

# MATHS POLICY

## September 2021



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**Reviewed and approved by:**

**Date of approval:**

**Date of next review:**

### Linked Policies

This policy is the umbrella policy for Somerville Primary School's curriculum. Each individual subject area has its own policy document or subject statement to add extra detail and clarification. It should be read in conjunction with the Curriculum, Teaching and Learning, Assessment, SEND, Marking and Feedback and Homework documents.

## MATHS INTENT AT SOMERVILLE

-Children will leave Somerville Primary School with a wide range of positive memories in Mathematics formed through interesting and exciting lessons and experiences that help our children to see learning in mathematics as an ongoing process not a one-off event.

-Children will meet the age related expectations in mathematics, which will be taught by passionate staff who will support children to become fluent in the fundamentals of mathematics, develop mastery of concepts, establish an interest in mathematics and finally, become competent mathematicians

-Children will study a high quality maths curriculum that is both challenging and enjoyable so that all children are able to achieve their full potential.

-Through both teacher input and independent learning children will be encouraged to follow lines of enquiry, establish connections, patterns and relationships, rapidly recall and apply their knowledge, solve problems and explain their reasoning. This will lead to greater depth learning, ensuring that our children are confident mathematicians who are not afraid to take risks.

-All children will study mathematics for at least 5 hours a week in both key stage one and key stage two.

-Children will confidently use age appropriate mathematical language to explain their reasoning and understanding. This is shared with parents via our “Somerville maths dictionary”.

-All maths lessons will be progressive, building on children’s prior knowledge and working walls will be used to support learning and further help children to make sense of their mathematical learning.

-Children in Somerville will access a rich and balanced curriculum within which mathematical skills will be applied to other subjects including but not limited to science and technology.

Children will be working as mathematicians throughout their mathematics journey.

### *The Somerville maths Curriculum is designed to:-*

- Ensure **breadth and depth** of learning, securing key knowledge. *Knowing more, remembering more.*
- Be **progressive** across the school.
- Be an **ambitious, connected** curriculum that makes maths accessible for all children from entry in FS2 to exit in Year 6.

- Develop pupils' knowledge, understanding and use of **mathematical vocabulary** across.
- Develop pupil's knowledge of '**mathematical concepts**' across the maths curriculum.
- Enable children to **make connections**.
- Give pupils **experiences** that **enrich** their curriculum that they would not get elsewhere.
- Encourage pupils' to develop **interests and passions**.
- Ensure **timely targeted support** as and when needed.
- Ensure **clear progress** is made by each child from entry into FS2 to exit in Year 6 and is in line or above national expectations.
- Pupils have many opportunities to practise their reasoning and solve problems.

## MATHS CURRICULUM IMPLEMENTATION AT SOMERVILLE

### Approach to Teaching and Learning and Pedagogy

-Through the use of White Rose resources which are carefully designed schemes of learning, children at Somerville Primary School access a curriculum which is challenging, progressive and consistent to ensure the progress of all learners.

-To ensure further consistency within our approach to the teaching of mathematics our calculation policy is progressive and is written to match the methods and representations used within the White Rose resources.

-Through our focus on a mastery approach to mathematics, daily lessons are built around the concrete, pictorial, abstract (CPA) approach.

-Support staff are effectively deployed and high quality questioning and instant verbal feedback are used within lessons to enable all learners to make progress.

- A combination of both formative assessment within lessons and summative assessments in the shape of pre and post tests enable teachers to identify any gaps in learning or opportunities to develop a deeper understanding. Such assessments enable staff to address such areas with urgency and ensure that work is challenging for all.

- Through the use of whole school number bond and times table tests we monitor children's progress towards achieving our expectation that all children should know their times tables by year 4 in line with the government guidance.

- Where necessary, staff will receive coaching and training in Mathematics, this includes opportunities to engage with outside agencies, specifically the maths hub but is also

encouraged within the school. Through frequent observations, learning walks and book looks the maths team are able to plan purposeful peer observations to share best practice.

### Enrichment Experiences

-Daily lessons include opportunities to practise fluency, problem solving and reasoning to ensure that all children acquire a deep, long-term, secure and adaptable understanding of the subject.

- Engagement with NSPCC Number day, Times Tables Rockstars Day or National maths day.

### Reading and Vocabulary

-Maths dictionaries have been created for each year group listing the vocabulary that children need to understand in each aspect of maths across each year group. They are available on our website and referred to within lessons when new mathematical vocabulary is introduced.

### Special Educational Needs and maths

-Quality first teaching ensures that children are able to understand new mathematical concepts. Staff break concepts down into smaller pieces of information so that a love of maths is fostered and children with special educational needs do not become overwhelmed.

-Children have access to a range of concrete resources which are used to support and scaffold their understanding.

### MATHS CURRICULUM IMPACT AT SOMERVILLE

-Children at Somerville Primary School enjoy maths; they talk enthusiastically about maths and are keen to share what they have learnt.

-Children experience a wide-ranging number of challenges in the subject and know appropriate responses to them.

-Children can independently apply their knowledge and are able to make decisions about which equipment and manipulatives might best support them in solving a problem.

-Children solve problems by applying their mathematics in a variety of problems with an increasingly systematic approach including breaking down problems into a series of simpler steps and using more than one method to check their answer.

-Children can reason mathematically, explain their thinking after following a line of enquiry, relationship or generalisation and justify their findings using an increasing range of mathematical language

-Children of all abilities and backgrounds make progress in mathematics and there will be an increased proportion of children who are achieving the end of year expectations.

-Children have an increased confidence in their mathematical ability and evermore resilient showing a willingness to have a go and try even when at first they may find a problem daunting.

-Children are becoming increasingly fluent in the fundamentals of mathematics and are increasingly quick at accurately recalling their number bonds, times tables and division facts.

- Children are assessed termly using White Rose assessments for Years 1 to 6.

## EQUALITY IN MATHS EDUCATION

Somerville Primary School is committed to valuing diversity and to equality of opportunity. We aim to create and promote an environment in which pupils, parents and staff are treated fairly and with respect, and feel able to contribute to the best of their abilities. The Governing Body recognises that it is unlawful to take into account anyone's gender, marital status, colour, race, nationality, ethnic or national origin, disability, religious beliefs, age or sexual orientation. Full consideration has been given to this during the formulation of this policy as it is the governors' aim that no-one at Somerville Primary School should suffer discrimination, either directly or indirectly, or harassment on any of these grounds.

## SMSC

When writing this policy and planning for lessons we have planned in opportunities that allow discussion and learning around pupils social, moral, spiritual and cultural development. Teachers will raise questions in a range of topics and children will also be encouraged to raise their own questions.