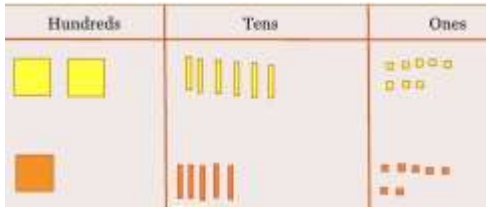
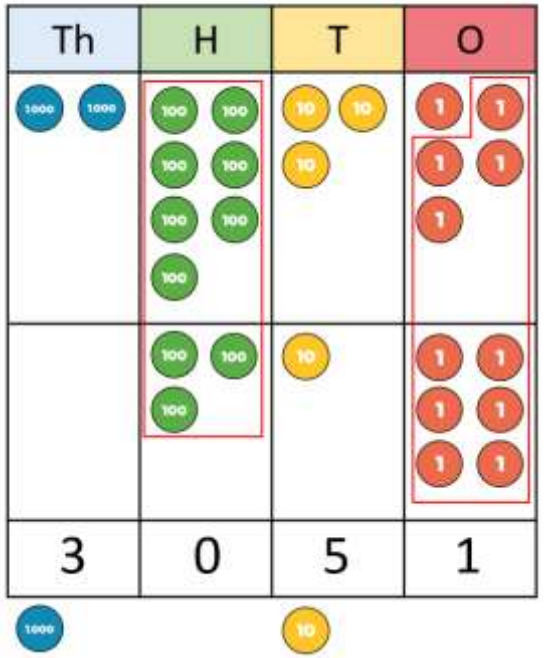
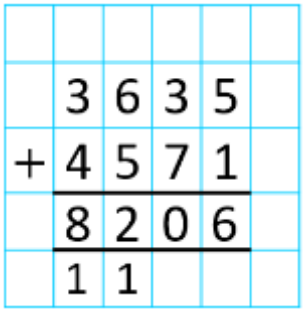
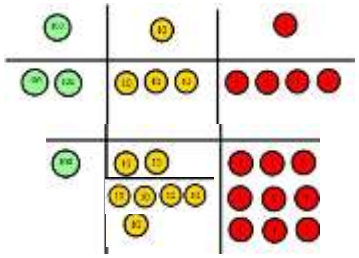
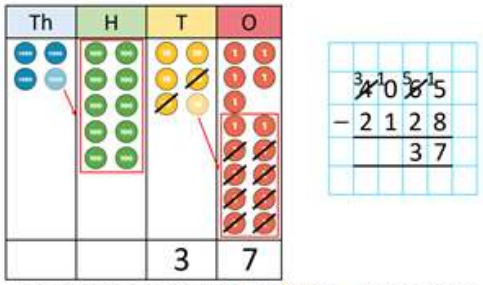
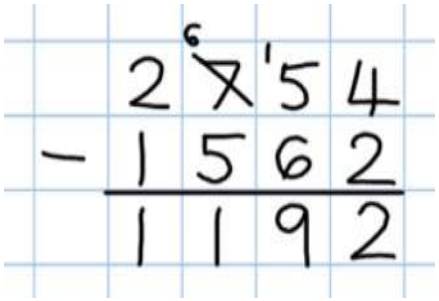
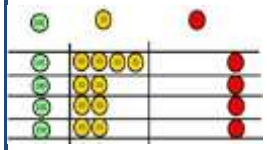
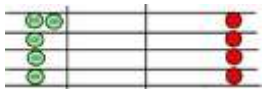
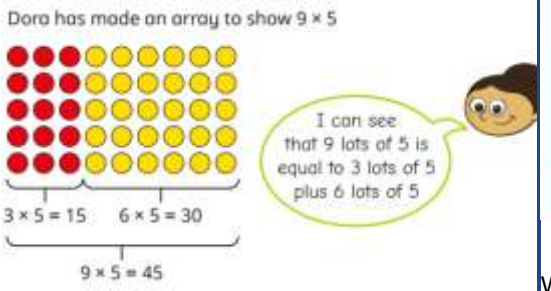
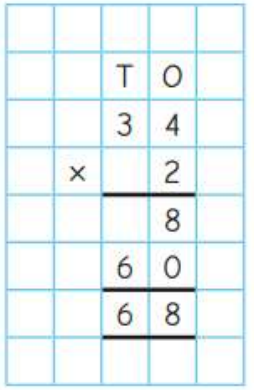
Addition + Year 4

