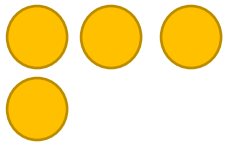
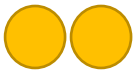
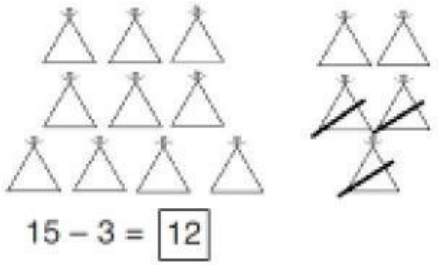
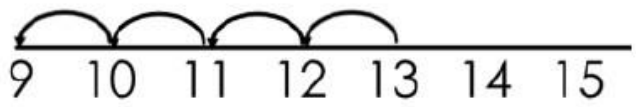
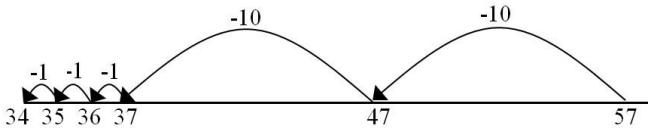
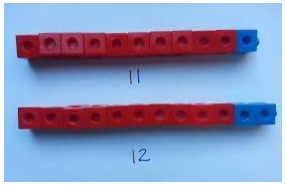
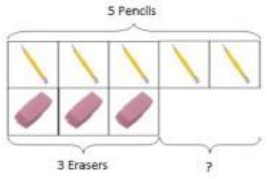
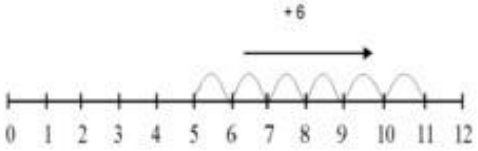
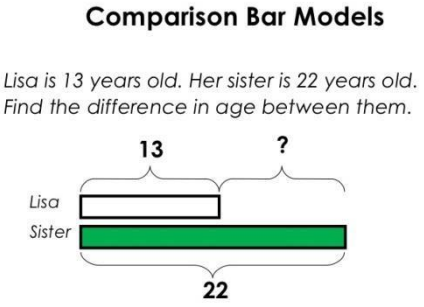
Tollesbury School – Progression in calculations

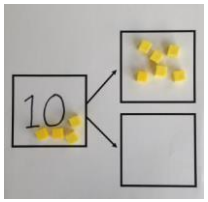
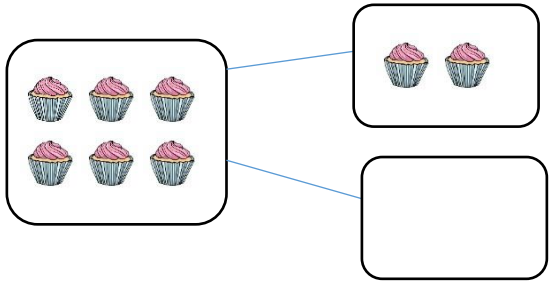
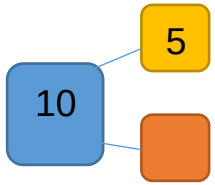
Subtraction

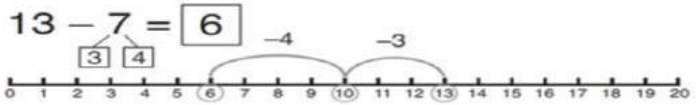
Objective and strategies	Concrete	Pictorial	Abstract
Year 1 **Taking away ones**	Use physical objects, counters, cubes etc to show how objects can be taken away.   6-2=4 	Cross out drawn objects to show what has been taken away.  	18 - 3= 15 8 – 2 = 6

Year 1 **Year 2 (2digits take 1 digit, 2 digits take two digits)**	Make the larger number in your subtraction. Move the beads along your bead string as you count backwards in ones.	Count back on a number line or number track. Start at the bigger number and count back the smaller number showing the jumps on the number line.	Put 13 in your head, count back 4. What number are you at? Use your fingers to help.

