



Maths Policy.

This policy is for Barleyhurst Park School and Barleyhurst Park Nursery.

Agreed by Governors: 10.11.2022

To be reviewed: Autumn 2025

Introduction:

The study of maths helps pupils to make sense of the world around them by developing their ability to calculate, to reason and to solve problems. It enables them to understand and appreciate relationships and patterns in both number and space in their everyday lives.

1 Aims

The aims of teaching maths are:

- to develop a positive attitude to maths;
- to promote enjoyment of learning through practical activity, exploration and discussion;
- to promote confidence and competence with numbers and the number system;
- to develop the mental skills necessary to calculate accurately and efficiently;
- to develop the ability to solve problems through decision-making and reasoning in a range of contexts;
- to develop a practical understanding of the ways in which information is gathered and presented;
- to explore features of shape and space, develop measuring skills in a range of contexts;
- to develop their ability to talk confidently about maths, using the correct mathematical language and vocabulary;
- to understand the importance of maths in everyday life.

2 Teaching and learning style

- 2.1 To ensure whole school consistency and progression, the school uses the DfE approved Maths No-Problem scheme to inform coverage and provide a structure for the delivery of lesson content. New concepts are shared within the context of an initial related problem, which children are able to discuss in partners or small groups. This initial problem-solving activity stimulates discussion and reasoning, as well as promoting an awareness of maths in relatable real-life contexts that link to other areas of learning. In KS1, these problems are almost always presented with objects (concrete manipulatives) for children to use. Children may also use manipulatives in KS2. Teachers use careful questioning to draw out children's discussions and their reasoning. The class teacher then leads children through strategies for solving the problem, including those already discussed. Independent work provides the means for all children to develop their fluency further, before progressing to more complex related problems. Maths topics are taught in blocks, to enable the achievement of 'mastery' over time. Each lesson phase provides the means to achieve greater depth, with more able children being offered rich and sophisticated problems, as well as exploratory, investigative tasks, within the lesson, as appropriate.



2.2 Classes have a wide range of differing mathematical abilities and this is widely catered for through the structure of the Maths No-Problem lessons. The discussion elements provide pupils with opportunities to explore their initial thoughts while also being introduced to potentially new ideas and methods for solving a problem. The questions children then encounter during their independent work increase in their level of challenge and complexity, ensuring all pupils can assess the learning while also providing the opportunity to deepen their understanding.

3 Structure of the lesson

3.1 Explore

This aspect of the lesson includes real-life questions related to various lesson objectives as an introductory activity for pupils. Pupils work collaboratively to discuss and explore methods to solve the problem. They use concrete materials to support them and to help them represent their thinking. Pupils discuss, reason and explain. In journals, they then record their ideas and are encouraged to describe methods and explain their thinking. As they progress through the school, pupils are encouraged to evaluate more. These journals provide pupils with opportunities to show their understanding of the mathematical concepts learnt.

3.2 Master

This introduces new concepts through a Concrete, Pictorial, Abstract approach with the use of engaging pictures and manipulatives. Guided examples are provided for reinforcement. Teachers reinforce non-negotiable learning objectives through direct teaching.

3.3 Guided Practice

This comprises of questions for further consolidation and for the immediate evaluation of pupils' learning. Pupils complete tasks either independently, with a peer or collectively as a class. Discussion follows which encourages reasoning and mathematical fluency to be shown.

3.4 Workbooks

Pupils independently answer a range of questions directly related to the National Curriculum and the objective which they are focusing on that day. These are arranged in a non-uniform way, allowing children to evidence their mastery of the mathematical concept being taught.

4 Maths curriculum planning

4.1 Maths is a core subject in the National Curriculum. The National Curriculum (2014) is used as guidance for implementing the statutory requirements of the programme of study for maths.

4.2 The Maths No-Problem scheme provides detailed lesson plans for each unit of work and sequences the units so that learning and understanding is built on through the academic year, as well as from Year 1 through to Year 6. The Maths No-Problem planning, as well as providing in-depth detail for the delivery of each lesson, also



provides information about potential misconceptions which may arise, along with a thorough list of resources which are used to support the teaching of the curriculum. This ensures pupils are exposed to a wide range of strategies to aid them in their problem solving abilities and mathematical successes.

5 Maths Provision

5.1 Speaking and Listening

Pupils develop their speaking and listening skills through regular planned use of paired talk, group work and oral and practical problem solving. Pupils are required to articulate their thinking in discussions and make choices about the strategies they use to solve problems, explain and justify their answers and reasoning. Teachers explain, display and model appropriate use of mathematical vocabulary and encourage pupils to use mathematical language to explain, refine and evaluate their own work and the work of others.

5.2 Mental agility

Running alongside our traditional maths lessons, teachers will also set their class a 'Fast Maths' activity, which on average is completed twice a week. In Key Stage 2 this focuses on their times tables and being able to complete a multiplication grid with improved efficiency. In Key Stage 1, the focus is primarily on number bonds, which then moves into addition problems as they become more confident with their number work.