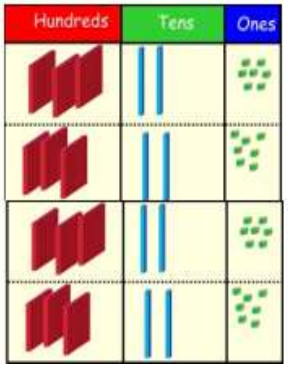
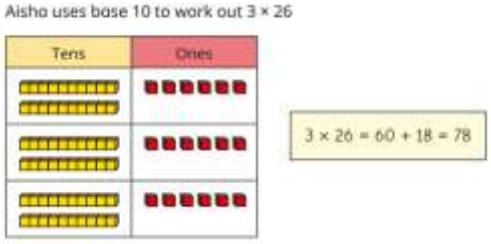
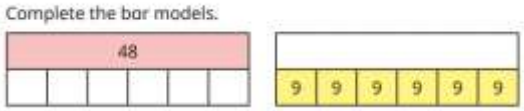
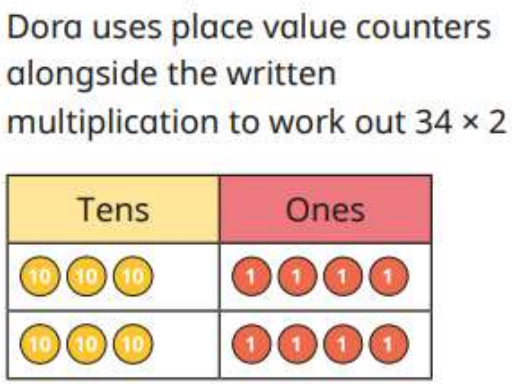
Objective & Strategy	Concrete	Pictorial	Abstract
Y4—add numbers with up to 4 digits	Counters to add, exchanging ten ones for a ten and ten tens for a hundred and ten hundreds for a thousand. 	 .	 I have 6 ones, so I do not need to make an exchange. I have 10 tens, so I do need to make an exchange. I have 12 hundreds, so I do need to make an exchange. I have 8 thousands, so I do not need to make an exchange. Continue from previous work to carry hundreds as well as tens. Relate to money and measures.

