



Mathematics Policy

July 2017

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

Definition

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.

Maths at SCPS – Our Aims

- 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.

Planning

Our planning across KS1 and KS2 is based upon the Abacus Evolve Scheme. Teachers use the online planning system that is automatically updated to reflect new changes to the curriculum. This allows new objectives to be applied seamlessly and easily into our current planning. All year groups use the resources that are provided with Abacus; textbooks, workbooks and interactive teaching programmes as well as the online pupil space. Abacus allows teachers to plan online, differentiating four different ways to ensure tailored teaching for all children. It also allows teachers to provide detailed plans for their TAs in the classroom ensuring that additional adults are guided into providing suitable yet challenging support for the groups that they are working with.

Abacus now includes weekly 'Mastery' challenges, which extend the more able or gifted students further – testing their breadth of knowledge and ability to apply it.

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.

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.

Teaching Styles and Strategies

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.

Big Maths

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.

Differentiation

In KS2 there are three maths sets. The top set normally has 30 children, the middle set 20 children and the lower set 10 children. Within these classes, children are divided into groups according to ability. 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.

ICT

A variety of different programs are used to introduce and/or reinforce concepts. Easiteach Maths, Powerpoint presentations, Interactive Teaching Programs (ITPs) and websites are used by teachers using an interactive white board or lap top and projector. 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 and entertain.

Inclusion

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

Record Keeping and Assessment

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

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.

Summative Assessment

Children complete end of term Abacus 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.

The teacher passes relevant information to other teachers and to the Mathematics Subject Leader.

Staff Training

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.

Dissemination

The Policy is available on the school web site and a paper copy is held in the main school admin office. A short summary will be included in the school prospectus. 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.

Reviewing the Policy

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.

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