South Avenue Primary School

Mathematics Policy

Rationale

This policy is set within the context of South Avenue Primary School's vision, aims and policy on teaching and learning. Mathematics provides a way of viewing and making sense of the world. Mathematics is taught not only because it is essential but also as a source of delight and wonder, offering pupils intellectual excitement. Our curriculum is fully in line with the 2014 National Curriculum.

As a result of their learning in mathematics and problem solving across the curriculum children will:

- Be prepared for applying their skills effectively in everyday life situations, in their future learning and in the work place
- Have the building blocks in place that provide a solid foundation to lead onto secondary, further and higher education.

Aims

The schools aim is for all pupils;

- To have equality of opportunity
- To enjoy mathematics, be successful and have a positive attitude to the subject
- To develop mastery through practical and investigational work
- To acquire appropriate and necessary mathematical skills including mental arithmetic
- To be able to demonstrate their skills and knowledge and talk about their work using appropriate mathematical language
- To develop critical thinking skills and logically apply their mathematical knowledge to solve problems
- To use mathematics as part of their everyday life in school and at home

Numeracy in Foundation stage

Developing mathematical thinking and early vocabulary through:

- Communication
- Listening
- Reading
- Recording
- Manipulating
- Comparing / classifying

- Estimating / measuring
- Prediction
- Choosing / testing
- Drawing conclusions

Pupils have opportunities to initiate their own mathematical learning through using engaging resources both inside and outside of the classroom. A balance of directed time activity and detailed observations inform class teachers of the next steps for learning for individual Early Years pupils.

Numeracy in KS1 and KS2:

Whilst the basic lesson structure is as outlined below, teaching staff may adapt this form to reflect the age and needs of the children.

- Oral and mental calculation activities 10 minutes
- Main teaching activity 25 minutes (KS1) 40 minutes (KS2)
- Review - plenary session 10 minutes, but also mini plenaries throughout the lesson
- Manipulative resources, such as Numicon, Place Value Counters and Dienes will be used.
- Lessons will have clear learning objectives that are communicated to the pupils. The children will have a chance to discuss and help produce a list of success criteria and this will be displayed throughout the session.
- All lessons will include an element of reasoning, using and applying and some development of fluency.

Big Maths

In all three phases, there is also an additional 20 minutes per day devoted to mental maths. This consists of four, five minute sections.

Counting

Every class will spend five minutes a day counting in different intervals, from different starting points and in different directions. They will use a selection of tools such as 100 squares and counting sticks. This builds greater understand of the number system.

Learn It

Five minutes will consist repeating the same 3 or 4 number facts (bonds or multiplication facts) over a period of 3 weeks before moving on.

It's Nothing New

A further 5 minutes is spent exploring a known fact in order to discover new facts.

Calculations

A variety of calculations, of varying difficulty, are presented to the children for them to solve with the opportunity to discuss their thinking and strategies. Further guidance can be found in the Calculation Policy.

Guided group work

Guided group teaching is particularly powerful across the whole curriculum. Pupils work with an adult who guides their learning through a planned sequence of tasks and discussions. There are opportunities for focused teaching and assessments. Each child will have a guided group session with a class teacher every week and a second with a TA where available.

Differentiation

Differentiation will take place through the support and scaffolding provided. Our teaching stretches the 'rapid graspers' whilst supporting any pupils who need different amounts of time to grasp new concepts. Written calculation methods have been developed for each year group and these can be found in the Calculation Policy.

100 Club

All KS2 children are encouraged to work towards becoming a member of the 100 club. This supports their multiplication skills, but encouraging them to practice and when they feel ready to participate in a quiz at lunchtime. Quizzes are held twice a term. They are timed and levelled for different abilities. They are rewarded with badges, if they achieve the required level in the quiz. Any child who achieves 100 correct answers in 10 minutes will then be a member of the 100 Club. This supports the National Curriculum expectation that all children should know all the times tables by Year 4.

Planning

Lessons are planned using Kent's Medium Term Mastery Planning, whereby the end of year group objectives have been broken down into manageable stages.

Assessment (please see relevant policies)

Assessment in mathematics is continuous in order to inform planning and diagnose strengths and areas for development. Teachers make regular assessment of pupils' progress and record them systematically. This involves:

- Informal evaluation of groups progress made against termly plans
- Interventions (TAs)
- Weekly quizzes as part of allotted Big Math's sessions.
- Weekly Learn-it quizzes
- Seasonal assessment against the School's key skills assessment grid.

Pupils with SEN (please see relevant policies)

The development of pupil's mathematical skills would need to include varied teaching approaches and use of resources to support a child's learning and progression. Planning for these groups of children, with consideration to the resources and teaching approaches, should ensure that the activities have been suitably matched to individual needs.

Marking

See Marking and Feedback Policy

Homework

All Year 6 children have access to the Mathletics online programme to support their learning at home.

Please see homework policy for further information

This policy should be read in conjunction with the Teaching, Learning & Curriculum Policy, Marking and Feedback Policy, Calculation Policy, Homework Policy and SEN Policy.

This policy is reviewed as required in school or as legislature demands.

Written by ..... date 14/09/16

Ratified by ..... date 26-9-16