

Written Calculation Strategies Policy

Aims and objectives

The national curriculum for mathematics aims to ensure that all pupils:

- become **fluent** in the fundamentals of mathematics, including through varied and frequent practice with increasingly complex problems over time, so that pupils have conceptual understanding and are able to recall and apply their knowledge rapidly and accurately to problems
- **reason mathematically** by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language
- can **solve problems** by applying their mathematics to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions.

At Highcliffe Primary School, we believe that a child's ability to use written calculation strategies to solve number problems, alongside their use of mental strategies and recall of key facts, forms the basis of the 'Nuts and Bolts' that they need to become effective learners in maths and that these allow them to become fluent in number. In order to support a child's growing understanding of number, the teaching of written calculation strategies *that the child can use confidently and effectively* is a crucial step in their development. It enables them to extend their mental working into easily recordable methods that they understand and can use successfully. It also allows them to solve increasingly complex problems, based on both number and real-life contexts, and provides them with life-skills that they will need in both their future schooling and beyond.

Our objectives in the teaching of written calculation strategies are:

- to build on the practical and mental calculation strategies that will have been developed across the Foundation Stage and Key Stage 1
- to promote links to their current abilities in mental maths and show how these abilities can be used to solve more complex problems;
- to promote confidence and competence with numbers and the number system;
- to work with the child at their current level of understanding to develop effective strategies that they can use confidently;
- to ensure a consistency of teaching of written calculation strategies across Key Stage 2;
- to develop the ability to solve problems in a range of contexts.

Although this policy maps out the ideal route that a child may take in the development of their written calculation strategies, it should be remembered that many children do not fit with the ideal. *When teaching written calculation strategies, the starting point should always be the child's current level of understanding* and should not be based purely on their age or year group. For instance, if a Year 6 child's understanding of number is not sufficiently developed to use the most compact method, but they can use methods introduced in Year 4 *confidently and efficiently*, then these are the strategies they should initially use, before moving on to more efficient methods. *If a child has difficulty applying a more compact method when solving problems involving more complex numbers, e.g. multiplying decimals in Year 5 and 6, it may be necessary for them to return to a less efficient method to secure understanding of areas such as place value or partial products before returning to the more compact method.* Likewise, a Year 3 child who has a well developed understanding of number can be introduced to strategies from later year groups. We believe that the people who know best which methods they can use confidently, consistently and accurately are the learners themselves.