# Mathematics Policy

Policy Updated: Spring 2017

Date for Review: Spring 2020

# Mathematics Policy

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# 1 Aims and Objectives

Mathematics teaches us how to make sense of the world around us through developing a child's ability to calculate, to reason and to solve problems. Through our work at school in Mathematics, we hope the children will gain the knowledge and understanding to confidently use these skills in their everyday lives.

The aims and objectives of Mathematics are:

- To promote enjoyment and enthusiasm for learning through practical activity, exploration and discussion
- To promote confidence and competence with numbers and the number system
- To develop the ability to solve problems through decision-making and reasoning in a range of contexts and use problem solving skills in different contexts across the curriculum
- To develop a practical understanding of the ways in which information is gathered and presented
- To explore features of shape and space and develop measuring skills in a range of contexts
- To be able to verbally reason within the lessons and explore different methods to answer problems.
- To understand the importance of Mathematics in everyday life

# 2 Teaching and Learning Styles

The school uses a variety of teaching and learning styles in Mathematics lessons. In Years 1 – 5, Maths No Problem is used to deliver the daily lesson. Our principal aim is to develop children's mathematical fluency, knowledge, skills and reasoning in Mathematics. We do this through a daily lesson that has a high proportion of whole-class teaching. During these lessons, we encourage verbal reasoning and for children to ask as well as answer mathematical questions. They have the opportunity to use a wide range of resources to support their work. Children use technology in Mathematics lessons, through the Interactive Whiteboard and tablets, where it enhances their learning through modelling ideas

and methods. Wherever possible, we encourage the children to use and apply their learning in everyday situations.

In all classes, there are children of differing mathematical ability. We recognise this fact and provide suitable learning opportunities for all children by matching the challenge of the task to the ability of the child. We use Teaching Assistants to support some children both in and out of the classroom, and ensure that work is matched to the needs of individuals.

## 3 Mathematics Curriculum Planning

Mathematics is a core subject in the National Curriculum 2014 and we use the objectives outlined for each year group as a basis for implementing the statutory requirements of the Programme of Study for Mathematics.

The Programmes of Study in the National Curriculum 2014 gives a detailed outline of what we teach in the long term.

Our medium term plans, taken from the Mathematics Programmes of Study objectives in the National Curriculum 2014, ensures an appropriate balance of work across each term.

In years 1-5, Maths No Problem is used to deliver the daily lesson. Lessons are planned to ensure that every child can access the lesson and that the children are suitably challenged.

Maths lessons are taught every day. Daily plans are written by the class teacher reflecting the requirements of the key Maths objectives, and giving details of how the lessons are to be taught, outlining the provision of challenge for all abilities.

All medium and short term lesson plans are available for scrutiny in the school Google Drive folder.

Mathematics is taught in our Foundation Stage as an integral part of the curriculum. The Mathematics objectives are taken from the Early Learning Goals as set out in the Early Years Outcomes document which underpins the curriculum planning for children aged birth to five. All the children are given ample opportunity to develop their understanding of number, measurement, pattern, shape and space through varied activities that allow them to enjoy, explore, practise and talk confidently about Mathematics.

# 4 Links to Other Curriculum Areas

## *4.1 English*

We encourage children to read and interpret problems in order to identify the Mathematics involved. They explain and present work to others. Younger children enjoy stories and rhymes that rely on counting and sequencing. Older children encounter mathematical vocabulary, graphs and charts when using non-fiction texts.

## *4.2 Computing*

The use of computers and tablets is built into the delivery of the Mathematics programme wherever possible. This enables the children to use and apply their developing skills in Mathematics in a variety of ways.

Interactive white boards are used in all classes as an integral part of the daily Mathematics lessons to enhance teaching and learning.

# 5 Resources

Most Mathematics resources are stored in a central area so all classes can access them but every classroom contains basic equipment.

In the classrooms there should be, either on display or easily accessible to children, level appropriate resources, particularly concrete and pictorial apparatus to support children to grasp concepts.

Mathematical vocabulary should be displayed so that children use this in the communication of their understanding.

# 6 Assessment and Recording

We assess children's work in Mathematics in three phases: short-term, medium-term and long-term. Targeted under-attaining pupils receive additional support from trained staff through intervention groups. These groups change throughout the year depending on the progress and needs of different cohorts.