Counting back	13 – 4 = Use counters and move them away from the group as you take them away counting backwards as you go. 	 When ready this can progress all the way to counting back using two 2-digit numbers.  	

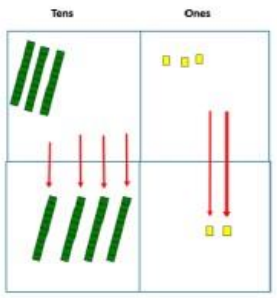
Year 1 **Year 2 (2digits take 1 digit, 2 digits take two digits)** **Find the difference**	Compare amounts and objects to find the difference.  Use cubes to build towers or make bars to find the difference.  Use basic bar models with items to find the difference	 Count on to find the difference.  Draw bars to find the difference between 2 numbers.	Hannah has 23 sandwiches, Helen has 15 sandwiches. Find the difference between the number of sandwiches.

Year 1 **Year 2 (2digits take 1 digit, 2 digits take two digits)** **Part-Part Whole model**	 Link to addition- use the part whole model to help explain the inverse between addition and subtraction. If 10 is the whole and 6 is one of the parts. What is the other part? 10 - 6 =	Use a pictorial representation of objects to show the part part whole model. 	 Move to using numbers within the part whole model.

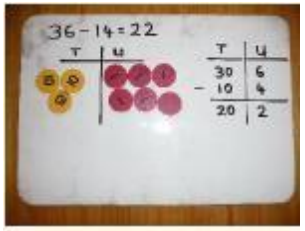
Year 1 **Year 2 (2digits take 1 digit, 2 digits take two digits)** **Make 10**	14 – 9 = Make 14 on the ten frame. Take away the four first to make 10 and then takeaway one more so you have taken away 5. You are left with the answer of 9.	 Start at 13. Take away 3 to reach 10. Then take away the remaining 4 so you have taken away 7 altogether. You have reached your answer. Year 2 – Draw a number line, count back in ten and then ones. 54 – 26=. Draw number line, 54 on right hand side, count back one jump of 10- label, next 10- label and then count back the ones.	16 – 8= How many do we take off to reach the next 10? How many do we have left to take off?

Year 2

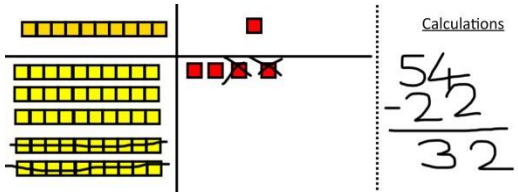
Column method without regrouping



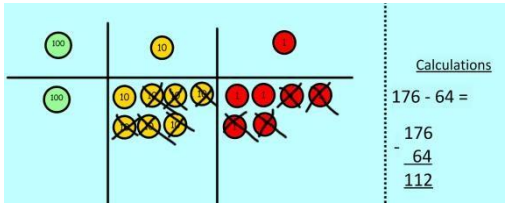
Use Base 10 to make the bigger number then take the smaller number away.

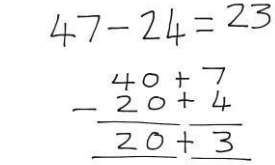


Show how you partition numbers to subtract.
Again make the larger number first.

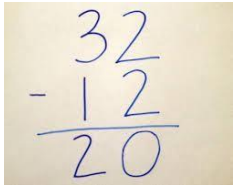


Draw the Base 10 or place value counters alongside the written calculation to help to show working.





This will lead to a clear written column subtraction.



