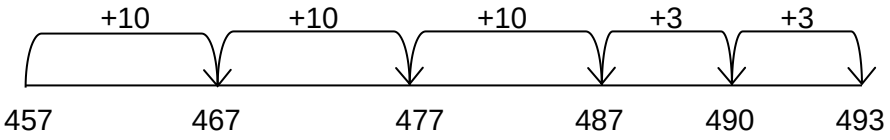
Yr4 Addition

- Using jottings of addition on a number line to regularly support mental calculations for HTO + TO questions:

Eg 457 + 36



- **Column addition up to 4 digit numbers and decimals with 1 decimal place:**

Place each number into a place value chart to help with setting out the question

	Th	H	T	O
			1	
	3	**1**	**5**	**6**
+	**2**	**8**	**3**	**5**
	5	**9**	**9**	**1**

- Using a variety of practical situations e.g. the total cost of a holiday, the total length of a journey etc.

```
  1
 £126
+£267
 £393
```

Yr4 Subtraction

Continue with the formal method of column subtraction by demonstrating with partitioning the numbers and using Dienes first.

E.g. 437- 182

(before exchange)

H	T	O
400 +	30	+ 7
100 +	80	+ 2

(after exchange)

H	T	O
~~400~~ 300	1	
400 +	30 +	7
100 +	80 +	2
200 +	50 +	5

Then show how this is shortened to this:

3. Adjustment H to T

H	T	O
~~4~~ ^{3}	^{1} 3	7
- 1	8	2
2	5	5

4. Adjustment H to T and T to O

H	T	O
~~4~~ ^{3}	~~3~~ ^{12}	^{1}2
- 1	8	7
2	4	5

5. Noughts

H	T	O
4	~~7~~ ^{6}	^{1}0
-1	4	2
3	2	8

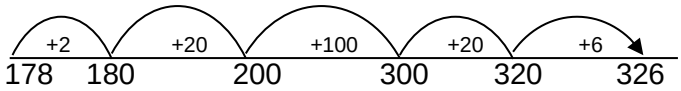
H	T	O
~~7~~ ^{6}	~~0~~ ^{91}	^{1}0
- 4	8	5
2	1	5

H	T	O
~~6~~ ^{5}	~~0~~ ^{91}	^{1}4
- 3	4	7
2	5	7

Check using inverse

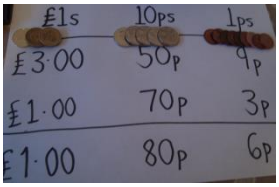
Counting forward with 3 digits

326 – 178 = 148



Demonstrate subtraction of money using £s, 10ps and pennies headings to reinforce place value

(Use coins to demonstrate)



£1s	10ps	1ps
~~£2.00~~ £3.00	1 50p	9p
£1.00	70p	3p
£1.00	80p	6p

Show how this moves to column subtraction

A.

£4.35	
- £1.23	
£3.12	

B.

£5.~~4~~ ^{3}	^{1}5
- £2. 2	9
£3. 1	6

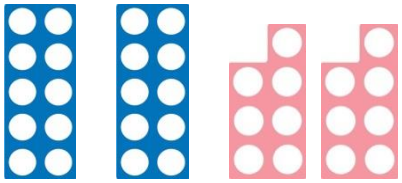
C.

£ ^{2}~~3~~ . ^{1}~~5~~	9
- £ 1.	73
£ 1.	86

Yr4 Multiplication

- Count in multiples of 6, 7, 9, 25 and 1000
- Know Times Tables facts for all tables up to 12 x 12
- Double numbers (including decimals to one decimal place)

Use a Numicon one piece to represent 0.1



1 1 0.7 0.7

1 + 1 = 2

0.7 + 0.7 = 1.4

3.4

- **Grid method of multiplication for all digits**

TO x O

38 x 5

X	30	8
5	150	40 = 190

- **Multiply two-digit and three-digit numbers by a one-digit number using the formal written method of column multiplication**

- 3. Carrying

  3 8
  X 7
  2 ^{5}6 6

4. Noughts

  202
  x 4
  808

Ext:

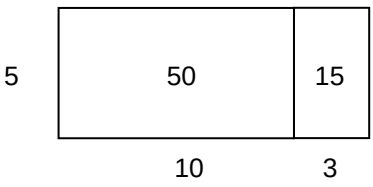
  5□
  x 4
  2□2

(**Solve missing number problems**)

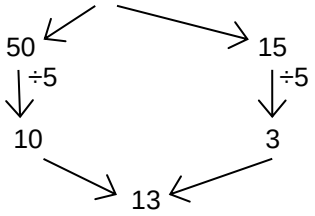
Yr4 Division

- Know all the division facts for every times table up to 12 x 12
- Build up to using chunking and short division including carrying by using arrays first to show how numbers can be partitioned.

e.g. 65 ÷ 5 **Array**



Partitioning 65 using known times table facts



Chunking
Then move onto taking 'chunks' out of the dividend (65)

Make a chart of the key x3 facts first to help:

1	2	5	10
5	10	25	50

13
5) 65
-50 (10 x 5)
15
-15 (3 x 5)
0

3. Short division
(No remainder, carrying)

$$5\overline{)6^{1}5}\quad 13$$

Continuation of short division
Divide numbers of up to 3 digits by 1 digit numbers

4. Remainder, carrying

$$3\overline{)4^{1}24}\quad 141\ r1$$

5. Placing of quotient (answer)

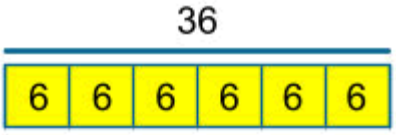
$$7\overline{)2^{2}87}\quad 41$$

6. Noughts in quotient

$$4\overline{)81^{1}6}\quad 204$$

- Use bar modelling to solve problems eg:

Mr Smith had a piece of wood that measured 36 cm.
He cut it into 6 equal pieces.
How long was each piece?



- Make sense of remainders in division problems according to the context of the problem (use pictures and objects to support understanding)

E.g. a football coach organised 45 children to travel in cars to a match. Each car could carry 4 children. Explain how many cars he would need and why?