



## **CALCULATION POLICY**

### **Vision Statement/ School Aims**

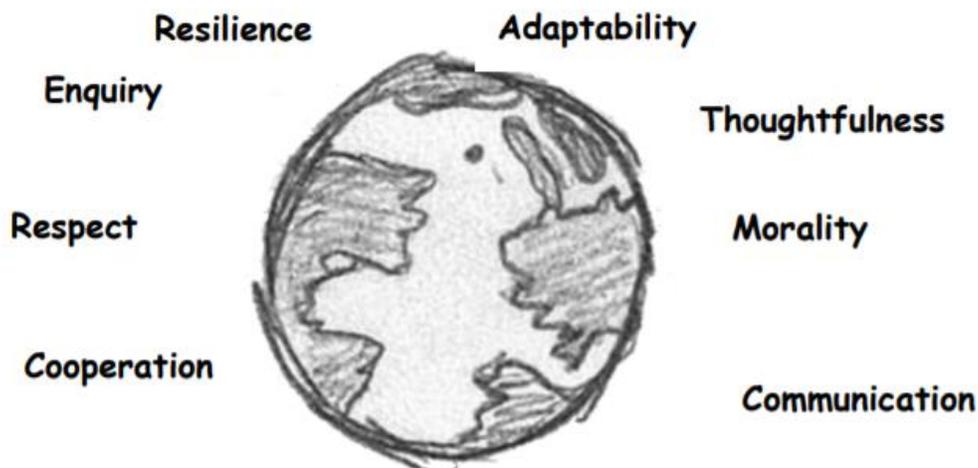
At Boothferry Primary School our multi-cultural community places family at its core.

Our innovative, international curriculum provides opportunity and experiences that enable our children to become ambitious, resilient learners.

All members of our school community aspire to achieve their full potential. This ensures that all children make the best possible progress from their starting points and are supported to achieve high level academic skills.

We recognise and appreciate our responsibilities for ourselves and the wider world.

There are eight learning goals woven through our curriculum:

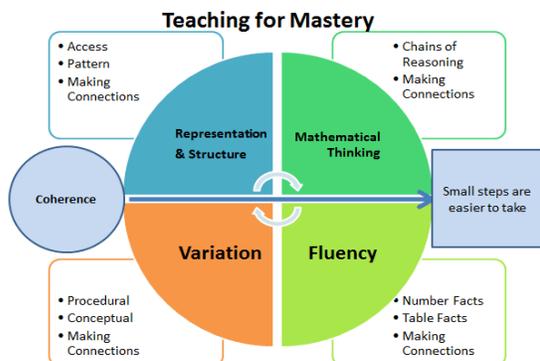


### **Introduction**

Maths is essential to everyday life: a high quality maths education provides a foundation for understanding of the world. At Boothferry Primary, we aim, through creative and inclusive lessons, to create a sense of excitement and curiosity around mathematics, where children are encouraged to make links between areas of maths as well as what they are learning and the world around them.

### **Mastery Approach**

The following calculation policy has been devised to show progression in written calculations in response to the introduction of the mastery approach of the 2014 National Curriculum and its aims of fluency, reasoning and problem solving. It is also designed to give pupils a consistent and smooth progression to aid their learning of calculations across the school, taking into account *Maths – No Problem!* – a Singaporean approach of teaching and learning maths.



At the centre of the mastery approach to the teaching of mathematics is the belief that all children have the potential to succeed. They should have access to the same curriculum content and, rather than being extended with new learning, they should deepen their conceptual understanding by tackling challenging and varied problems. Similarly, with calculation strategies, children must not simply rote learn procedures but demonstrate their understanding of these procedures through the use of concrete materials and pictorial representations.

A key principle of maths mastery is the concrete, pictorial, abstract (CPA) approach. Pupils are introduced to a concept using concrete resources before representing the resources using pictorial jottings. In the abstract stage, children represent the calculation using mathematical notation. Whilst this policy aims to show a CPA approach to different calculations, there are various ways concrete and pictorial representations which could be used and the representations shown in this policy are not exhaustive.



## The national curriculum in England

### Key stages 1 and 2 framework document

The calculation policy is organised according to year group expectations, as set out in the National Curriculum 2014; however, year group strategies are guidance only. Some children may be working below the age-related expectation. It is expected that strategies are revisited from previous year groups in order to embed understanding and develop fluency and confidence with calculations.

Integral to learning to calculate is the ability to select the most appropriate methods to solve calculations efficiently and accurately, dependent on the numbers involved. Fluent computational skills are dependent on accurate and rapid recall on number bonds to 10, 20 and 100 and times tables knowledge which are frequently taught systematically. Children are taught strategies to develop and strengthen their mentally agility and written methods in order to support, record and explain mental calculations; record of steps in longer calculations and work out calculations which are too difficult to calculate mentally.

*This policy has been produced, in part, by a working party of Maths Subject Leaders within the GASP. Some images have been copied from NCETM and MNP materials.*