Year 3

Column method with regrouping. (up to 3 digits)

Year 4

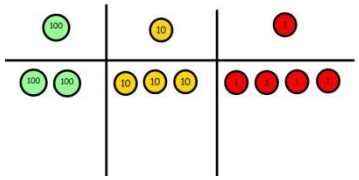
Column method with regrouping. (up to 4 digits) (decimals)

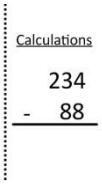
Year 5

Column method with regrouping. (with more than 4 digits)

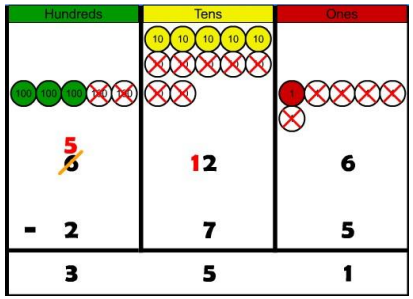
Use Base 10 to start with before moving on to place value counters. Start with one exchange before moving onto subtractions with 2 exchanges.

Make the larger number with the place value counters.

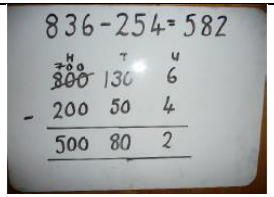




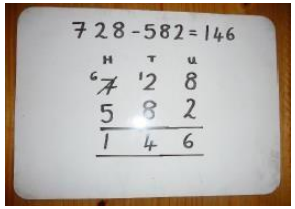
Start with the ones, can I take away 8 from 4 easily? I need to exchange one of my tens for ten ones.



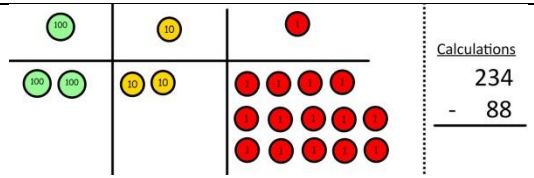
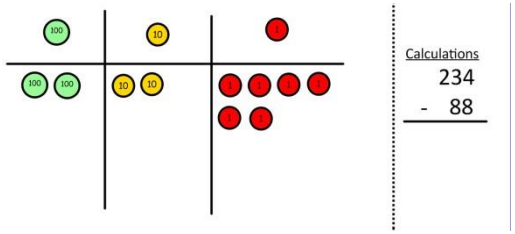
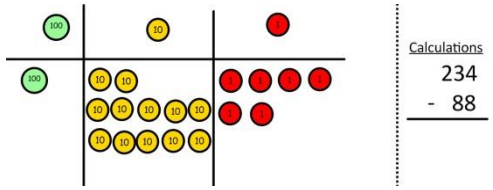
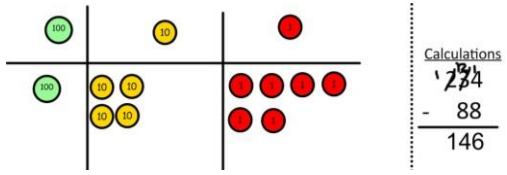
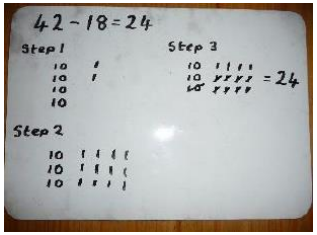
Draw the counters onto a place value grid and show what you have taken away by crossing the counters out as well as clearly showing the exchanges you make.



Children can start their formal written method by partitioning the number into clear place value columns.



Moving forward the children use a more compact method.

(Decimals- with the same amount of decimal places) **Year 6** Column method with regrouping. (Decimals- with different amounts of decimal places) **Column method with regrouping.**	 Calculations 234 - 88 Now I can subtract my ones.  Calculations 234 - 88 Now look at the tens, can I take away 8 tens easily? I need to exchange one hundred for ten tens.  Calculations 234 - 88 Now I can take away eight tens and complete my subtraction  Calculations ~~2~~~~3~~4 - 88 146 Show children how the concrete method links to the written method alongside your working. Cross out the numbers when exchanging and show where we write our new amount.	When confident, children can find their own way to record the exchange/regrouping. Just writing the numbers as shown here shows that the child understands the method and knows when to exchange/regroup.  	This will lead to an understanding of subtracting any number including decimals. 5 12 1 2 ~~6~~ ~~3~~ . 0 - 2 6 . 5 2 3 6 . 5