



## **MICKLEOVER PRIMARY SCHOOL**

**Name of Policy:** Mathematics

**Date of Policy:** November 2016

**Member of Staff responsible:** Millie Harrison/Sonia Sharpe.

**Review date:** November 2018

**Signature:** \_\_\_\_\_ **Chair of Governors**

**Date Approved:** \_\_\_\_\_

### **At Mickleover Primary School**

**We are:**

**Motivated to learn**

**Proud of our achievements**

**Successful and skilled for life**



## Mathematics Policy

### INTRODUCTION

This policy outlines the teaching, organisation and management of the mathematics taught and learnt at Mickleover Primary school. The school's policy for mathematics is based on The National Curriculum 2014. The policy has been drawn up as result of staff discussion and has full agreement of the Governing Body. The implementation of this policy is the responsibility of all the teaching staff.

### AIMS

Mathematics is a tool for everyday life. It is a whole network of concepts and relationships which provide a way of viewing and making sense of the world. It is used to analyse and communicate information and ideas and to tackle a range of practical tasks and real life problems. It also provides the materials and means for creating new imaginative worlds to explore.

Using the scheme of work produced by the City of Derby and Derbyshire MaSt teachers, it is our aim to develop:

- A positive attitude towards mathematics and an awareness of the fascination of mathematics;
- Competence and confidence in mathematical knowledge, concepts and skills;
- A fluency in the fundamentals of mathematics, so pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly.
- An ability to solve problems, to reason, to think logically and to work systematically and accurately;
- Initiative and an ability to work both independently and in cooperation with others;
- An ability to communicate mathematics;
- An ability to use and apply mathematics across the curriculum and in real life;
- An understanding of mathematics through a process of enquiry and experiment.

It is intended that the main focus of our mathematics should be based upon calculation- in order to lay strong foundations for the using and applying of mathematics in real-life situations.

### INCLUSION

The daily mathematics lesson is appropriate for all pupils. Teachers will involve all pupils through differentiation.

In the daily mathematics lesson we support children with English as an additional language in a variety of ways; e.g. repeating instructions, speaking clearly, emphasising key words, using picture cues, playing mathematical games, encouraging children to join in counting, chanting, finger games, rhymes etc...

IWBs (Interactive whiteboard) and ICT are important resources for many reasons, one of which is supporting children with visual needs.



## **GIFTED AND TALENTED**

More able children at mathematics will be taught with their own class and stretched through differentiated group work and extra challenges. Staff must ensure that there are adequate opportunities for Gifted and Talented children and these should be noted within planning where appropriate. When working with the whole class, teachers will direct questions towards the more able (at their ability level) to maintain their involvement. Where possible, outside agencies, e.g. secondary schools, will be involved with such children.

## **SPECIAL EDUCATIONAL NEEDS & DISABILITIES (SEND)**

Within the daily mathematics lesson teachers aim to provide activities to support children who find mathematics difficult. Children with SEND are taught within the daily mathematics lesson and are encouraged to take part when and where possible.

Where applicable children's MEPs incorporate suitable objectives from the Derby City scheme of work and teachers keep these objectives in mind when planning work.

When educational support staff are available to support groups or individual children they work collaboratively with the class teacher. The support teacher feeds back to the class teacher when appropriate to inform evaluations, assessment and future planning.

## **EQUAL OPPORTUNITIES**

It is the policy of Mickleover Primary School to ensure that every child receives an equal opportunity within Mathematics activities, regardless of race, gender, ability or Special Educational Needs.

## **I.C.T.**

ICT will be used in various ways to support teaching and motivate children's learning. ICT will involve the computer, calculator, and audio-visual aids. They will however only be used in the daily mathematics lesson when it is the most efficient and effective way of meeting the lesson objective.

## **TEACHING AND LEARNING**

### **Teaching time**

To provide adequate time for developing numeracy skills each class teacher will provide daily mathematics lessons. This may vary in length but will usually last for about 45 to 60 minutes, dependent upon the age of the pupils. Additional mathematics may be taught within other subject lessons when appropriate.

Teachers of the Foundation Stage children base their teaching on objectives in the Early Years Foundation Stage framework; this ensures that they are working towards the 'Early Learning Goals for Mathematical Development'. Towards the end of the Foundation Stage, teachers aim to draw the elements of a daily mathematics lesson together so that by the time children move into year 1 they are familiar with a more structured lesson.



### **Class Organisation**

From year 1, all pupils will have a dedicated daily mathematics lesson or appropriate proportion of the timetable. Within these lessons there will be a good balance between whole-class work, group teaching and individual practice.

