

Sapientia Education Trust (SET) Calculations Policy

This policy details the progression through written stages of working for each of the four operations. Through this policy and through the teaching of mathematics in our schools, we seek to achieve the three aims set out in the purpose of study for mathematics (detailed in the Mathematics Programmes of Study: Key stages 1 and 2, National Curriculum in England)

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 develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately.
- **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.

The methods of working are not set by year group or age, as they are part of a progression. As each individual pupil shows confidence and competency in one stage of working, they may move onto the next stage.

Children should be encouraged to approximate their answers before calculating.

Children should be encouraged to check their answers after calculation using an appropriate strategy.



Children should be encouraged to consider if a mental calculation would be appropriate before using written methods.

The aim is for children to be accurate and efficient with their method of working, not to cover all methods of working outlined in this policy.

We strive to create confident and competent mathematicians who are skilled calculators by the end of KS2.

Through all stages of working in mathematics and in all year groups, pupils should be taken through the stages of working following the CPA approach:

Concrete – pupils should explore the mathematics using physical resources to show their working.

Pictorial – pupils will move onto using pictorial representations of concrete activities, which will help them to move into the final stage, which is working in the abstract.

Abstract – using a written method of working to calculate an answer.

Children can travel back and forth through these concepts when developing their understanding, there is not a linear route that fits all children.

SET promotes Maths teaching for Mastery. This means acquiring a deep, long-term, secure and adaptable understanding of the subject. The Mastery approach is built on the understanding that all pupils can succeed in maths. To aid teaching and learning and to ensure correct coverage of the National Curriculum objectives for each year group we have chosen to follow the White Rose Maths Hub's Schemes of



Learning. These Schemes of Learning break down the teaching of mathematical concepts into small steps so that pupils achieve deep conceptual understanding which they can apply to problem solving, reasoning and fluency.

As a Trust we have purchased and chosen to use Power Maths as a resource to support our teaching. These resources have been created in partnership with White Rose, so they support our long term plans and are fully recommended by the DfE. Power Maths provides our schools with an exciting growth mind-set and problem solving approach which helps spark a curiosity and excitement for maths and equips children with deeper understanding.

This mathematics policy is a guide for all Sapientia Education Trust staff and has been adapted from work by the NCETM and the White Rose Maths Hub. Significant teaching and learning time is spent developing deep knowledge of the key ideas that are needed to underpin future learning. As a result of this, teachers will use their professional judgement to decide whether consolidation of existing skills is required or if pupils should move onto the next concept.

This policy has been adapted from the White Rose Maths Hub Calculation Policy. It is a working document and will be revised and amended as necessary.