

# **NORTHCOTE PRIMARY SCHOOL**

## **MATHEMATICS POLICY**

### **THE NATURE OF MATHEMATICS**

#### **INTRODUCTION**

Mathematics is all encompassing. It is an active search for description of the world around us. It is the basis for understanding movement, position and shape. It provides ways of extracting meaning and diversity. As well as children becoming masters at handling numbers and data in a way that equips them with skills for life.

Children learn mathematics by manipulating and exploring numbers, objects, patterns and structures. They then develop mental images and must have the communication skills to pass on their knowledge and understanding. They must develop the ability to use their own standard symbols to represent things.

#### **AIMS**

Our approach to mathematics is based on our general school aims. In particular, we feel that mathematics will:

- Provide opportunities which will develop lively, enquiring minds and the ability to question and argue rationally.
- Provide the knowledge, skills and understanding of mathematics so that pupils have a good foundation for life beyond school.
- Develop in pupils' confident use of numbers, both mentally and in written form.
- Develop children's learning so that they can apply their knowledge to solve problems.
- Develop teaching and assessment methods so that we ensure that pupils reach and often exceed their full potential in terms of mathematical achievement, whilst retaining classrooms where children enjoy their work and become good learners.

#### **ORGANISATION OF MATHEMATICS**

The core of our teaching is based on the renewed Primary National Curriculum for Mathematics (2014). This is taught through the Abacus Evolve Teacher Toolkit in Key Stages One and Two. This is also supplemented by a variety of commercial schemes; practical resources and use of I.C.T. Plans are adapted to the needs and ability of pupils.

Nursery and Reception children are involved in mathematical activities related to the Early Learning Goals.

### **TEACHING AND LEARNING STRATEGIES**

The most appropriate teaching and learning methods will be applied to suit the purposes of each learning objective. Pupils may work individually, in pairs, in groups or as a class, following through investigation, based on first hand experiences (*reference teaching and learning policy*).

### **Computing**

Computing is used to support the Mathematics Curriculum to enrich pupil learning experiences, and as a planning and teaching resource. Interactive Teaching Recourses are provided through the scheme and this is supplemented with I.T.P.s, a bank of websites and a range of activities stored in the staff area on the Server. Activities are regularly updated. iPads are increasingly used from EYFS to year 6 to enhance learning.

### **Additional Mathematics input**

Everyday in year 2 and KS2 children spend 15 minutes completing their 5 a-day activities that give them practice of each of the 4 operations as well as an extension activity based around a different area of the curriculum.

### **Assertive Mentoring**

Assertive mentoring is an assessment and intervention scheme that children from year 1 – year 6 follow. Here children complete weekly 'Basic Skills' checks from this teachers target their Oral Mental Starters (OMS) for following week to address misconceptions and revisit areas of the curriculum that children skill need to master. Further maths interventions are put in place during the week.

### **SCHOOL WEBSITE**

Pupils are encouraged to use the maths activities and links found on the children's activity page. Opportunities for access to the website during school hours are provided through lessons and Computer time.

### **CROSS CURRICULAR LINKS**

Mathematics contributes to all other subjects in the Primary Curriculum, often in practical ways. To make the most of these opportunities is important to identify the mathematical possibilities across the curriculum at the planning stage. Children's attention should be drawn to the links between subjects by talking frequently about them, both in Mathematics and in other lessons.

### **DIFFERENTIATION AND PROGRESSION**

There are several ways in which the needs of particular pupils can be met, partly through differentiated group work and open-ended tasks and partly through teaching strategies. Years 4, 5 and 6 group children according to ability in 3 separate sets. Here children receive high quality teaching and learning; supporting lower ability children to close the gap on age related expectation, as

*This document can be made available in other formats*

well as ensuring more able children become masters within the curriculum expectations and beyond.

All children will be encouraged to reach their full mathematical potential. Progression will be demonstrated through long term, medium and weekly planning. The school has a calculations policy in place that allows for progression from EYFS – year 6.

### **ASSESSMENT**

In addition to National Testing at the end of Key Stages and the year 4 multiplication tables check children are regularly tested both formally and informally at half termly intervals.

In years 1 to 6 pupils are assessed five times during the year using Assertive Mentoring and NFER Tests. The data is collated and analysed providing the information for required intervention. Pupil results are logged on tracking sheets and carefully monitored to inform future planning and target setting. Pupils are encouraged to be aware of individual targets.

### **RECORDING AND REPORTING**

We report to parents through three open evenings, one in Autumn term, one in the Spring term and one at the end of the Summer term. Parents also receive a written report detailing coverage and attainment at the end of the summer term. All assessment is recoded on whole school tracking system after teachers complete pupil progress meeting with phases leaders (EYFS – year 6).

### **SPECIAL EDUCATIONAL NEEDS**

Pupils with special educational needs follow the curriculum at an appropriate level and activities should be adapted, extended or reinforced for pupils as required.

Pupils will be identified on pupil One Page Profiles and provision maps. They follow individual programmes of work and intervention programmes.

### **EQUAL OPPORTUNITIES**

Every effort is made to ensure that mathematics activities and investigations are of equal interest and relevance for boys and girls. Equality of access to the Mathematical Curriculum is essential for all pupils, regardless of gender and ethnic background.

### **ADULTS OTHER THAN TEACHERS**

We welcome the support of helpers within the classroom, but recognise that responsibility for pupils remains with the teacher. It is essential that health and safety guidelines are communicated and complied with by students and helpers.

## **HEALTH AND SAFETY**

The safe use of equipment is promoted and children will be taught to use equipment correctly and safely. The school health and safety policy should be followed at all times.

## **RESOURCES**

Mathematics requires an extensive range of resources, both durable and consumable. The resource base is reviewed, renewed and developed each year from money delegated from capitation. Class teachers are required to inform the Mathematics Co-ordinator of any resources needed to be included in the next requisition.

Foundation Stage and Key Stage 1 resources are mainly classroom based.

Key Stage 2 equipment is based in classrooms and the main stockroom upstairs.

## **MONITORING**

Planning will be monitored by the Mathematics Co-ordinator in order to ensure a coherent and comprehensive delivery of the curriculum. The Co-ordinator will meet both formally and informally with colleagues in order to keep informed as to developments.

Samples of pupil's work will be collected in by the Co-ordinator in order to monitor quality, quantity and presentation. Time release will be made available to carry out supportive classroom observations.

The school's Senior Leadership Team will periodically review the school's policy, schemes of work and samples of pupil's work in order to monitor the development of mathematics through the school.

Test results will also be monitored and evaluated in order to ascertain strengths and weaknesses in the school's work.

## **REVIEW AND DEVELOPMENT**

This policy will be reviewed annually, as will schemes of work. Development of teachers' expertise may be provided through in-school inset provision, in class support from the co-ordinator, focused staff meetings and attendance at externally held courses.

**Member of staff responsible:**

**Mrs C Foden**

**Date Policy written:**

**February 2019**

**Date to be reviewed:**

**February 2021**

**Date approved by Governors:**

**Signature of Chair of Governors:**