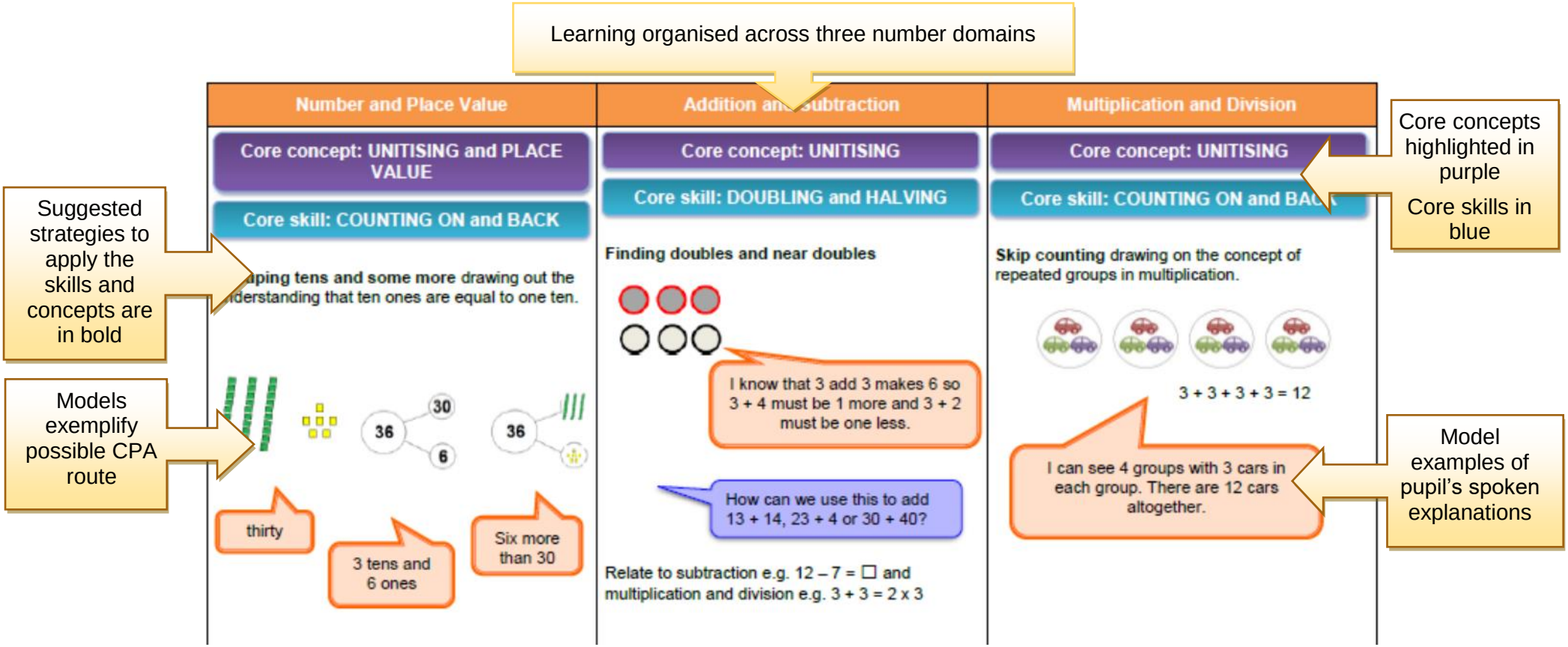
Using the progression document

The progression is structured into phases. In Years 1 to 4, this is organised into individual year groups. At the beginning, there is a section entitled 'Pre-operational Learning'. This helps ensure that the foundations are secure by the end of EYFS and in the first few weeks in Year 1 before mental fluency within numbers to 10 begins. This also supports the early identification of gaps and barriers.

In each year group / phase, the progression is organised into the National Curriculum Programs of Study domains: number and place value; addition and subtraction; multiplication and division including fractions. Within these domains, key **concepts** (ideas), **skills** (which can be utilised) and **strategies** (methods) are exemplified within the relevant number ranges.



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Herts for Learning

At the end of each phase, a selection of possible examples that align with a given strategy or skill are included. For KS1 and UKS2, there are examples taken directly from the relevant end of key stage assessments (2016) and sample papers. When designing opportunities to practise or for strategy discussions, these will support teachers to explore and / or guide pupils towards a particular strategy.

Upper KS2 examples

Place Value

937 + 100 1969 + 100 546 - 40
1.7 + 0.05 40 000 - 500
246 ÷ 1 100 x 217 0.4 ÷ 10
1.68 x 100 100 x 100

Examples from 2016 KS2 and Sample Papers
435 - 30 979 + 100 3.005 + 6.12 2.15 + 0.05
100 x 412 0.9 ÷ 10 1.28 x 100 50,000 – 500
10 x 100

Two decimal numbers add together to equal 1 One of the numbers is 0.007. What is the other number?

Circle two numbers that added together make 0.25
0.05 0.23 0.2 0.5

Circle two numbers that multiply together to equal 1 million
200 2,000 5,000 50,000

Write the number that is 5 less than 10 million

Write the number that is one hundred thousand less than six million

Compensation

56 + 8 72 + 9 56 - 8 72 - 9
371 + 18 255 + 49 304 + 299
673 - 99 854 - 398 3720 - 996
0.71 + 0.09 0.56 + 0.08 0.34 – 0.09
£1.17 + £0.39 £8.89 - £4.99

Examples from 2016 KS2 and Sample Papers
468 - 9 472 - 9 15.98 + 26.314
12 − 6.01 15.4 - 8.88

Rebalancing - Equal sum

56 + 8 72 + 9 371 + 18 255 + 49
304 + 267
£37.67 + £3.85 563 + 397 890,488 + 4,890
229,899 + 31,321

Examples from 2016 KS2 and Sample Papers
89,994 + 7,643 936 + 285 89,994 + 7,643

Rebalancing - Equal difference

Think Partition for x and ÷

32 x 4 29 x 2 122 x 4 4.6 x 2
75 x 3 8.3 x 6 39 x 7
3.3 x 7 5 x 49 4 x 198 96 x 0.3

Examples from 2016 KS2 and Sample Papers
15 x 6.1 24 x 3 1.52 x 6 7,505 ÷ 5
17 x $1\frac{1}{2}$

Make links to doubling and halving

50 x 28 86 x 50 500 x 70 18 x 2.5
86 x 2.5 160 x 35 500 x 88 1.5 x 6.6
0.5 x 120 4.5 x 2.2 15% x 346 75% x 220

Examples from 2016 KS2 and Sample Papers
15% x 440 $\frac{2}{5}$ x 140 24 x 3
20% of 1500 95% of 240

Multiplying and dividing fractions

Examples from 2016 KS2 and Sample Papers