Landscore Primary School

Towards Greater Fluency in Calculation – Progression in Number Facts and Expectation by the end of each Year Group

Reception	• Know some number rhymes and songs • Count in 1s, 2s and 10s • Know number bonds 1 to 5 (eg. 2+3=5, 1+4=5) • One more and one less than a number and talk in full sentences (eg. one more than three is four) • Double objects to find amounts to 10 • Count up to and back from 20 and order numbers to 20
Year 1	• Number bonds 1 to 10 (eg. 7+3=10) • Count to and across 100, forwards and backwards from any number • Addition facts for all pairs of numbers (5, 6, 7, 8, 9 and 10), and the corresponding subtraction facts (eg. 1+4=5, 4+1=5, 5-1=5, 5-4=1) • One more and one less than a number and talk in full sentences (eg. one more than twelve is thirteen) • Use bonds to 5, 6, 7, 8, 9 and 10 to help with numbers to 20 • Recall doubles to 10 (eg. 2+2, 3+3 … 10+10) • Count in ones, twos, fives and tens (relate to multiples of 2, 5 and 10)
Year 2	• Number bonds to 20 and recognise the link with bonds to 10 (eg 16+ 4=20) • Use bonds to 5, 6, 7, 8, 9 and 10 to help with numbers to 20 • Addition and subtraction facts for each number to at least 10 (eg. 7+3=10, 3+7=10, 10-7=3, 10-3=7) • All pairs of multiples of 10 with a total of 100 (eg. 30+70=100, 80+20=100) • Recall doubles of all numbers to 20 (eg. 12+12, 16+16) and the corresponding halves • Notice doubles when adding 3 numbers • Understand place value when adding/subtracting 1 and 10 to a two-digit number, even when crossing boundaries • Use number bonds to 5, 6, 7, 8, 9 and 10 to help with adding and subtracing. • Order numbers from 0 to 100 and know which number is bigger/smaller • Multiplication facts for 2, 5 and 10 times tables • Multiples of 2, 5 and 10 and notice the patterns • Notice links between repeated addition and multiplication
Year 3	• Know all number bonds to 20 • Addition and subtraction facts for each number to at least 20 (eg. 17+3=10, 3+17=10, 20-17=3, 20-3=17) • All pairs of multiples of 100 with a total of 1000 (eg. 300+700=1000, 800+200=1000) • Derive quickly all pairs of multiples of 5 with a total of 100 (eg. 35+65)

	• Notice number bonds within two two-digit numbers to help with addition • Know 10 or 100 more/less than a given number and notice how the place value changes • Order numbers to 1000 and know which number is bigger/smaller • Know multiplication and division facts when counting in steps of 2, 5 and 10. • Multiplication facts for 3, 4 and 8 times tables and corresponding division facts • Know that multiplying and dividing by 4 and 8 links to doubling and halving • Use a number fact to derive others linking to place value eg. (2x7=14, 20x7=140, 200x7=1400) • Double whole numbers to 20 • Use number bonds to help with trickier calculations
Year 4	• Number pairs that total 100 (eg. 62+38, 75+25, 40+60) • Pairs of multiples of 50 with a total of 1000 (eg. 850+150) • Adding and subtracting by 1, 10, 100 and 1000 and recognising the place value of digits in numbers • Use number bonds to help with trickier calculations (eg. 3400 + 600 = 4000) • Know that multiplying and dividing by 3 and 6 links to doubling and halving • Know that multiplying and dividing by 6 and 12 links to doubling and halving • Knowing multiplying by 10 to help with multiplying by 9 and 11 • Knowing multiplying by 10 and 2 to help with multiplying by 12 • Multiplication facts for 6, 7, 9, 11, 12 times tables and corresponding division facts • Multiplication facts up to 12x12 and corresponding division facts • Use a number fact to derive others linking to place value, both multiplication and division (eg. 7x8=56, 70x8=560, 700x8=5600) • Can round numbers to the nearest 10, 100, 1000 • Round decimal with 1 decimal place to the nearest whole number
Year 5	• Use number bonds to help with trickier calculations (eg.8754+30=8784) • Use a number fact to derive others linking to place value, both multiplication and division (eg. 7x8=56, 70x8=560, 700x8=5600) • Use understanding of whole numbers and the number system to add and subtract with decimals (eg. 4.9+0.1, 6.79+0.01) • Use understanding of the place value of digits in numbers (eg. 3.04+0.5 = 3.54) • Using understanding of the additive composition of ten to understand about the additive composition of 100, 1000, 10,000 and multiples of these numbers • Consolidate multiplication facts up to 12x12 and corresponding division facts • Multiply and divide whole numbers and decimals by 10, 100, 1000 • Read numbers up to 1,000,000

	• Understanding of the multiplicative structure of the number system to multiply and divide by powers of ten, with both whole numbers and decimals and to identify related multiples and factors • (eg. 0.9x100=90, 456÷100=4.56 etc) • Know factor pairs of a given number • Add and subtract tenths, hundredths and pairs of decimal numbers • Know square numbers and cube numbers
Year 6	Year 6 revisits lots of concepts taught in Year 5. • Order operations to make calculations easier (eg. 4.3x7 – 4.3x5 = 4.3x2) • Use factors and multiples to make calculations easier • Know square, cube and prime numbers • adding and subtracting one tenth, one hundredth and one thousandth. • Understand the relationship between fractions, decimals and percentages and use in context (eg. £750 ÷ 2 = £375, £750 x 0.5 = 375 and 50% of £750 is £375) • Add and subtract tenths, hundredths, thousandths and pairs of decimal numbers • Consolidate multiplication facts up to 12x12 and corresponding division facts • Read numbers up to 10,000,000