



**The Park Federation Academy Trust
Lake Farm Park Academy**

**Mathematics Policy
September 2022**

Approval

Signed by Principal/Chair	Ms. H. Buttar
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Section 1: Introduction

Mathematics is essential to everyday life, and critical to many other areas. A high-quality mathematics education therefore provides a foundation for understanding the world, the ability to reason mathematically, and a sense of enjoyment and curiosity about the subject. Our school embodies the mastery approach to ensure children deepen and embed their mathematical learning. This policy outlines the teaching, organisation and management of mathematics at Lake Farm Park Academy.

Section 2: Aims and objectives

Mathematics teaches us how to make sense of the world around us through developing our ability to calculate, reason and to solve problems. Mathematics enables children to understand and appreciate relationships and patterns both in number and in space, which they can apply beyond the classroom. Through their growing knowledge and understanding, children learn to appreciate the development and application of mathematics.

Intended outcomes of teaching mathematics.

Children will:

- Enjoy maths and have enthusiasm for their learning through practical activity, exploration and discussion (concrete methods).
- Develop logical thinking, problem solving and reasoning skills through a natural curiosity and investigative approach, ***in line with the main aims of the National Curriculum (2014)***
- Use and understand a wide range of mathematical vocabulary.
- Have a deep understanding of mathematics and apply it to a range of contexts.
- Have positive attitudes, confidence and competence and will ‘aim high’ and challenge themselves in all lessons.
- Celebrate achievements (they will receive feedback from teachers, peers and self)
- Apply their learning to everyday situations so that they understand the importance of mathematical skills in everyday life.
- Explore features of shape and space, and develop measuring skills in a range of real life contexts.
- Develop a practical understanding of the ways in which information is gathered and presented, including opportunities to record independently.
- Use a range of mathematical skills over the course of a unit. They will be able to choose an appropriate skill to solve a particular problem.

The National Curriculum (2014) for Mathematics describes what must be taught in each Key Stage as well as defining a programme of study for each year group.

In Early Years, the curriculum is guided by the Early Learning Goals and the ELG statutory framework.

Cross-Curricular Links

Mathematics is taught as a discrete subject but every effort is made to link maths with other areas of the curriculum. We try and identify the mathematical possibilities across the curriculum at the planning stage. We also draw children's attention to the links between maths and other curricular work so children see that maths is not an isolated subject.

Section 3: Teaching of Mathematics

Lessons have a flexible approach to ensure the pitch and pace suits the children. Teachers use their own judgement in how to approach teaching a concept and will incorporate group, paired or individual work as appropriate. In the EYFS, the children work in small and large groups depending on the focus for the week. Maths activities are accessible at all times during child-initiated learning. Using the mastery approach (concrete, pictorial, abstract), teachers will build a lesson drawing on evidence from previous learning.

Pupils engage in:

- The development of mental strategies
- Written methods
- Practical work
- Investigational work
- Exploration
- Problem-solving
- Reasoning
- Mastery practise
- Evaluation
- Visualisation
- Mathematical discussion using precise mathematical language.
- Consolidation of basic skills and routines

The Foundation Stage

Mathematics in Foundation stage is initially developed through stories, songs, games and imaginative play. A positive approach to Numeracy around the classroom helps the children to begin to relate mathematics to their everyday lives.

The EYFS learning environment includes visual images, models and number resources to stimulate interest.

We give all the children 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. Mathematical resources are readily available both indoors and in the outside learning environment.

Key stage 1 and 2

All classes have at least five maths lessons a week including a maths investigation lesson. Whenever it is appropriate, other lessons will be used to develop and apply maths skills (e.g. opportunities can be planned for measuring and data collection in science work). The pupils in each year group are taught in mixed ability classes and are provided with differentiated activities to ensure tasks are set according to their individual needs. A mastery activity is included in each lesson and children are encouraged to apply the skill to solve the mastery problem/ question. The teaching of mathematics provides opportunities for group work, paired work, whole class teaching, individual work.

