Mathematics Policy

Northwick Park MAT

Northwick Park Primary and Nursery

We Take Pride

…working together

Approved by: LGBs Date: June 2021

Last Reviewed: September 2024 Next Review Date: September 2026

Maths Curriculum Policy

Intent

The 2014 National Curriculum states that:

'Mathematics is a creative and highly interconnected discipline that has been developed over centuries, providing the solution to some of history's most intriguing problems. It is essential to everyday life, critical to science, technology and engineering, and necessary for financial literacy and most forms of employment. A high-quality mathematics education therefore provides a foundation for understanding the world, the ability to reason mathematically, an appreciation of the beauty and power of mathematics, and a sense of enjoyment and curiosity about the subject.'

We aim to provide a quality mathematics curriculum that fosters a positive and enthusiastic attitude in pupils that will stay with them in the future. We believe that mathematics is integral to all aspects of everyday life and that it is crucial that children have a thorough grasp of mathematical skills in order to participate fully as valued members of society and to fulfil their potential. We aim to provide children with high quality teaching that encourages them to be numerate, creative, independent, inquisitive and confident whilst fostering an environment where pupils understand that we learn from mistakes. We recognise that mathematics is an interconnected subject and that it is vital that pupils can make links between mathematical concepts and also apply their knowledge to science and other subjects.

These aims are embedded across our wider curriculum. This policy sets out in detail how we approach mathematics teaching.

Implementation

In Foundation Stage, children follow the EYFS curriculum. Children will develop of a secure base of knowledge and vocabulary from which mastery of mathematics is built. We are committed to ensuring the confident development of number sense and put a strong emphasis on the mastery of early key concepts including the formation of the digits 0-9. The curriculum encourages children to develop their spatial reasoning skills and other key mathematical concepts through a range of mathematical opportunities provided throughout the Foundation Stage day both inside and out.

In Years 1 to 6, children are taught maths in a dedicated timetabled lesson each day but opportunities to develop and reinforce maths skills within other lessons are maximised. In schools with more than one class in the year group, children are taught in ability sets with additional teachers available in most year groups. Learning support assistants are deployed according to the needs of pupils in order to provide the most effective support. The expectation is that the majority of pupils will move through the programmes of study at broadly the same pace. However, decisions about when to progress should always be based on the security of pupils' understanding and their readiness to progress to the next stage.

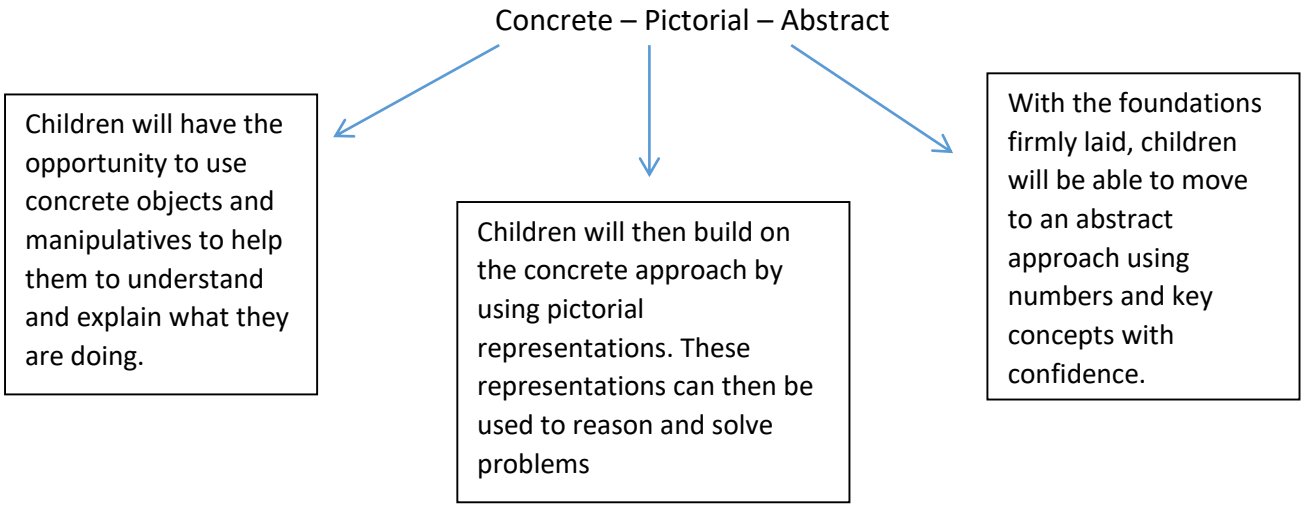
Pupils who grasp key concepts rapidly should be challenged by being offered rich and sophisticated problems before accelerating through new content. Those who are not sufficiently fluent will be given opportunities to consolidate their understanding, through additional practice. Our main focus is on delivering quality first teaching, with teachers being clear about 'where their children are', 'where they need to be' and 'how they are going to get them there'.

