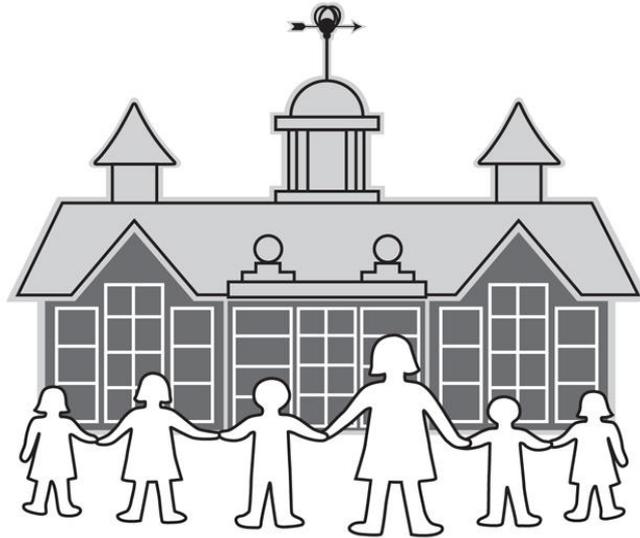


# North Ealing Primary School



## Mathematics Policy

Committee with oversight for this policy – Curriculum & Standards	
Policy to be approved by the Curriculum & Standards Committee	
Policy last reviewed by the Curriculum & Standards Committee	22/06/2016
Policy last ratified and adopted by Full Governing Body	N/A
Policy / Document due for review	June 2020

# North Ealing Primary School

## Mathematics Policy

### **Introduction**

At North Ealing Primary School (NES) we value every pupil and the contribution they have to make. As a result we aim to ensure that every child achieves success and that all are enabled to develop their skills in accordance with their level of ability.

Mathematics is both a key skill within school, and a life skill to be utilised throughout every person's day to day experiences.

### **Rationale**

Mathematics equips pupils with the uniquely powerful set of tools to understand and change the world. These tools include logical reasoning, problem solving skills and the ability to think in abstract ways. Mathematics is important in everyday life. It is integral to all aspects of life and with this in mind we endeavour to ensure that children develop a positive and enthusiastic attitude towards mathematics that will stay with them.

The National Curriculum for mathematics (2014) describes in detail what pupils must learn in each year group. Combined with our Calculation Policy, this ensures continuity, progression and high expectations for attainment in mathematics.

It is vital that a positive attitude towards mathematics is encouraged amongst all of our pupils in order to foster confidence and achievement in a skill that is essential in our society. At NES we use the National Curriculum for Mathematics (2014) as the basis of our mathematics programme. We are committed to ensuring that all pupils achieve mastery in the key concepts of mathematics, appropriate for their age group, in order that they make genuine progress and avoid gaps in their understanding that provide barriers to learning as they move through education. Assessment for Learning, an emphasis on investigation, problem solving, the development of mathematical thinking and development of teacher subject knowledge are therefore essential components of the NES approach to this subject.

### **Aims**

- To foster a positive attitude to mathematics as an interesting and attractive part of the curriculum.
- To develop the ability to think clearly and logically, with confidence, flexibility and independence of thought.
- To develop a deeper understanding of mathematics through a process of enquiry and investigation.
- To develop an understanding of the connectivity of patterns and relationships within mathematics.
- To develop the ability to apply knowledge, skills and ideas in real life contexts outside the classroom, and become aware of the uses of mathematics in the wider world.
- To develop the ability to use mathematics as a means of communicating ideas.
- To develop an ability and inclination to work both alone and cooperatively to solve mathematical problems.

- To develop personal qualities such as perseverance, independent thinking, cooperation and self confidence through a sense of achievement and success.
- To develop an appreciation of the creative aspects of mathematics and an awareness of its aesthetic appeal.

### **Principles of Teaching and Learning**

The school uses a variety of teaching and learning styles in mathematics lessons during each lesson. Children from Y2 to Y6 are taught in differentiated year group sets.

Our teachers strive to:

- Build children's confidence and self esteem.
- Develop children's independence.
- Allow all children to experience regular success
- Provide children with a variety of calculation strategies.
- Contextualise mathematics.
- Use practical approaches to mathematics (models and images).
- Encourage children to select independently resources to help them.
- Challenge children of all abilities.
- Encourage children to enjoy mathematics.
- Develop a child's understanding of mathematical language.
- Learn from teachers, peers and their own mistakes.
- Allow children to ask questions as well as answer them.

