## Don't Count, Calculate...

From an early age children need to use known facts to help them calculate rather than count on or back in ones.

I can split 6 into $5+1$. I know $9+1=10$ so 5 more would be 15. Number bonds to 10 help me to cross the tens.

## $9+6=10+5$



For 16-4 I know 6-4 = 2 then I add on ten more. It is important that children can partition a two digit number into tens and ones.

$$
\begin{aligned}
6-4 & =2 \\
16-4 & =12
\end{aligned}
$$

The importance of discovering and learning facts:
Numbers get bigger when we add
Numbers get smaller when we subtract.
If we add or subtract 0 , the number stays the same. Children need to learn their number bonds to 10 and understand the relationship between the numbers. DO and SEE and HEAR it in different ways:


|  | $\begin{aligned} & 6+4=10 \\ & 4+6=10 \\ & 10-4=6 \\ & 10-6=4 \end{aligned}$ | $\begin{aligned} & 6+4=10 \\ & 4+6=10 \\ & 10-4=6 \\ & 10-6=4 \end{aligned}$ | 10 |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  | 6 | 4 |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
| Tens Frame |  | Part Whole Model | Bar Model |  |

The importance of the number line for counting on and back small amounts:


## Gear 1

## Addition and Subtraction

Use a variety of words
add, more than, plus, total, altogether, count on subtract, less than, minus, take away, difference between, count back

Demonstrate a greater depth of understanding by reasoning and solving problems - not using bigger numbers.

| True or False? |
| :---: |
| $7+8=14$ |
| $55-5=51$ |
| $13+7=20$ |


|  |
| :--- |
| what is different? |
| $5+5=10$ |
| $15+5=20$ |
| $25+5=30$ |
| $35+5=40$ |
| $40+5=45$ |

To be fluent in calculating, children need to be able to count in ones forwards and
backwards from any number to and across 100.

Practise counting in 2s 5s and 10s - looking for patterns in the numbers.

102030405060708090100

We can use equipment or do jottings to find the total of 2 numbers. Understanding the value of tens and ones helps us to record our results too. Coins reinforce place value too.


When subtracting, children can cross out the ones that they are taking away:


Solve missing number problems
Understand the relationship between numbers to work out the unknown:


Problems (involving measures and money)
Dan needs $24 p$ to buy a rubber. He already has 18p. How much more money does he need?

