



KING'S NORTHWAY
PRIMARY ACADEMY

SCHOOLS OF CHARACTER
MAKING GREAT LEADERS

Mathematics Policy



GREAT SCHOOLS
TRUST

Document Control

This document has been approved for use within	King's Northway Primary Academy
This document has been approved by On	Governing Board
	November 2024
Date effective from	November 2024
Date of next review	November 2025
Review period	Annually
Status	Active
Owner	K.McNeil

Mathematics Policy

Introduction:

King's Northway Primary Academy is a strong and distinctive community, where we value each other as part of the family. We show this through our planning, our teaching, our relationships and respect for each other as individual learners. We are all learners – no matter our age or time within this or another School.

Learning potential is realised most when parents and teachers work in partnership. We believe in our children and we want our children to believe in themselves – they will then 'believe and achieve'. We set ourselves the high standard of: All learners, All achieving, All the time. Our Policy for Teaching and Learning is underpinned by this ethos.

The King's Northway Curriculum has a golden thread that links a rich tapestry of knowledge, interwoven with key skills and allows children to engage with, connect with and understand their locality and rich cultural offer and take their places as global citizens in the twenty first century.

The King's Northway Values for Victory exemplifies an ethos that builds community and provides the expectations for excellent attitude and learning behaviour. The curriculum is planned to allow children to explore, evaluate and improve. Children know the high expectations and are encouraged to strive for success in all that they do. Children are nurtured so they can engage with their learning without barriers and reach their own potential. King's Northway understands that aspiration is good but aspiration for all: all learners, all valued, all achieving...all the time.

Our Curriculum is a progressive programme of study, where children are exposed to knowledge and skills year on year. Children should see the 'big picture' as they progress through school and see building blocks coming into place. They will be immersed in a rich vocabulary and text-base to inspire a love of learning and given the opportunity to share their knowledge. Children can exemplify their prior knowledge and staff teach from this starting point, knowing the expectation for their specific year group. Low state quizzing for pre-assessments endeavour the development of sticky knowledge and post-assessment give children the satisfaction of achievement. Each subject area is taught discretely but has clear cross-curricular links and crossover of skills. We give core subjects and basic skills a strong emphasis but passionately believe in a wide, broad, rich curriculum, where children have deeper learning experiences and develop a life-long love of learning...developing dynamic and industrious citizens for Liverpool and the world who can make a positive contribution.

Excellence, enjoyment, enrichment, progression and relevance are all key principles of our King's Northway Curriculum from Nursery to Year 6.



1. Statement of consideration of equalities in all policies and procedures

This policy outlines the teaching, organisation and management of Mathematics taught at King's Northway Primary Academy. The policy has been drawn up as a result of staff discussion and has the full agreement of the Governing Body. The implementation of this policy is the responsibility of all teaching staff.

2. Intent

The King's Northway Primary Academy Mathematics policy is designed to foster pupils that can identify patterns in number, shape, data and measures. Our curriculum ensures that pupils learn to notice and explain, using concrete apparatus, pictorial models and increasingly precise mathematical vocabulary.

Pupils will learn to understand increasingly efficient methods of calculation, building on previous learning throughout school. Throughout their mathematical journey at King's Northway, pupils will be taught to make links and connections. They will apply their knowledge and thinking through reasoning, problem solving and real-life contexts.

3. Implementation

At King's Northway Primary Academy mathematics is taught using Total Maths planning and resources, teachers adapt this scheme to suit our pupils' needs in order to deliver the national curriculum objectives effectively.