### **Our pupils should:**

- Have a well-developed sense of the size of a number and where it fits into the number system (place value)
- Know by heart number facts such as number bonds, multiplication tables, doubles and halves
- Use what they know by heart to figure out numbers mentally
- Calculate accurately and efficiently, both mentally and in writing
- Draw on a range of calculation strategies
- Make sense of number problems, including real life problems and identify the operations needed to solve them
- Explain their methods and reasoning, using correct mathematical terms
- Judge whether their answers are reasonable and have strategies for checking them where necessary
- Suggest suitable units for measuring and make sensible estimates of measurements
- Explain and make predictions from the numbers in graphs, diagrams, charts and tables
- Develop spatial awareness and an understanding of the properties of 2D and 3D shapes.

To provide adequate time for developing mathematics, maths is taught daily and discretely. However, the application of skills is linked across the curriculum where appropriate.

### **Maths Curriculum Planning**

Mathematics is a core subject in the National Curriculum and we use the objectives from this to support planning and to assess children's progress. The school uses the Collins Busy Ants scheme from Rec to Y6, Mathletics and the NCETM mastery documents.

It is the class teacher who completes the weekly plans for the teaching of mathematics in collaboration with the other year group teachers. Formative assessment is also used to inform planning (see below)

### **Assessment**

This section details the various assessment methods and practices used at NES through which we ensure that children are making appropriate progress and that the activities they take part in are suitably matched to their ability and level of development. At NES the assessment of a child's achievement is recorded and tracked on Classroom Monitor.

### **Formative Assessment/Assessment for Learning (AfL)** - (monitoring children's learning)

Assessment is an integral and continuous part of the teaching and learning process at NES and much of it is done informally as part of each teacher's day to day work. Teachers integrate the use of formative assessment strategies such as: effective questioning, clear learning objectives, the use of success criteria, effective feedback and response in their teaching and marking and observing children participating in activities. Findings from these types of assessment are used to inform future planning.

### **Summative Assessment** – (evaluating children's learning)

More formal methods are used to determine the levels of achievement of children at various times during the school year:

*Assessment Weeks:* We use termly assessments as a way of recording children's progress in objectives covered across that specific term. This information then feeds into the teacher's assessment for the child.

*Standardised Testing.* NFER standardised tests are used once a year, towards the end of the year. They allow the school to measure each child's attainment in all areas of mathematics, and compare this with an "average" for children of that age. The results are used to inform teacher assessment of an individual's progress year on year.

*Statutory end of Key Stage Assessment.* The National Curriculum requires that each child is assessed, at the end of KS1 and KS2. This is to be carried out at the end of Key Stage One and at the end of Key Stage Two. The results will show if the child is *working towards* or *working at* or *working above* the expected attainment levels for their age group.

### **Early Years Foundation Stage (EYFS)**

We follow EYFS curriculum guidance for Mathematics. However, we are committed to ensuring the confident development of number sense and put emphasis on mastery of key early concepts. Pupils explore the 'story' of numbers to ten and the development of models and images for numbers as a solid foundation for further progress.

### **Resources**

A bank of essential mathematics resources are kept in each classroom. Further resources relating to key whole school topics are kept centrally in the lower staff room.

### **Information and Communication Technology**

Teachers should use their judgement about when ICT tools should be used.

### **Role of the Subject Leader**

- Ensures teachers understand the requirements of the National Curriculum and helps them to plan lessons. Leads by example by setting high standards in their own teaching.
- Prepares, organises and leads CPD and joint professional development.
- Works with the SENCO and SLT.
- Observes colleagues with a view to identifying the support they need.
- Discusses regularly with the senior team and the mathematics governor the progress of implementing the National Curriculum for Mathematics in school.
- Monitors and evaluates mathematics provision in the school by conducting regular work scrutiny, learning walks and assessment data analysis.

### **Moderating and review**

Moderating of the standards of children's work and of the quality teaching in mathematics is the responsibility of the mathematics subject leader alongside members of the senior leadership team. The work of the mathematics subject leader also involves supporting colleagues in the teaching of mathematics, being informed about current developments in the subject, and providing a strategic lead and direction for the subject in the school.

A named member of the school's governing body is briefed to oversee the teaching of numeracy. This governor meets regularly with the subject leader to review progress.