

Examples of Progression in Mathematics at Our Lady of the Angels

Place Value

Progression in place value begins with children developing secure **number sense**, recognising quantities, understanding the composition of numbers and comparing values using concrete resources and visual representations. As pupils move through the curriculum, they learn that digits have different values depending on their position, building confidence in grouping objects into tens and ones and recognising that ten ones can be exchanged for one ten. This understanding is deepened through the **concrete–pictorial–abstract approach**, allowing pupils to explore number structure using manipulatives before moving to more efficient written and mental methods. Over time, pupils learn to partition numbers flexibly, read and write larger numbers, and use place value knowledge to support calculation, reasoning and problem solving. By the end of Key Stage 2, pupils can explain the value of each digit, compare and order numbers confidently, and apply their understanding of place value to increasingly complex mathematical concepts and real-life contexts.

Addition and Subtraction

Progression in addition and subtraction develops steadily from the Early Years through Key Stage 1 and beyond. In Reception, children begin by combining groups, counting on and counting back, recognising doubles within 10 and using part–part–whole relationships to understand how numbers can be composed and decomposed. In Year 1, pupils build on this foundation by securing number bonds within 10 and 20, recalling doubles and halves, and learning to read, write and interpret addition and subtraction statements using concrete resources and pictorial representations. By Year 2, children recall and use addition and subtraction facts to 20 fluently, derive related facts up to 100, and apply their understanding to solve increasingly complex problems involving numbers, quantities and measures. In Key Stage 2, pupils deepen their understanding of addition and subtraction through increasingly complex concepts, representations and formal methods. In Year 3, children build on Key Stage 1 knowledge by adding and subtracting numbers with up to three digits, using both mental strategies and the formal written columnar method. They begin to apply their understanding to missing-number problems and multi-step calculations, drawing on secure place value knowledge. In Year 4, pupils extend this to four-digit numbers, selecting efficient strategies and using columnar addition and subtraction where appropriate. They also develop flexibility in choosing mental methods when numbers are well-suited to them. By Year 5, children work confidently with numbers beyond 10,000, applying formal written methods to increasingly large values and developing accuracy and efficiency in multi-step problems. They learn to check their calculations using inverse operations and estimation. In Year 6, pupils apply addition and subtraction across a wide range of contexts, including multi-step problems involving large numbers, decimals and real-life data.