Manipulatives are used to unveil the structure of the mathematics so that children can understand the concept and make links and connections within maths. The use of similar manipulatives are to support familiarity and progression. They include 10 frames, double sided counters, cubes, pattern blocks.	New vocabulary will be displayed. Through questioning/tasks, children encouraged to use the vocabulary to explain their thinking. Questioning encourages children to think and explain. Use of what do you notice, what's the same and different, what has changed ... encourage explanations and the use of vocabulary.	Fluency will come from children being taught to make decisions about the best method to calculate with the numbers they are using, Manipulatives will unveil structures and these will be applied through school. Games are used as a tool to blend fluency and reasoning.
All pupils will be taught to reason mathematically. This includes following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language.	All pupils will be taught to problem solve through modelling. The skills include systematic thinking, working backwards, pattern spotting and trial and improvement so they can apply them to any non-routine problem they are faced with.	The inclusion of all children through adaptive teaching will include explicit teaching, scaffolding, tasks adapted through questioning or number and flexible groupings where appropriate.



Assessment happens during every lesson through questioning and assessment of the work produced by the end of the lesson. At the beginning of each unit of Maths Children complete an entry ticket which allows teachers to gain understanding of prior knowledge. An exit ticket is then completed to assess knowledge and understanding at the end of the unit.

Intervention happens as part of our lesson sequence I DO, WE DO, YOU DO. During the WE DO sections children can be given intervention so they are then able to access the YOU DO section independently. These interventions can be led by teachers or LSA's.

CPD as a whole staff on identified areas are carried out using in-school expertise and outside consultants. Staff attend external CPD to constantly strive for the best practise in our school.

Resources are carefully selected from 'build a sequence' to ensure a build-up of skills from fluency - reasoning, connections to measure and problem solving. Additional materials are taken from NRICH, NCETM and SIL where appropriate.

Sequence is created to move from modelling to practise, reasoning, real-life context to problem solving.

4. Impact

Monitoring and reflection

Pupils use acquired vocabulary in maths lessons to explain effectively. They have the fluency and reasoning/problem solving skills to independently tackle a range of questions and show resilience when tackling problems. Books demonstrate the range of mathematical skills.

Progression within a topic is evident from the modelling - practise - reasoning - problem

Pupil Voice

Children are interviewed to look at how they tackle questions on fluency, reasoning and problem solving as well as how confident they are in maths. This shows that children can use their fluency skills and vocabulary to reason mathematically and solve mathematical problems.

Outcomes

Outcomes are reported with internal data termly and are reviewed in pupil progress meetings. Parents are informed termly during parents evening and end of year reports.

External data is completed at the end of EYFS, KS2 and Year 4 Multiplication checker.

5. Progression within the subject

Early Year Foundation Stage

At King's Northway Primary Academy we provide a rich Early Years environment in which we encourage and value creativity and exploration. We relate the children's

mathematics development to the objectives set out in the Early Learning Goals. The range of experiences offered to the pupils encourages them to make connections between one area of learning and another, and so extends their understanding. Pupils are engaged in a wide range of activities, developing number and pattern skills that they are encouraged to apply independently during continuous provision.

Key Stage 1 and 2

Progression within Mathematics has been carefully designed and planned to ensure that knowledge and skills are taught with fidelity and are regularly revisited throughout the Key Stages. Progression documents for all year groups have been produced and are available on the school website.

6. Monitoring and Review

Subject leaders at King's Northway are responsible for monitoring the way in which their subject area is implemented across the school. The subject leader monitors the subjects through:

- Provide a lead and direction for the subject in consultation with colleagues, written policies and guidance.
- Ensure efficient resource management for their subject.
- Monitor and assist in the evaluation of the delivery of their subject area across the school.
- Monitor pupil progress termly within their subject area, including pupil interviews, book studies, reviewing children's work and data analysis using Balance.

It is the role of each subject co-ordinator to keep up to date with developments in their subject, at both national and local level. They review the way the subject is taught in the school and develop yearly action plans to ensure targets are being met and progress is made. The subject leader reviews the curriculum plans for their subject, ensures that there is full coverage of the National Curriculum and that progression is planned into schemes of work.

7. Role of the pupil and parent

Pupils are expected to engage with mathematics lessons with enthusiasm and explore new artists, knowledge and skills alongside their peers. They will share their expertise with their peers and across the school to build knowledge and confidence. Parents are given opportunities to share in their children's mathematics work through the use of Seesaw and workshops.

