Cotwall End Primary School

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POLICY AND PROCEDURES

Title	Maths Policy
Purpose	To set out school policy to promote high standards of calculation and mathematical fluency.
Policy author	Mrs Sullivan, Miss Kaur, Mrs A Hardeman and Mrs Mitchell
File name and path	Staff/Policies/Curriculum Policies/2019-2020/Calculations Policy 2019
Consultation	Presented to governors: September 2021

Policy adoption			
Revision number	**Date**	**Amendment**	**Revised by**
1	September 2017	Update of Calculations	Mrs Sue Sullivan
2	March 2018	Calculations update	N/A
3	November 2019	White Rose update	Mrs Sullivan, Miss Kaur, Mrs A Hardeman and Mrs Mitchell
4	September 2021	Unchanged	

Adopted by Governors	Nov 2021
Adopted by Staff	Nov 2021
Signed by Chair of Governors/Headteacher	

AIMS OF THE POLICY

- To ensure consistency and progression in our approach to calculation and enable a smooth transition between year groups and phases.

- To ensure that all Mathematics is taught through the process of:
  Concrete → Pictorial → Abstract.

- To ensure that children develop an efficient, reliable, formal written method of calculation for all operations.

- To ensure that children can use these methods accurately with confidence and understanding.

- To ensure pupils understand important concepts and make connections within mathematics.

- To ensure pupils show high levels of fluency in performing written and mental calculations.

- To ensure that pupils are ready for the next stage of learning and have been given strong foundations in mental methods, the use of practical equipment, allowed to explore jottings and pictures in a range of forms and then to move onto more formal recording using a strong knowledge of place value, number lines labelled or blank, partitioning before eventually using compact written methods.

- To ensure that pupils are competent in fluency, reasoning and problem solving and can make informed and appropriate choices about the methods they wish to use (mental, pictorial or written) to solve mathematical problems efficiently and effectively.

INTRODUCTION

The policy is set out in subjects, addition, subtraction, multiplication and division. Within each specific area there is a progression of skills, knowledge and layout for written methods that has been agreed by all staff. The calculation strategies which will be used will reflect this ideology – moving from concrete to pictorial and then abstract recording leading to more formal written methods. Mental methods and strategies will work in partnership with these methods.

It has been agreed by all staff that to enable pupils to become more fluent a variety of mental calculation methods and recall of facts will be regularly taught in school.

The basis of our maths calculation policy is that mental and written methods are integral to each other and should not be seen as taking separate paths but developed in conjunction with each other. Mental skills will be developed through concrete, pictorial (which support mental calculation) and then into more formalised jottings in the form of number lines and partitioning which in turn leads to expanded column methods and ultimately compact algorithms.

It is important to always show the links between operations and not teach them in isolation or without showing, in practical problem solving activities and across all mathematical topics, how these operations can be applied.

It is important that staff always use correct mathematical language and encourage this from every pupil. This will take place in class discussions as well as through oral and written feedback, next steps and target setting.

Ultimately we aim to enable pupils to make informed choices about the methods they use both mental and written that are the most efficient and this includes recognised compact methods and ensure that pupils are developing mastery of maths. As a school we will be adopting a practical approach to teaching maths based on our Antony Reddy training where use of practical equipment initiates all activities and topics. Practical equipment should be readily available for all pupils. The work with practical equipment (concrete) will lead to recording pictorially and finally to the abstract written methods. Pupils should be taught breadth rather than progressing in a linear style through the curriculum to enable ALL abilities to progress through the National Curriculum statements at the same rate. Pupils will be teacher assessed against their year group National Curriculum targets but there is the option for staff to assess progress against lower year group targets but NOT to move onto the year above. For more able pupils who are developing greater fluency the emphasis should be on giving problem solving experiences to enable them to show working at greater depth.
As a school we will follow the White Rose Planning frame, which allows for a broad and balanced coverage of the National Curriculum and with reasoning and problem solving as an integral part of the Maths study and which correlates well with this calculations policy. However, staff have agreed that there may be some variations from the White Rose planning scheme for the sequence of teaching division and multiplication written methods. On these occasions staff will refer to the steps agreed in the Calculations Policy.