Pupils in KS2 also have access to online platforms such as TTRS (Times Table Rock Stars) to help develop and strengthen their knowledge of times tables. The platform provides a stimulating environment where pupils compete against themselves, their peers and pupils in the wider world to answer multiplication questions as quickly as possible.

5.3 Written Methods

Formal written methods are taught once pupils have developed effective mental strategies and are able to use these approaches to support their written work. Informal written methods and jottings are encouraged to support children to deal with more challenging numbers or more complex calculations. These are then developed further and refined into more standard written methods. Through the delivery of the Maths No-Problem scheme, pupils are taught and encouraged to use a wide variety of written methods to support their calculations and problem solving; as well as the standard written methods, pupils are also taught to use methods such as bar modelling and part-part-whole models to allow them to have a variety of strategies to allow for greater levels of success.

5.4 Homework

Homework is used to consolidate learning and to prepare pupils for tasks that they will be undertaking in school.

Refer also to Homework Policy.



6 The Foundation Stage

The format for the daily lesson is similar to that used in the rest of the school. The foundation stage class follows the Early Years Foundation Stage Curriculum (EYFS). Learning opportunities are based on progressing through Development Matters and Early Learning Goals. The pupils are given opportunities to develop their understanding of problem solving, reasoning and numeracy through a wide range of planned activities that allow them to use, enjoy, explore, practise and talk confidently about maths.

7 Contribution of Maths to teaching in other curriculum areas

Pupils are encouraged to use mathematical skills, knowledge and understanding across a range of other subjects. For example, the opportunities in science to use maths learning in a real world context are everywhere; pupils are required to test predictions, record, measure and calculate results, while also creating tables and graphs to share their data. Map reading in geography requires skills in interpretation of scale, measuring distance and the ability to plot points accurately. These skills are also transferred across to PE as pupils undertake the challenges of orienteering. Pupils' mathematical understanding is enhanced through making these links to other areas of their learning and to the wider issues of interest and importance within their lives.

8 Maths and inclusion

Pupils' needs are addressed through carefully planned learning opportunities using appropriate resources. We aim to provide Quality First Teaching to all pupils. Effective tracking systems enable us to identify pupils who require early intervention at an appropriate level. Provision is also put in place for pupils who have a particular ability in maths.

Also refer to: Special Educational Needs; Disability Non-Discrimination; English as an Additional Language (EAL).

9 Assessment for learning

9.1 Teachers regularly assess children's work in maths. Teachers use AFL (Assessment for Learning) in every lesson and use this information to provide same-day or next-day intervention, where appropriate, to support those pupils who may have struggled or where a misconception is apparent.

9.2 Teachers make summative assessments once a unit has been taught. Assessment tasks are carried out away from the point of teaching, as cold tasks, as a way of assessing understanding and level of retention. These results are then used to provide progress and attainment information for each pupil. Where a pupil demonstrates gaps in their understanding, teachers then use this information to allow appropriate support to be put in place. This assessment information is then inputted into Pupil Asset, our online data management tool, the data is then collated which provides judgements on where each pupil is for that point in the year.

Teachers also use the information available from Pupil Asset to summarise the progress and attainment for each child before discussing it with the child's parents at different points through the year. When children move year groups, the new teacher uses the



information available from Pupil Asset to inform the support and provision they put in place.

- 9.3 In line with expectations, children undertake the national tests at the end of Year 2 and Year 6. A multiplication check is carried out in Year 4.
- 9.4 Staff are keen to improve their subject knowledge and the subject leader takes an active role in disseminating best practice and making recommendations for staff development.

Refer also to Assessment Policy and Marking policy.

10 Resources

The Maths No-Problem scheme encourages the use of a wide range of resources to support and develop pupils' understanding. It is through the use of these practical resources that pupils develop a variety of strategies which can be used to make problems more accessible and increase the level of success they see. Every classroom has a wide range of maths equipment, appropriate to the age of the pupils. Each teacher also has access to a detailed register of maths resources available in other classrooms through the school, allowing equipment to be shared and combined so that the best provision is available to all pupils. A range of ICT resources are also used to support the teaching of maths.

Refer also to Computing Policy

11 Monitoring and review

- 11.1 Monitoring of the standards of pupils' work and the quality of teaching in maths is the responsibility of subject leader and the SLT (Senior Leadership Team). The work of the subject leader also involves supporting colleagues in their teaching, being informed about current developments in the subject, and providing a strategic lead and direction for maths in the school. The subject leader gives the Headteacher an annual summary report evaluating the strengths and areas for development in the subject. The subject leader has regular management time in which to scrutinise pupils' books and undertake moderation of assessment information. Lesson observations and learning walks are also used to gain a clear picture of maths teaching across the school and offer ongoing professional development for staff.
- 11.2 This policy will be reviewed at least every two years.

Also refer to:

Teaching and Learning policy, Equal Opportunity Policy, SEN policy,

Disability Non-Discrimination Policy, English as an Additional Language Policy, Assessment Policy, Marking Policy, Homework policy, Computing policy, Foundation Stage Policy.