Subtraction - Year 4

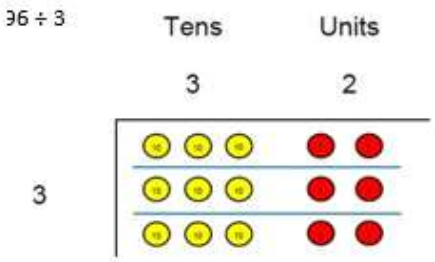
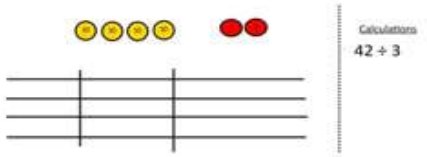
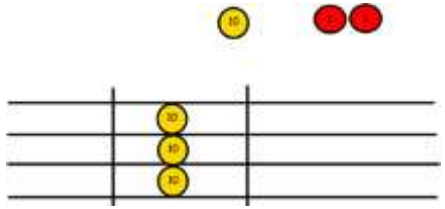
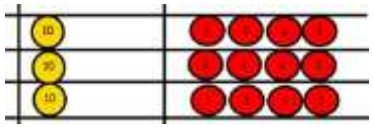
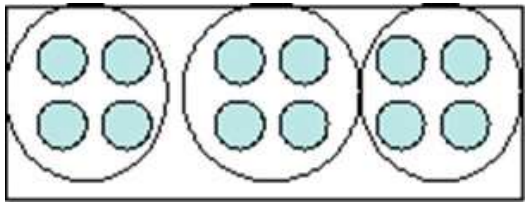
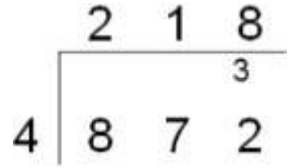
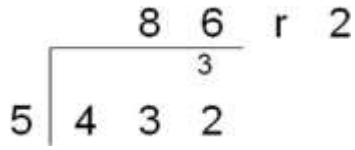
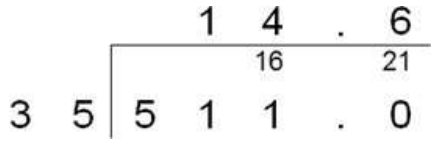
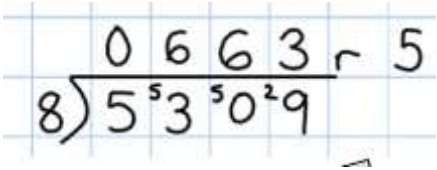
Objective & Strategy	Concrete	Pictorial	Abstract
Subtracting tens and ones Year 4 subtract with up to 4 digits. *Introduce decimal subtraction through context of money*	234 - 179  Model process of exchange using Numicon, base ten and then move to PV counters.	Children to draw pv counters and show their exchange—see Y3 4,065 – 2,128 =  There are not enough hundreds, so I need to exchange 1 thousand for 10 hundreds	 Use the phrase less on top STOP, go next door borrow ten more.

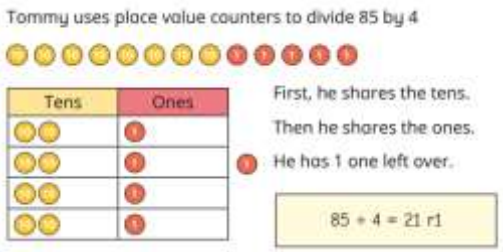
Multiplication X Year 4

Objective & Strategy	Concrete	Pictorial	Abstract
Move to multiplying 3 digit numbers by 1 digit. (year 4 expectation)	Use place value counters to show how we are finding groups of a number. We are multiplying by 4 so we need 4 rows Fill each row with 126  Add up the columns making any exchanges as they go  504 Use blocks to make arrays  2 × 4 =	Children can represent their work with place value counters in a way that they understand. They can draw the counters using colours to show different amounts or just use the circles in the different columns to show their thinking . We draw arrays 	Moving to using compact formal written method  (4 × 2 = 8) (30 × 2 = 60) We might still use place value charts alongside written method: 

Column multiplication	Children can continue to be supported by place value counters at the stage of multiplication. This initially done where there is no regrouping. 327 x 4 = 1308  It is important at this stage that they always multiply the ones first.  The corresponding long multiplication is modelled alongside	Bar modelling and number lines can support learners when solving problems with multiplication alongside the formal written methods.   	

Division ÷ Year 4

Objective & Strategy	Concrete	Pictorial	Abstract
Divide at least 3 digit numbers by 1 digit. Short Division	 Use place value counters to divide using the bus stop method alongside 42 ÷ 3=  Start with the biggest place value, we are sharing 40 into three groups. We can put 1 ten in each group and we have 1 ten left over.  We exchange this ten for ten ones and then share the ones equally among the groups.  We look how much in 1 group so the answer is 14.	Students can continue to use drawn diagrams with dots or circles to help them divide numbers into equal groups.  Encourage them to move towards counting in multiples to divide more efficiently.	Begin with divisions that divide equally with no remainder.  Move onto divisions with a remainder.  Finally move into decimal places to divide the total accurately.  

Dividing by 10, 100 and 1000	Another example of this:  Use place value charts and counters