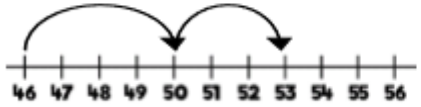
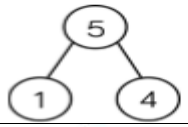
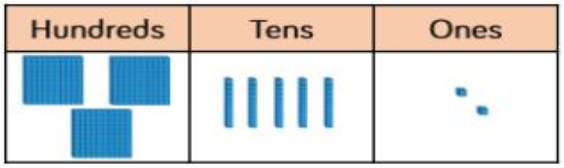
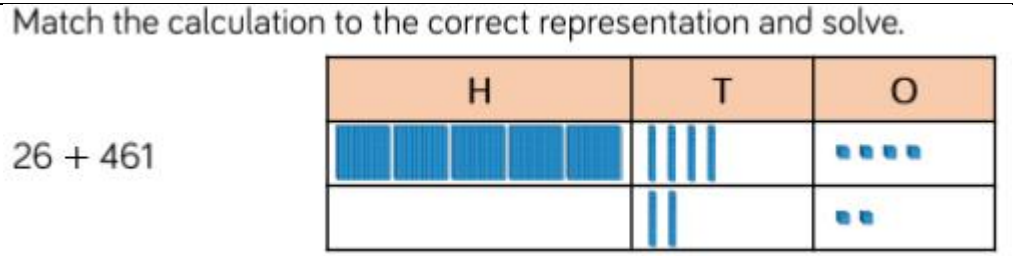
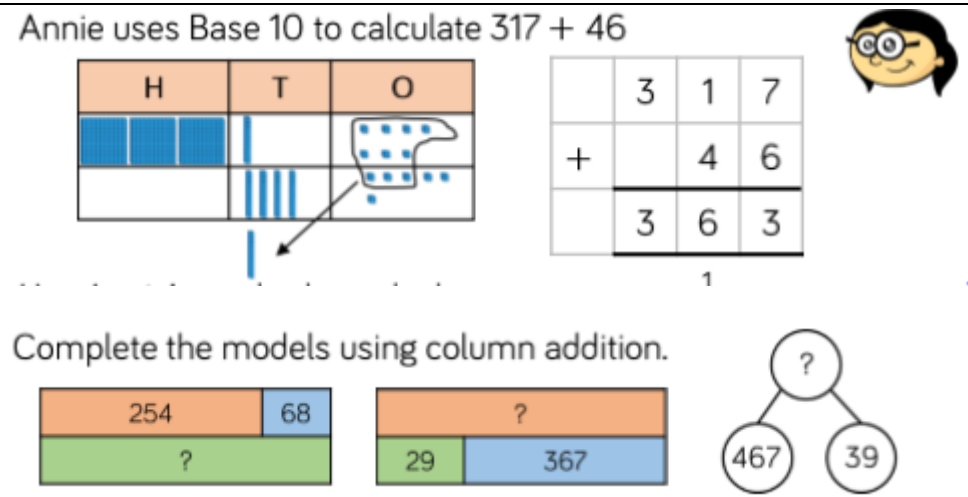
Progression in Calculations. Y3

Addition.

Year 3	
Add 3-digit and 1-digit Numbers. Children add ones to a 3-digit number, with an exchange. They discover that when adding ones it can affect the ones column and the tens column. Children learn that we can only hold single digits in each column, anything over must be exchanged. The use of 0 e.g. 145-5 is important so they know to use zero as a place holder.	We can use Base 10 to solve 245 + 7  We can use a number line to calculate 346 + 7  46 47 48 49 50 51 52 53 54 55 56 46 + 4 = 50 50 + 3 = 53 so 346 + 7 = 353 We can partition our 1-digit number to calculate 379 + 5  5 1 4 379 + 1 = 380 380 + 4 = 384
3-digit and 2-digit Numbers Children look at what happens to a 3-digit number when a multiple of 10 is added. Different representations such as Base 10, arrow cards and place value charts should be used. Children should explore whether a column method is needed and explain why. Mental methods should be encouraged throughout. Children add multiples of 10, to a 3-digit number with an exchange. Encourage children to count in 10s rather than use column addition.	 Hundreds Tens Ones Use place value counters to complete the number sentences. 352 + 4 tens = ____ 352 − 2 tens = ____ Complete the bar models.  185 40 135 90 What do you notice?

Progression in Calculations. Y3

Addition.

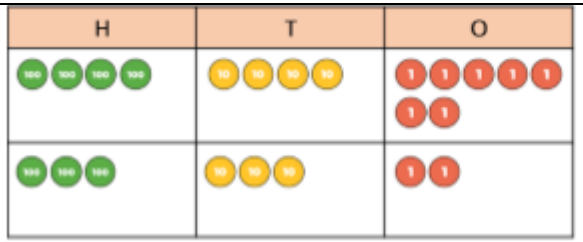
Add & Subtract 100s. Children can build on their knowledge of adding 100s together e.g. 300 + 500, by adding ones and tens to solve calculations such as 234+500. It is important to develop flexibility and ask the children why the column method isn't always the most effective method.	
2-digit & 3-digit Numbers Children focus on the position of numbers and place value to add and subtract 2-digit and 3-digit numbers. They represent numbers using Base 10 and line up the place value columns. In this step, children add numbers without an exchange.	
Add 2-digit & 3-digit Numbers Children deepen their understanding of adding 2-digit and 3-digit numbers in this step. They start adding numbers where there is an exchange from ones to tens, they then move on to exchanging tens to hundreds before adding numbers where there are exchanges in both columns. The links between concrete representations and the column method should be highlighted in order to support childrens' understanding.	

Progression in Calculations. Y3

Addition.

Adding Two 3-digit Numbers.

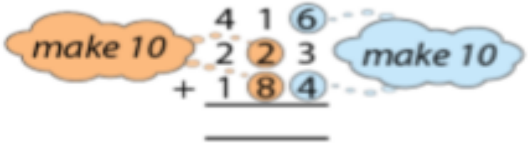
Children add two 3-digit numbers with no exchange. They should focus on the lining up of the digit and setting the additions clearly out in columns. Reinforce that we only exchange when there are 10 or more in a column.



___ + ___ = ___

2 2 3
+ 1 1 4
3 3 7

Add the ones first, then the tens, then the hundreds.



Progression in Calculations. Y3

Addition.

Adding Two 3-digit Numbers with an exchange. Children add two 3- digit numbers with an exchange. They start by adding numbers where there is one exchange required before looking at questions where they need to exchange in different columns. Children may use Base 10 or place value counters to model their understanding. Add up the ones and exchange 10 ones for one 10.	Use place value counters to calculate 455 + 436