



## South Stoke Primary School Policy for Mathematics

Mathematics is a tool required for everyday life. It is integral to all aspects of life and with this in mind we endeavour to ensure that children develop a healthy and enthusiastic attitude towards mathematics that will stay with them.

The Department for Education states in the national curriculum that:

*Every state-funded school must offer a curriculum which is balanced and broadly based and which:*

- *promotes the spiritual, moral, cultural, mental and physical development of pupils at the school and of society, and*
- *prepares pupils at the school for the opportunities, responsibilities and experiences of later life.*

### **Intent**

Our school believes that every child is entitled to a high-quality mathematics education, which will provide a foundation for them understanding the world. We want the children to develop their mathematical skills and understanding, and ensure they become confident mathematicians who are not afraid to take risks. All children should feel challenged through interacting with high quality activities which develop their skills and knowledge in fluency, problem solving and reasoning.

As a result, they will have an appreciation of the beauty and power of mathematics, and a sense of enjoyment and curiosity about the subject.

### **Implementation**

The national curriculum provides the framework for maths in our school. Statutory requirements for the teaching and learning of Mathematics are laid out in the National Curriculum.

The national curriculum aims to ensure all pupils:

- ***become fluent in the fundamentals of mathematics, so that they:***
  - *have a well-developed sense of number values*
  - *know by heart key number facts, e.g. times-tables and related division facts, number bonds - in line with the latest programmes of study*
  - *apply knowledge of the above to work out connected facts*
- ***reason mathematically, so that they:***
  - *are able to follow a line of enquiry*
  - *provide generalisations and proof of findings around their investigations*
  - *are able to justify their thinking, e.g. as to why a particular calculation strategy is the most efficient*
- ***solve problems by applying their understanding of mathematics, so that they:***
  - *encounter a variety of both routine and non-routine problems*
  - *are able to select specific maths skills and/or operations*
  - *persevere with a line of enquiry, breaking down increasingly complex problems into a series of smaller steps*

The Statutory framework for the early years foundation stage explains the framework to be taught to children in the foundation stage:

*Developing a strong grounding in number is essential so that all children develop the necessary building blocks to excel mathematically. Children should be able to count confidently, develop a deep understanding of the numbers to 10, the relationships between them and the patterns within those numbers. By providing frequent and varied opportunities to build and apply this understanding - such as using manipulatives, including small pebbles and tens frames for organising counting - children will develop a secure base of knowledge and vocabulary from which mastery of mathematics is built. In addition, it is important that the curriculum includes rich opportunities for children to develop their spatial reasoning skills across all areas of mathematics including shape, space and measures. It is important that children develop positive attitudes and interests in mathematics, look for patterns and relationships, spot connections, 'have a go', talk to adults and peers about what they notice and not be afraid to make mistakes.*

Each child experiences a maths lesson every day. These build up from an initial 10 minute carpet time session in Reception to a regular daily lesson of an hour in year 6. Approximately 20% of curriculum time is set aside for the teaching and learning of maths in line with national recommendations. Maths is delivered through a variety of teaching methods and approaches. Children have opportunities to use and apply their skills in a variety of relevant contexts.

Mathematics planning is dependent on the needs of the children ensuring thorough coverage. Our school has chosen to adopt the White Rose Maths (WRM) scheme to support the planning and teaching of mathematics. This scheme is used across the school but is adapted and tailored for each individual year groups to ensure all pupils are getting the progression in maths they need.

Long term planning: The mathematics national curriculum provides the key stage requirements. Teachers use these to plan the year of maths ensuring each area is given thorough coverage across the year. WRM also aids teachers in the planning of units across the year.

Medium term planning: We use our long-term plans to map out the objectives for each term. This ensures progression across the year and that objectives are revisited across the year. This allows for revisions and consolidation and ensures that progress is made. WRM breaks down each national curriculum area into small steps to be covered in the unit.

Short term planning: Lesson plans are derived from the medium term plan. Each teacher plans maths for the whole week for their class. This is where individual pupils needs are assessed and scaffolding and stretching is considered. Teachers use the WRM small steps to plan their lessons. Some steps are whole lessons or more whereas some may be combined into one lesson.

Each classroom has a wealth of mathematical resources needed to teach all aspects of the curriculum. Resources are shared between the classes. Children are encouraged to use resources to support their independence in maths learning. Pupils are taught using concrete, pictorial and abstract experiences.

Key math areas are also taught in other subjects where appropriate e.g. data handling through Science, measuring in PE.

## **Impact**

Whole school meetings and lesson observations offer support to teachers in their planning, delivery and evaluation of Mathematics, while termly work scrutiny seeks to identify good practice in mathematics and to share and address any developmental areas.

In KS1&2, teachers regularly make assessments against National Curriculum statements and ensure that progress is regularly recorded and monitored. This informal assessment may take a variety of forms: observation, discussion, questioning or via written work, tables tests, mathematical games and investigations. In Foundation stage, the children are assessed against the specific goals using their early years profile.

Formal assessments take place throughout the year and this information is fed into our school tracking system. Formative assessment is carried out on a daily basis, and plans are annotated and adapted to take into account the children's learning needs.

Statutory testing of children is carried out at the end of Key stage 2 (SATs). Year 4 sit a statutory testing of multiplication tables.

The Head teacher and Class teachers meet at regular Pupil Progress meetings to set targets for individuals, groups and classes. There are frequent opportunities for children at all stages to take part in the target-setting process through self and peer assessment.

### **Equal opportunities**

Mathematics is a subject taught to all. Different children will work at different speeds. Teachers plan work that allows for differentiation by outcome and by task to provide equality of access for all children. We have high expectations of all children and provide opportunities for them all to be challenged. Children with SEN are included in quality first teaching. Children with SEN that have learning difficulties in mathematics have additional provision and interventions are put in place for those requiring more mathematical support.

### **Staff development**

All staff are given regular opportunities and encouragement to develop their own mathematical teaching skills, through supported individual study, in-school and local cluster workshops and local authority training. The subject leader for Mathematics (Miss Townsend) identifies school needs and co-ordinates professional development opportunities where needed.

### **Role of Maths co-ordinator (Miss Townsend)**

The Maths co-ordinator is responsible for improving the standards of teaching and learning in Mathematics and children's subsequent achievement. Through regular meetings, they monitor and evaluate:

- pupil progress
- the provision of Mathematics within school
- the effectiveness of teaching and learning
- the quality of the learning environment (including available resources)
- the deployment, provision and effectiveness of support staff
- the involvement of parents in their children's Mathematics learning

The Co-ordinator takes the lead in policy development and ensures that staff are updated with Mathematics developments.