



# Kerr Mackie Primary School Maths Policy

November 2017

## THE NATURE OF MATHEMATICS

“Mathematics is a creative and highly inter-connected 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.”

(The National Curriculum for Mathematics 2014)

## Rationale

At Kerr Mackie Primary school we believe that Mathematics is a tool for everyday life. It is used to analyse and communicate information and ideas and tackle a range of practical tasks and real life problems.

Using the Programmes of Study from the National Curriculum for Mathematics we aim to develop:

- An enjoyment and curiosity of mathematics and for children to feel confident to become successful;
- Children’s abilities to use and apply mathematics to solve problems in both the classroom and in ‘real life’ contexts;
- A confidence to communicate ideas in written form and orally;
- Independent and collaborative ways of working, encouraging children to share ideas and solve problems together;
- A wide range of mathematical vocabulary to be modelled and used in the classroom environment;
- The children’s ability to recall mental facts accurately and quickly and using effective written calculation methods;
- Children’s logical thinking, reasoning and ability to problem solve as transferable life skills.

## Teaching and Learning

Each class teacher is responsible for the mathematics in their class working within guidance from the maths leader and the national curriculum objectives for the year group. There is a daily mathematics lesson. A typical lesson involves all classes from Y1-6 following the White Rose Scheme of learning which focuses on core topics to build deep understanding.

During these lessons children engage in:

- The development of mental strategies
- Written methods
- Practical work
- Problem-solving
- Reasoning
- Mathematical discussion using precise mathematical language.
- Consolidation of basic skills and routines

In addition to the daily maths lessons, there will be regular maths facts sessions where teachers provide opportunities for the children to practice key facts including times tables to help develop their fluency.

Teaching assistants are used in Maths to support the learning that is taking place on either a one to one basis or small groups. They support children of all abilities.

Teaching staff in the EYFS provide a range of experiences and resources, so that the children learn through a mixture of adult led activities and child initiated activities both inside the classroom and in the outside environment. Children are encouraged to use areas of provision within the classroom and outside environment to support their maths learning, ensuring children have opportunities throughout the day to practise and develop skills being taught. In addition across EYFS, regular maths sessions are taught through adult directed activities. Opportunities are provided for children to develop and embed this learning through provision enhancements, which may be accessed independently or supported by an adult. Key maths learning is shared with parents each week and their involvement is encouraged through 'Sharing Our Learning' letters, posts on our online learning journey Tapestry and in reception through daily 'Leading your Learning' questions and challenges.

At Kerr Mackie Primary School we believe in moving children through the process of using concrete objects, onto using pictorial representations and then onto working with numbers in the abstract.

### **Mastery**

At Kerr Mackie Primary school we are wanting children to learn at a steadier pace to ensure that they have a full understanding of the concepts and methods taught. This allows us to provide deeper learning for all especially those children who are above the national expectations for their age.

We focus on all children achieving what is expected of their age group and not going beyond this. Evidence shows that children need to be able to understand a concept, apply it in a range of situations and then be creative to really understand it. Simply going beyond their age group does not guarantee they understand something, it just means they have heard it.

### **Children's Records of Work**

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. We encourage children to have neat presentation when recording their learning. All children are expected to work in pencil in maths, using one square for each digit when using squares. We encourage children to either mental and written methods depending on the activity set.

EYFS record informally within the setting. They can use whiteboards, resources, on their playground, physically using objects. These are shown in their classes big books for the children to explore and recap on their learning. Staff in EYFS use photos, videos and observations on Tapestry to record each child's achievements in maths.

### **Planning**

The National Curriculum for Mathematics 2014, Development Matters and the Early Learning Goals (Number, Shape Space & Measure) provide the long term planning for mathematics taught in the school.

Years 1-6 use the White Rose scheme of learning as its medium term planning. This provides a detailed, structured curriculum which is mapped out across all phases, ensuring continuity and supporting transition.

EYFS planning is based on Development Matters and the Early Learning Goals (Number, Shape Space & Measure) initially focusing on a number a week.

### **Resources**

To support children's learning in maths we have a number of resources readily available. All classes have a large amount in their rooms to support day to day learning and other specific resources are made available as required. Within the classrooms are Numcion, rulers, counters, number lines, 100 squares, maths dictionaries whereas items such as 3-D shapes, metre sticks, scales are all in a central storage.

All children from reception to year 6 have Mathematics accounts that they access both in and out of school which supports the learning done in lessons.

### **Contribution of Maths to teaching in other curriculum areas**

Mathematics is a tool for everyday life. It is a network of concepts and relationships and is used to analyse and communicate information and ideas in practical tasks and problems. By making links to other subjects at the initial planning stage we aim to provide real context in which to apply skills taught during the maths lessons.

### **Inclusion**

Children with special educational needs:

- Within the daily mathematics lesson teachers provide activities to support children who find mathematics difficult. Children with SEN are taught within the daily mathematics lesson and are able to take part at their level through the support of a Teaching Assistant and appropriate activities and resources.
- Where children need an individual curriculum this is planned for and acted on in lessons so that the learning is at the level required for these children. B squared is used for assessing these children's learning and planning their next steps.
- Pre teaching is used to help teach children concepts or language before they meet it in lessons. Post teach is used in the format of same day interventions whether it be in 2 part lessons or by TA at other times.

### **Assessment**

Half termly, we use a mixture of tests (White Rose Hub) and teacher assessments which is recorded on positive mentoring to track coverage and progress. This is then backed up with moderation that is done in school, with other schools from our FOS (family of schools) and members from the local authority. This data is analysed by teachers as well as members of the SLT and reported to governors throughout the year.

### **Monitoring Teaching and Learning**

This will be undertaken by the Subject Leader, other members of SLT or the Teaching and Learning governor in teaching and learning reviews through observations, book scrutinies, pupil voice and the learning environment.

Areas to be monitored will be decided at the beginning of the year and will be recorded on the school improvement overview so that staff are informed. Results of any monitoring will be fed back to staff quickly and to SLT at their meetings so that any action required can be carried out effectively.

### **Roles and Responsibilities**

#### **1. Subject Leader:**

- Supports teachers in their planning and teaching;
- Lead by example in the way they teach in their own classroom;
- Prepare, organise and lead CPD for both teachers and teaching assistants with the support of the Curriculum leader and Head teacher;
- Monitor different aspects of maths teaching and learning feeding back to SLT and staff on findings and future actions.
- Attend relevant INSET provided by LA consultants and Maths Hubs;
- Be available to discuss with the Curriculum leader, Head teacher, class teachers, parents and governors the progress of maths in the school.

#### **2. Class Teachers:**

- To deliver daily Maths lessons to their children which is engaging and motivating and challenging for all children.
- To continually assess and track the progress of their class to ensure that all groups of children are making progress and use this to inform their planning and teaching.

- To enter and analysis their class' data to track progress of all children.

Review Date: November 2018