Stage 3 – Subtraction

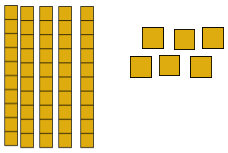
Expanded Decomposition Method

Children should be introduced to larger numbers during this stage. They will still use base 10 so will need to be introduced to the hundreds and thousands equipment.

Without Decomposition

56 – 34 =

Step 1: Begin by partitioning both numbers and making the largest number using base 10.



Record the largest number in your book like this

		T		O
	5	0	and	6
-				4
				2

		T		O
-	5	0	and	6

Step 2: They should then subtract the ones. They have 4 to subtract so this should be written down. They should then subtract the four ones physically using the base 10 and move the ones below the tens and write the answer in the correct column.

Step 3: Children should write down that they are subtracting 30 from 50 and subtract 3 tens physically using the base 10. They should then move these down to sit next to the ones. When children have moved the base 10 'down' they know they have gotten to the answer in that column. Children should then join the two partitioned numbers back together to make their answer.

This method can also be used with three and four digit numbers if it is the method best understood by the child.

		T		O
	5	0	and	6
-	3	0	and	4
	2	0	and	2

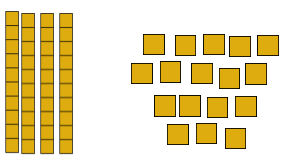
With Decomposition

When children are ready to decompose, they should again do this using practical resources. The same method should be used; the child should record every physical move that is made to ensure they do not miss a step.

57 – 29 =

Step 1: Make the larger number using base 10 and record.
Step 2: Look at the ones that you need to take away. Can you take them away or do you need to decompose? If so decompose the ten and put the decomposed ones into the ones column. Record.
Step 3: Now you can subtract your ones. Record.

		T		O
	5	0	and	7
-				



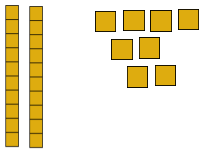
		T		O
	45	0	and	17
-				9
				8

		T		O
	45	0	and	17

Vocabulary

Number
More
Numeral
Equal to
Equivalent to
Many
Addition
Add
Altogether
Sum
Total
How many more
Same
Greater than
Less than
Place value
Partition
Regroup
Value
Digit
Ones
Tens
Hundreds
Bridging through ten
Tens boundary
Thousands
Hundreds boundary
Integer
Inverse

Step 3: Move onto the tens column. Write down the number you are subtracting before subtracting your tens using the base 10. Record.



-	2	0	and	9
	2	0	and	8

Children should then join the two partitioned numbers back together to form their answer.

Standard Decomposition Method

Once children are secure with the understanding of 'decomposition', they can use this method for numbers with a larger amount of digits. It is still a good idea to use practical resources – base ten or place value counters – until children feel ready to move on without them. Children should use column headers when using this method.

Steps to Success:

Step 1: Write down the numbers you are subtracting ensuring you also use column headers.

Step 2: Always start with the column furthest to the right. Can you subtract or do you need to decompose?

Step 3: Continue working your way through the columns from right to left. Remember to check – do you need to decompose?