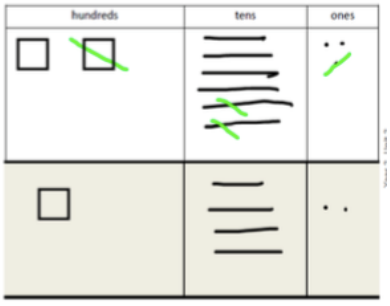
Subtraction Stations 2

Following my previous explanation of how we perform subtraction calculations using concrete (physical) resources and visual (pictorial) representations in Key Stage 1, we are now going to explore how we carry out subtractions in Key Stage 2.

Year 3

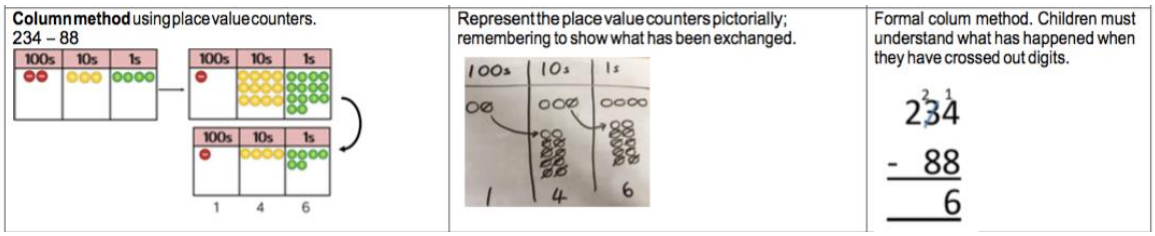
In Year 3 we tend to use the following vocabulary when teaching children to subtract: part, whole, hundreds, tens, ones, estimate, partition, recombine, difference, decrease, near multiple of 10 and 100, inverse, rounding, column subtraction, exchange

Year 3 children carry out 3-digit – 3-digit subtractions. It is very important that they use dienes apparatus and place value charts like the one below to do this…

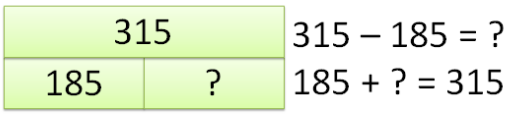


263 – 121= 142

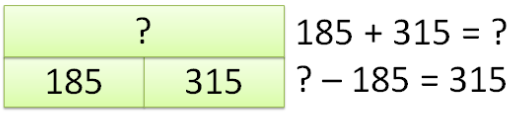
When, and only when, they are secure with this they can go on to 'exchanging', which some of you may remember as 'borrowing'. This is typically done initially using place value counters (see left) and then into working drawings and the abstract.



Year 3 children are also taught to find missing values by using bar models.



315 – 185 = ?
185 + ? = 315

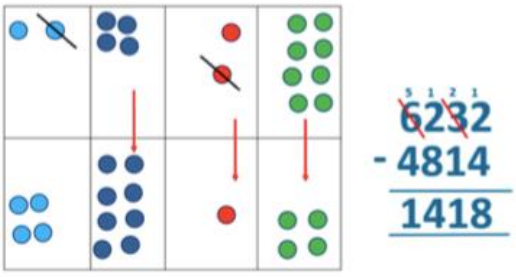


185 + 315 = ?
? – 185 = 315

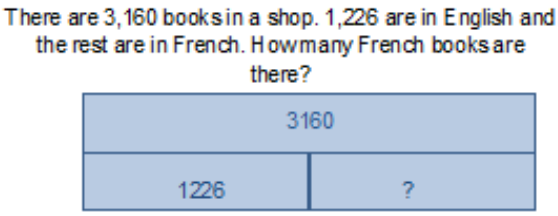
Year 4

In Year 4 we tend to use the following vocabulary when teaching children to subtract: part , whole, subtract, takeaway, less, minus, decrease, fewer, difference, how many less to make..? how much less? ones boundary, tens boundary, hundreds boundary, thousands boundary, tenths boundary, hundredths boundary, inverse, how many fewer? Equals sign, is the same as.

The children are taught how to carry out 4-digit subtractions involving exchanging (when they are secure) and to support this they use place value counters…



Year 4 children also use bar models to work out missing values. This method is particularly useful for problem solving.

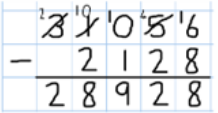


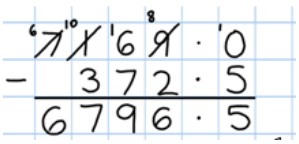
Year 5

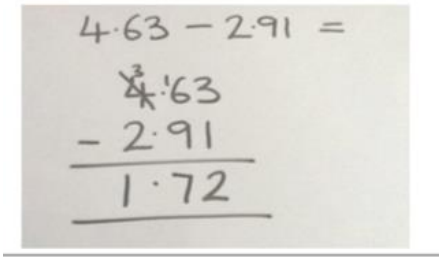
In Year 5 we tend to use the following vocabulary when teaching children to subtract: part, whole, tens of thousands boundary, and all from previous years

Year 5 children subtract with at least 4-digit numbers including two decimal places.

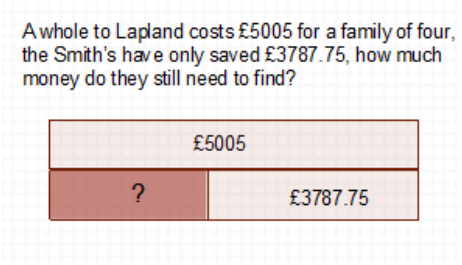
They carry out subtractions involving money, measures and decimals and do this practically before the abstract.







As with Year 4, the children use bar models to find missing values and to problem solve…

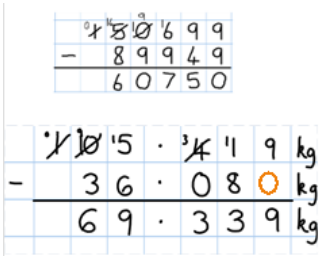


Year 6

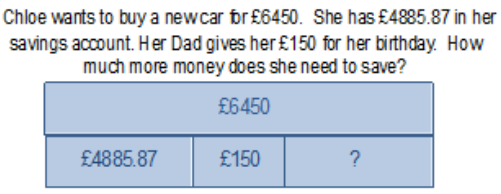
In Year 6 we tend to use the following vocabulary when teaching children to subtract: part, whole, and all from previous years.

Year 6 children subtract with increasingly large and more complex numbers and decimal values.

It is very important to use in a range of contexts - especially measures and money.



Year 6 children also use bar models to find missing values and to problem solve…



You can see that, as with addition, when they are ready, they move from using the resources to drawing visual representations and then to abstract numbers. If children move too quickly to the abstract or don't have experience of the resources they may not understand the maths behind the concept. This is where, as adults we can go wrong sometimes, as we forget the journey we made to get to our own understanding or were taught a procedure rather than actually understanding what is going on mathematically.

Anyway, I hope that you have found this insight into how we teach subtraction in KS2 useful. After half term we will explore how we teach multiplication in Key Stage 1.

Mr Wheat