

# Stroud Green Primary School



*Believe and achieve*

Stroud Green Primary School, part of a richly diverse community, is a place where all children flourish in a safe, happy and stimulating environment.

## Mathematics Policy

Mathematics Subject Leader: Carol Amonsingh

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The following policy reflects our values and philosophy in relation to the provision and teaching of mathematics at Stroud Green Primary School and Rainbow Nursery to produce children with mathematical fluency, children who confidently and successfully undertake mathematical activities both in the classroom and the world beyond. Mathematics is valued as a vital life skill as well as an academic pursuit.

### **Policy Statement**

Children who have mathematical fluency are confidently able to apply their mathematical knowledge and skills both at school and in their daily lives.

From Autumn 2014 pupils will follow the new curriculum for Mathematics document 2014-15, with the exception of those children in Y2 and 6. By Autumn 2015 all pupils will be taught using the revised curriculum. Mathematics is delivered to all pupils across EYFS, KS1 and KS2. It offers a broad foundation of mathematical experiences. When possible, practical opportunities, using models and real life situations are incorporated. This supports and increases all children's access to exciting and successful learning through excellent teaching.

### **Aims and purposes of mathematics**

Mathematics teaching should contribute to the acquisition of life-long skills and promote enjoyment and enthusiasm for mathematical learning through practical activity, exploration and discussion.

Through our provision, we intend that children:

- will be able to apply their mathematical knowledge to solve problems, including those with real-life contexts, by choosing the appropriate operations
- can estimate the approximate size of the answer to check the reasonableness of their calculations
- will leave primary school with an efficient, reliable, compact written method of calculation for each operation
- develop a range of mental calculations strategies, aided by informal jottings where necessary
- are confident in the fundamentals of maths and be able to reason mathematically independently as well as with a partner or group member
- recognise the purpose and relevance of mathematics in their learning and the importance of mathematical skills in everyday life
- recognise that mathematics exists beyond their classroom lessons

## **Achieving and Maintaining High Standards**

The staff at Stroud Green work hard to understand the factors that lead to high standards in maths, and have developed a common approach to teaching maths throughout the school based on the following assumptions:

- the need to follow the agreed curriculum, alongside the mental and written calculation policies.
- the primacy of mental calculations, backed by accurate and rapid recall of number facts, is acknowledged.
- the importance of incorporating a range of teaching approaches, together with appropriate differentiation so that mathematics is interesting, challenging and enjoyable.
- the importance of being consistent in the use of correct mathematical language and of ensuring children have access to the vocabulary being taught each week via the 'learning walls'.
- the importance of closing any gaps in pupil attainment that are identified in children's learning through gap analysis and assessment, providing appropriate input and regular review to ensure good or better progress.

## **Planning**

The National Curriculum 2014 provides the programmes of study to be covered with ideas on how to deliver them and what the children need to achieve. Teachers use a variety of references and resources to support and produce their weekly plans.

Planning between parallel classes should show parity of learning intentions.

Teachers use a range of activities to deliver the objectives, sometimes using published material to support the learning. Teaching and learning activities will include the use of IT to support the teaching and learning of identified learning objectives, when this is judged by teachers to enhance learning.

Our medium-term mathematics plans give details of the main teaching objectives for each term. They ensure an appropriate balance and distribution of work across each term.

Our short-term planning follows a range of key principles regarding dedicated mathematics lessons. They are:

- direct, instructive, inductive, applicable, exploratory and reflective teaching with the whole class and groups
- emphasis on mental calculation
- use correct mathematical language and notation to discuss mathematics and explain thinking
- opportunities for open-ended and investigative activities that lend themselves to collaboration

- differentiation with all pupils working on a common theme (e.g. resources, strategies, allocated adults)
- initial lessons in a unit are used to assess prior learning, to ensure appropriate future planning. Oral work/mental calculation starters are generally used to begin every lesson, linking where possible to the learning objectives of the lesson.

### **Mental Maths**

Mental methods will be emphasised from an early age. Children will be directly taught and provided with regular opportunities to develop the different skills involved. Children are taught using modelling by the class teacher and practical and visual materials. These skills include:

- remembering number facts
- using known facts to work out new facts
- developing a repertoire of mental strategies
- solving problems

### **Written Work**

Written recordings are used to:

- informally support a mental calculation
- develop the skill of explaining the method used
- help someone else follow the method or assess the work
- practise writing and using the correct symbols and notation
- help remember or practise the recall of number facts
- carry out the working of a standard written method of calculation

The move from informal to standard written methods will occur in line with the expectations set within the National Curriculum. Expectations about presentation of written work in books are shared with staff at the beginning of every year.