### **A Typical Lesson**

A typical 45 to 60 minute lesson in year 1 to 6 will be structured like this:

- Oral work and mental calculation. This will involve whole-class work to rehearse, sharpen and develop mental and oral skills.
- The main teaching activity. This will include both teaching input and pupil activities and a balance between whole class, grouped, paired and individual work.
- A Plenary. This will involve work with the whole class to sort out misconceptions, identify progress, to summarise key facts and ideas and what to remember, to make links to other work and to discuss next steps.

### **CROSS-CURRICULAR LINKS**

Mathematics contributes to many subjects within the primary curriculum and opportunities will be sought to draw mathematical experience out of a wide range of activities. This will allow children to begin to use and apply mathematics in real contexts.

### **CALCULATIONS POLICY**

We believe that too great a diversity of algorithms can be confusing to many children and therefore have a 'Calculation Policy' to demonstrate our teaching approaches to both parents and children.

### **RECORDING**

There are occasions when it is not necessary to record mathematics in a permanent form, but there are also occasions when it is both quick and convenient to carry out written calculations. It is also important to record aspects of mathematical investigations. Children are taught a variety of methods for recording their work and they are encouraged and helped to use the most appropriate and convenient method of recording.

Children are encouraged to use mental strategies before resorting to a written algorithm.

Recording work may involve children making rough jottings first followed by recording actual answers for the teacher's attention. All children are encouraged to work tidily and neatly when recording their actual answers but jottings may take any form and are important evidence for the teacher. Learning objectives or titles and dates will be written on all pieces of work.

### **MARKING**

Work in mathematics can generate a great deal of marking and it is recognised that it is not always necessary to mark every piece of work. The children can sometimes mark exercises with support and guidance from the teacher. Where appropriate, children in KS2 are encouraged to check computational exercises with a calculator. This can foster independence in the children, who can seek help if they are unable to locate and correct their errors.



## **TARGET SETTING**

Each child will be set challenging targets at an appropriate level to enhance their understanding. Such targets will be shared with parents through the 'Home/School Diary'. We feel that a good degree of mental agility is vital to success in mathematics and therefore may set additional informal targets for mental calculations, e.g number bonds, multiplication facts. The targets will be informed by the implementation of the 'Maths Number Track', facilitating differentiated targets for each child.

## **ASSESSMENT AND REPORTING.**

Assessment will take place at three connected levels: short-term, medium-term and long-term. These assessments will be used to inform teaching in a continuous cycle of planning, teaching and assessment.

Short-term assessment will be an informal part of every lesson. The teacher will share the objectives for the lesson with the children and make sure they are clear what is being expected of them to successfully achieve the objective. This is a necessary part of assessment for learning and helps the children take ownership for their own learning. The short term assessment will also involve the teacher checking the children's understanding at the end of the session to inform future planning and lessons.

Children will be encouraged to self- assess their understanding by using the traffic light system, or with younger children thumbs up/down. Older children will be encouraged to explain their choice of traffic light.

Medium-term assessment will take place on a termly basis and will cover the key objectives highlighted in the in the Derby City Scheme of work, covered during the term. Teachers will update the MPS Numeracy Maths Grids at least once per term. The outcomes of the assessments will be recorded by the class teacher and used to inform the updating of the School Pupil Tracker every term.

Long-term assessment will take place once during the year. This assessment will take place towards the end of the school year to assess and review pupils' progress and attainment. These will be made through compulsory National Curriculum mathematics tests for pupils in Year 2 and 6 and supplemented by the optional QCA tests. Teachers will also draw upon their class record of attainment against key objectives and supplementary notes and knowledge about their class to produce a summative record. Accurate information will then be reported to parents and the child's next teacher.

## **RESOURCES**

At Mickleover Primary School, we do not believe that one particular published 'scheme' offers sufficient variety and flexibility to suit all children. We therefore aim to draw upon a wide variety of resources and are constantly striving to ensure that these are challenging, relevant and appealing to the children.



## **ROLE OF THE CURRICULUM LEADER**

The Coordinator will:

- Ensure teachers are familiar with the framework and help them to plan lessons;
- Lead by example in the way they teach in their own classroom;
- Prepare, organise and lead INSET, with the support of the Headteacher;
- Work co-operatively with the SENCO;
- Observe colleagues with a view to identifying the support they need and monitoring the quality of teaching and learning in the classroom;
- Attend INSET provided by LA Mathematics consultants;
- Inform parents;
- Discuss with the Headteacher and Mathematics governor the progress of implementing the Strategy in the school.

The Headteacher will:

- Lead, manage and monitor the implementation of the Mathematics National Curriculum, including monitoring teaching plans and the quality of teaching in the classrooms;
- Keep the governing body informed about the progress of the framework;
- Ensure that mathematics remains a high profile in the school's development work;
- Deploy support staff to maximise support for the framework.