Resources

Pupils should engage in activities from a variety of sources - practical apparatus, worksheets, textbooks and the environment. Through regular and frequent access to computers and iPads they will experience the fascination of mathematical exploration and investigation. We use MyMaths and Times Tables Rockstars, which are available to use at home as well as in school. Children also have the power to solve real and challenging problems. Each classroom has a variety of teaching aids to support mathematics.

Classes have access to a wide variety of equipment (including multilink, Numicon, Cuisenaire rods, number lines as well as measuring and weighing equipment). Pupils are encouraged to choose resources, which are relevant to their work.

Section 4: Assessment, Recording and Reporting

To develop learning, pupils are continuously assessed using a variety of strategies - observation, questioning, marking in accordance with our Marking & Feedback Policy. In the EYFS, pupils are assessed and the Foundation profile completed throughout the year.

Statutory Assessment requirements will be administered in accordance with the law at the end of KS1 and KS2. Each term all children will sit a PUMA test (Progress in Understanding Mathematics Assessment). This will enable us to reliably assess, track and predict pupil progress in maths across the primary years. All federation schools will be sitting the same tests termly.

Children in Year 2 and KS2 will have a weekly times tables test. Year 4 will sit a Statutory Assessment for times tables (from 2020). Children across the school will sit several timed mental maths tests to develop their speed.

Each pupil will have targets set and checked regularly. These will link to the learning intentions for that year group. Parent consultations are held each term where the teacher discusses children's targets and progress in mathematics.

In accordance with statutory requirements, an Annual Report is sent to parents towards the end of the Summer Term. This report covers progress and achievements in mathematics, including the setting targets for future improvement.

Section 5: Roles and Responsibilities

The Principal (with *Senior Leadership Team*)

- To actively support and encourage staff, praising good practise and supporting staff development, in-service training and resources.
- To monitor teaching and learning through lesson observations, learning walks, review days and book review analysis and to give informative and constructive feedback.
- To support staff (including LSAs) development through training and provision of resources.

Maths Lead

- To work with the Principal and the Senior Leadership Team to monitor, plan and develop the subject to allow for progression, continuity and high standards of attainment in Mathematics.
- To support colleagues in the teaching of Mathematics and provide a strategic lead and direction in the subject.
- To manage periodic book reviews to ensure the curriculum is being covered and the marking policy is adhered to.
- To lead maths reviews of the school with an SLT team.
- To monitor progress in Mathematics, highlight and plan actions required.
- To take responsibility for auditing and organising Mathematics resources.
- To keep up to date with developments in Mathematics education and to inform colleagues as appropriate.
- To draw up annual action plan for Mathematics.
- To review the school policy for Mathematics as appropriate.

The class teacher

- To be responsible for the planning and teaching of Mathematics.
- To manage and supervise their class' use of Mathematics equipment.
- To ensure children in their class make progress in lessons and across the year.
- To provide effective feedback in line with our Marking and Presentation Policy.

Section 6: Inclusion

We provide an inclusive curriculum, which meets the needs of all pupils, where the teaching and learning, achievements, attitudes and well-being of every learner matters. All children have equal access to the curriculum regardless of their gender or background. This is monitored by analysing pupil performance throughout the school to ensure that there is no disparity between groups. Intervention is provided to ensure that all children achieve their full academic potential.

Children with Special Educational Needs are taught within the daily mathematics lesson. Where applicable, children's targets incorporate suitable learning intentions, which may be pre-key stage. We provide help for those children who use a means of communication other than spoken English in developing and understanding specific mathematical language.

Section 7: Evaluation

The Mathematics Policy will be reflected in our practice. This will be monitored and evaluated by the Principal, the Senior Leadership Team and the Maths Lead in the form of lesson observations, discussions, reviews and regular scrutiny of planning and of pupils' work.