### **Organisation of Maths Lessons**

Mathematics is taught by class teachers and other adults. It may be taught to individual pupils, to small groups of similar ability, to the whole class or in cross curricular work.

In the Early Years Foundation Stage, learning is underpinned by the 'Characteristics of Effective Learning'. Child initiated learning opportunities are cross-curricular and children experience a wide range of open-ended problems and resources, both in the indoor and outdoor setting. In the EYFS mathematics is also taught through child-led and adult-led themes and activities.

The EYFS curriculum continues as part of their transition into Y1 to consolidate their learning. After the transition period, mathematics starts to be delivered as a dedicated maths lesson. Mathematics continues to be taught, following the principles

described above, throughout KS1 and KS2 and there is a good balance of whole-class work, group and individual practice. Our curriculum planning recognises that cross curricula work is an ideal way in which mathematical knowledge can be applied and skills reinforced.

Where appropriate, interventions are designed for those pupils with specific identified needs (e.g. Numicon, booster groups). Teachers use their professional judgement to determine activities, timing and organisation of each part of the lesson to suit the objectives – indeed we encourage variety and creativity.

### **Assessment, Recording and Reporting**

Assessment in maths is part of the assessment cycle. Assessments are formally reviewed termly. Learning objectives and success criteria are shared with the children. Children are provided with opportunities for self/peer-assessment. Marking pupils' work against the learning objectives is an integral part of the maths lesson. Marking is developmental and children are provided with next steps to extend their learning. Feedback is timely, ensuring opportunities are used to move learning forward and ensure pupils make progress. Teachers monitor the acquisition of skills, knowledge and understanding through gap analysis, appropriate teacher intervention, observations and discussions with groups and individuals, and records of achievement in the key skills in maths for each year group are updated termly. Trends in summative assessments are analysed for strengths and areas for development. These in turn inform school strategic planning.

Continuity and progression is supported by the timely transfer of baseline and termly data, transfer of books and reports and regular dialogue between successive teachers, colleagues, the mathematics subject leader and the senior leadership team. Moderation is a key part of the assessment process.

### **Homework and Parental Involvement**

Opportunities will be provided for children to practise and consolidate their skills and knowledge. They are given opportunities to develop and extend their techniques and strategies, and to prepare for their future learning through out-of-class activities or homework. This may not always be written work, and it is aimed that it will be set on a weekly basis. The activities will be short and focused and used to consolidate and further develop their learning and foster different study skills. Parent workshops are offered periodically to assist parents with knowledge and skills. Support for parents from some of our key language groups is also on offer. Information is also available on our school website, including the school's homework policy.

## **Equal Opportunities**

The maths policy firmly supports the equal opportunities philosophies of the school and all children will have access to the maths curriculum.

## **Special Educational Needs and Disability**

Where necessary, adaptations will be made to the curriculum, to equipment and to resources to allow access to maths for pupils with SEND, including provision for pupils who are exceptionally able in mathematics.

## **Resources to support delivery of the Mathematics Curriculum**

Each class is separately resourced with basic materials and particular equipment for age specific year groups. Additional resources are stored in the Maths resources room. Teachers will use resources to:

- demonstrate or model an idea, an operation or method of calculation e.g. a number line, large arrow cards, counting stick.
- enable children to use a calculation strategy or method that they couldn't do without help; e.g. individual number grids or lines, counters.
- provide a context for the application and practise of mental calculation strategies and number skills e.g. dice, number cards, number games, coins.

## **Management and Curriculum Leadership**

The Senior Leadership Team, Subject Leaders and Governors work together to ensure consistency, progress and standards are maintained.

The role and responsibilities of the Subject Leader include:

- inspiring an exciting and creative approach to maths teaching,
- leading initiatives and ensuring staff and governors are kept informed and trained as appropriate
- supporting mathematics teaching, providing curriculum guidance/resources
- reviewing the maths policy and monitoring its implementation
- regularly evaluating the maths scheme of work and amending as necessary
- organising pupils participation in maths workshops and events
- effectively managing the maths budget, and managing and purchasing mathematics resources
- monitor the impact of intervention programmes and discuss these with the SENDCo to gain evaluations
- to monitor the quality of teaching and learning of Mathematics across the school (e.g. lesson observations, work sampling, target setting)
- to inform SLT of the targets set and attainment within Mathematics.
- reporting to parents, governors, SLT and others when appropriate