



Mathematics Policy

July 2022

'Mathematics equips pupils with a uniquely powerful set of tools to understand and change the world.' (National Curriculum for England Mathematics 1999)

Version 4.1

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1 Introduction

- 1.1 This document outlines our approach towards the teaching of Mathematics at SCPS. It sets out our intent for the subject, how it will be implemented, and the way we assess its impact.

2 Definition

- 2.1 Mathematics is:

- *an important tool which can be used to enable things to be done which might otherwise be impossible and should equip the children for real life situations;*
- *one way of teaching initiative, accuracy, systematic logical thinking and is a source of interest and fun;*
- *important in the communication and analysis of information and ideas;*
- *a tool to give the power to describe and explain, but also predict – to suggest possible answers to practical problems.*

3 Intent

- *to encourage children to use mathematics in everyday situations, to understand its relevance to life and use problem solving skills;*
- *to develop children's understanding of mathematical concepts, skills, facts, relationships and strategies;*
- *to develop an inquiring and inquisitive mind;*
- *to encourage enjoyment, creativity and confidence in mathematics;*
- *to ensure all children receive their entitlement to the full range of mathematical experiences as set out in the National Curriculum in the areas of numbers and the number system, calculations, solving problems, handling data, measures, shape and space;*
- *to support children to attain the levels of achievement appropriate to their ability and experience and to challenge children to fulfil their mathematical potential;*
- *to encourage children to work co-operatively and independently;*
- *to familiarise children with the language of mathematics and the ability to use it to communicate with others.*

4 Implementation

- 4.1 We teach all children maths using the mastery approach, underpinned by the White Rose Maths planning materials. When we feel that individuals or groups of children have mastered a topic we will blend in a range of other materials to back up, inspire and extend. We make extensive use of practical maths activities and exercises to demonstrate the application of maths to real life. We organise children into flexible maths sets and allocate resources to those sets according to need.

- 4.2 Our planning reflects our involvement with the NCETM BBO Maths Hub, which is based on the White Rose Maths (mastery) planning scheme. All teachers have logins to the Premium Resources area.
- 4.3 All children will be taught using the mastery approach until they have understood (“mastered”) a topic. When they have done so, some of the alternative framings of problems will be explored, and other resources and materials will be employed. Where possible there will be a focus on the practical applications of maths in real-life, using real examples and making use of our grounds where appropriate and possible.
- 4.4 All maths activities and plans will be recorded on our tracking system weekly.
- 4.5 Kites (FS Class) tailor their maths teaching to ensure they cover all the Early Years objectives ready for the children to transition into more formal teaching in Year 1.
- 4.6 The use and application of Mathematics to investigate and solve problems is integrated with work on number, algebra, shape, space and handling data to help the children think mathematically. Cross-curricular links are made when appropriate.

5 Teaching styles and strategies

- 5.1 A range of styles of teaching is necessary for the teaching of Mathematics. Approaches need to be related to the topic itself and to the abilities and experience of both teachers and pupils. Our teaching at all levels includes opportunities for:

- *introducing a new topic with a real life problem;*
- *use of models and images;*
- *whole class teaching including mental / oral starters;*
- *speaking and listening;*
- *appropriate practical work;*
- *consolidation and practice of skills and routines;*
- *problem solving;*
- *the committing to memory and recall of a range of mathematical facts;*
- *investigation work;*
- *class work, group work, individual work.*

6 Big Maths

- 6.1 Every two weeks, every class has the opportunity to study maths for a whole morning in the form of a ‘Big Maths’ session. This allows teachers to plan for a longer integrated session, perhaps incorporating an investigation, scaffolding of a more detailed topic, computer-based activities, or some other simulation which extend and broaden the students’ knowledge. The focus of these sessions is on the practical application of maths to everyday life and work.

7 Differentiation

- 7.1 In KS2 there are three maths sets based on ability. The more able set normally has 30 children, the middle set 20 children and the set needing more adult support has 10 children. Within these classes, children are further divided into groups according to ability but child move frequently within these groups depending on the maths topics they are learning.
- 7.2 Each teacher organises work taking into account the varying mathematical abilities within the class. Group working has an advantage, whereby children of a similar ability can be given work at a suitable level different to that of the rest of the class. Less able and talented children may require a larger proportion of individual teaching to help reinforce concepts or expand their capabilities.

8 ICT

- 8.1 A variety of different programs are used to introduce and/or reinforce concepts, predominately White Rose Maths. Children use appropriate websites and other suitable programs in either the ICT suite or using the laptops. Some classes encourage children to review their work and progress online. The Oxfordshire Sumdog maths competition is also a focus for some classes, to reinforce maths learning at home. Children from Y1 use NumBots then progress to Times Tables Rockstars from Year Two upwards to help with embedding timestables knowledge.

9 Inclusion

- 9.1 We ensure that the curriculum is available to all pupils, with equal appropriate access regardless of sex, race, religion or ability.

10 Record-keeping and assessment

- 10.1 Children's work is marked according to the agreed school policy and their performance continually assessed by class teachers.

11 Impact

- 11.1 **Formative Assessment.** Our online 'Assessment without Levels' system allows teachers to rate children on a three-point scale on around 60 attainment statements in maths. Throughout the year, a teacher is able to indicate whether the child is 'working towards', 'working at', or 'working above' the individual statement. Results from these data are used to identify individual progress and take remedial action as the year progresses.

- 11.2 **Summative Assessment.** Children may complete end of term White Rose Maths (WRM) tests based on their current term's work, and an end of year SATS practice test (except in Year 6 where a range of SATS practice activities are conducted). End of KS1 and KS2 SATs results and Teacher Assessments are reported to parents, LA and DFE as required by law. Teachers discuss pupil progress with parents on Consultation days, IEP meetings, and written annual reports are sent to parents in Term 6.
- 11.3 The teacher passes relevant information to other teachers and to the Mathematics Subject Leader.

12 Staff training

- 12.1 Staff will be encouraged to attend courses and review resources. The Mathematics Subject Leader will have access to specific training to support and develop their role.

13 Dissemination

- 13.1 The Policy is available on the school web site and a paper copy is held in the main school admin office. The policy and schemes of work will be available on request to parents, LA, OFSTED and others working for the school, through the Head teacher.

14 Reviewing the policy

- 14.1 This policy will be reviewed annually by the Mathematics Subject Leader and monitored by the Link Governor changes made to ensure that the Policy is relevant and up to date.

15 Further reading

- 15.1 This document should be seen in conjunction with our Assessment Policy, and SCPS Maths Calculations Progression.