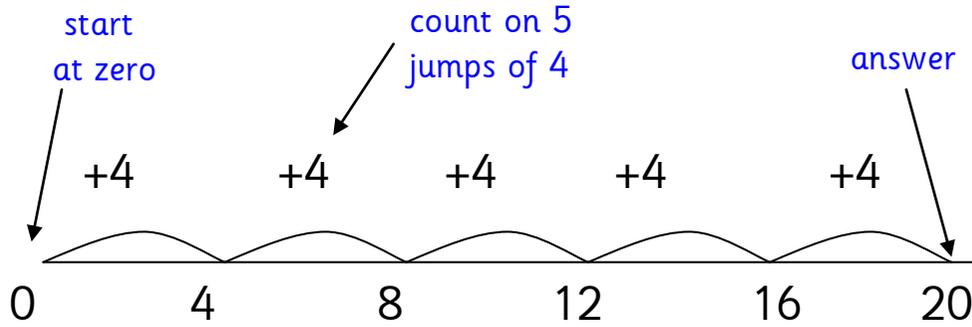target number

So that: 154 - 47 = 50 + 50 + 3 + 4

154 - 47 = 107

22-11=?

Multiplication in Year 3

- We begin by solving multiplication problems using repeated addition:

$5 \times 4 =$ (5 groups of 4) or $4 + 4 + 4 + 4 + 4$

start at zero   count on 5 jumps of 4   answer

+4   +4   +4   +4   +4

0   4   8   12   16   20

So, $5 \times 4 = 20$

- Children also need to learn and use times tables to help them solve multiplication problems:

> Tables to use:
> 2x, 5x, 10x
> Tables to learn... 3x, 4x, 6x tables

- They will also use the grid method. Here we partition numbers to make them easier to multiply. So we say 23 is 20 +3 and then multiply both numbers by 5. We then add to find the total:

$23 \times 5 = 100 + 15 = 115$

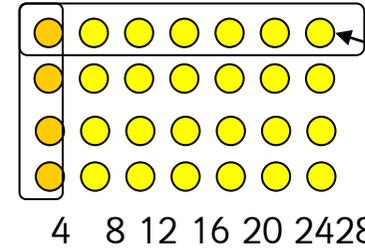| x	20	3
5	100	15

Partition 23 into 20 + 3 then multiply each by 5 and find the total

Division in Year 3

- We begin by using practical activities to solve division problems: 28 sweets shared by 4 people = 7

How many 4s in 28?

4 8 12 16 20 24 28

"There are 7 groups of 4 so 4 people have 7 sweets each"

draw sets of 4 until you reach your target number of 28.

- Children will then be introduced to the ÷ sign. They will use empty number lines to solve division problems using repeated addition: $25 \div 5 = 5$

+5   +5   +5   +5   +5

0   5   10   15   20   25

start at zero and count on in 5 jumps of 5

Count up the jumps to find the answer