Planning

The Northwick Park Academy Trust long term plan covers the National Curriculum for maths and is reviewed annually. Alongside this, teachers use the progression in mathematical strands document and the vocabulary progression document to aid their planning. A policy for calculation provides progression in the four rules from Reception to Year 6.
Teachers are not expected to plan sequences of detailed lessons in advance. A rough journey plan is all that is necessary and then daily lessons should be planned based on the assessment for learning (AFL) taking place each day. We do not follow a set scheme but have a wealth of resources, including textbooks, available for teachers to use.

Daily lessons do not have to follow a set structure but will generally include the practise of basic skills. Pupils are given opportunities to develop and extend their mathematical skills through a range of approaches including mathematical discussion, investigational work, problem solving and practical or written activities which they complete either independently or during paired or group work.

All pupils when introduced to a new key concept will have the opportunity to build competency in the topic through the CPA approach.



Intervention

We have a clear structure for intervention. In Key Stage 1 we use an adapted version of the Numbers Count programme when needed. Our main programme in Key Stage 2 is Maths Top Up which is delivered after the lesson by a Learning Support Assistant who was in the classroom. This 1:1 support aims to provide immediate support, clarification or extra practise to ensure the pupils are ready for the next lesson. We also provide 1:1 tuition both in and out of the school day by qualified teachers to identified Year 5 and/or Year 6 pupils.

Home Learning

In Foundation Stage pupils are asked to practise their number formation weekly at home. They are also set fun and practical homework tasks during the term to encourage a positive attitude and an interest in mathematics.
Year 1 to Year 5 are set weekly homework tasks on our online learning platform Purple Mash. Year 6 are set a paper based activity. All children have access at home to a range of interactive learning resources and games including Purple Mash, Maths Shed, Maths Bots and Times Table Rock Stars.

Impact

We aim for all children to understand the relevance of what they are learning in relation to real world concepts and that they make measurable progress against their own targets. We have worked hard to foster an environment of positive growth mindset, where it is 'ok' to be wrong because the journey to finding out the answer is more important

Assessment

Throughout each lesson formative assessment takes place and feedback is given to the pupils through immediate marking and next step tasks. Teachers then use this assessment to inform their next lessons and ensure they are providing a mathematics curriculum that allows all children to make progress. All children receive quality first teaching. Where children are more able, these pupils will work in sets with children of similar ability, in which the teacher will ensure they are stretched and challenge is provided in lessons.

Internal assessments take place once per term. In Year 1 children complete practical assessment tasks. In Years 2 – 6 most children sit a maths test – we use the 'Headstart' tests which generates a scaled score for each child or previous SATS papers. These scores (along with teachers' assessments) are used to inform ability groupings and identify any children who may need a support package. Teachers use the analysis of these test results and their own assessments to inform subsequent planning and teaching. SLT and Subject Leaders regularly scrutinise data. Any pupils whose progress is not on track are discussed at Pupil Progress Meetings. Where necessary interventions, and/or additional monitoring is put in place.

Children in Foundation Stage are assessed against the Early Learning Goals, the optional Key Stage One tests are used at the end of Year 2 and statutory end of Key Stage Two assessments are completed at the end of Year 6.
The teaching of maths is monitored through book scrutinies, learning walks, lesson observations and pupil dialogue.

The quality first teaching of mathematics within the Academy Trust, the positive approach by both staff and pupils and the leadership of the subject enables pupils to make progress and for us to maintain good standards, with achievement at the end of Key Stage Two above the national average for those reaching the expected level.