The short-term assessments that we make as part of every lesson help us to adjust our daily planning. We match these closely to the teaching objectives and to identify any remedial intervention required with identified children. The marking of children's output and use of peer /

self-assessment, which is in line with the school Marking Policy, helps children set targets for improvement and celebrate achievement.

We use medium-term assessment data to a) measure progress against the key objectives, b) help plan for consequent units of work, c) help teachers devise personal targets for the children in their class and d) identify and provide any necessary intervention to identified individuals or small groups to support their learning.

We use long-term assessments on a half-termly basis when pupils' attainment and progress is measured against school and National targets. The school assessment procedure is used to measure attainment and school tracking system is used to record progress data. End of year assessment data is analysed in order to identify current strengths and weaknesses within the subject and to plan whole school improvements in Mathematics teaching.

Children take the National tests in Year 6 and Year 2. Years 3, 4 and 5 take the 'Optional National Tests' in the summer term.

All assessment outcomes are available for scrutiny in the school Google Drive folder.

## 7 Monitoring and Review

The policy and practise will be monitored and evaluated by the Mathematics Co-ordinator, the Headteacher and the management team. Teachers are observed as part of the School Development Plan to achieve high expectations in Mathematics teaching and learning. All children are assessed each half term and pupil interviews are conducted.

***The Role of the Mathematics Co-ordinator:***

- To attend training to broaden knowledge of teaching Mathematics, to have regular updates about the current national and local targets and new initiatives, and to meet with the family of school's Mathematics team.
- To observe colleagues periodically to identify strengths and any support that might be needed.
- To report regularly to the school Governors
- To lead, manage and monitor the implementation of the Mathematics Curriculum 2014

- To developing an action plan for achieving school targets for publishing in the School Development Plan
- To liaise with the Mathematics Link Governor
- To scrutinise and moderate Mathematics work.
- To assess the children each half term with an independent test based upon what has been taught
- To hold half-termly pupil interviews to supplement the assessments

## 8 Reporting

All parents receive an annual written report in which there is a summary of their child's effort and progress in Mathematics over the year.

At the end of Key Stage 2, each pupil's level of achievement, measured against National Standards, is included as part of their annual report. In all year groups, the children's level of achievement based on teacher assessment is included in their annual report.

## 10 Special Needs Provision / Enrichment and Challenge

As an inclusive school, we recognise the need to tailor our approach to support children with Special Educational Needs as well as those who are identified as benefitting from further enrichment and challenge.

Provision to support SEND children revolves around additional support using the daily Maths No Problem lesson. Children can be supported on a 1-1 or small group basis to make sure they move on with their learning.

Additional options are available and used throughout school:

- The 1 billion maths app (iPad) is used in all years so that children can access the fundamentals of Mathematics
- SENT-R and SENT-KS2 diagnostic assessment programmes are used to assess and identify specific needs of children who are struggling in Mathematics. A support programme is then put together and implemented through Teaching Assistant support

- We have one-to-one programmes, Plus 1 (KS1/lower KS2) and Power of 2 (upper KS2), and Teaching Assistants also work with children in groups or one-to-one on Springboard Mathematics and using Numberbox activities

All children matter and are given every opportunity to achieve their best. As well as specific programmes for children with Special Needs there are 'Enrichment and Challenge' Mathematics for KS2 and links with the local comprehensive school (Y5).

The class teacher will identify pupils who show a particular talent for Mathematics and both the Enrichment and Challenge Co-ordinator and the Mathematics Co-ordinator will be informed.

## 9 Equality, Inclusion and Diversity

At Brookside School, we aim to ensure that no pupil experiences harassment, less favourable treatment or discrimination within the learning environment because of their age; any disability they may have; their ethnicity, colour or national origin; their gender; their religion or beliefs.

We value the diversity of individuals within our school and do not discriminate against children because of 'differences'. We believe that all our children matter and we value their families too. We give our children every opportunity to achieve their best by taking account of our children's range of life experiences when planning for their learning.

The planning and organising of teaching strategies for each subject is consistently reviewed to ensure that no pupil is disadvantaged. This is in line with our Equality, Diversity and Inclusion Policy.

## 10 Policy Review

This policy will be reviewed in keeping with the Policy Review Cycle. This planned programme of review puts subjects together that have common strands of learning, and is included in the annual School Improvement Plan, published in the Spring Term of each year.