Midsomer Norton Mathematics Policy

1. Introduction

The school's policy for mathematics is based on a mastery curriculum as stated in the National Curriculum 2014 Framework. This policy, together with our calculation policy (Appendix A) sets out a framework within which all staff (teaching staff and support staff) should work.

2. Philosophy

Aims:

- for children to become **fluent** in the fundamentals of mathematics;
- for children to **reason** mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language;
- for children to **solve problems** by applying their mathematics to a variety of routine and non-routine problems.

Mathematics is important in everyday life. It equips pupils with a 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.

It is therefore vital that a positive attitude towards mathematics is encouraged amongst all of our school community in order to foster confidence and achievement in a skill that is essential in our society. We strive to "*teach children to be mathematicians by engendering an appreciation of the beauty and power of mathematics, and a sense of enjoyment and curiosity about the subject*."

3. Teaching and Learning

The school uses a variety of teaching and learning styles in mathematics lessons. Children are taught in mixed age and mixed ability classes. The organisation of groups within a class is flexible. Teachers use continuous 'Assessment for learning' (AfL) to arrange groups within the teaching week.

Differentiation is achieved by teaching and guiding children to self- select activities appropriate to their needs and next steps in learning and through individual support and intervention. The questioning and scaffolding individual pupils receive in class as they work through problems will differ and pupils who grasp concepts rapidly are challenged through more demanding problems which deepen their knowledge.

Practice and consolidation, through a concrete, pictorial and abstract (CPA) approach, play a central role to mathematics learning. Carefully designed variation within this builds fluency and understanding of underlying mathematical concepts. Teachers use precise questioning in class to test conceptual and procedural knowledge, and assess pupils regularly to identify those requiring intervention so that all pupils keep up. Teachers ensure that concepts are modelled to pupils using multiple representations. This ensures that procedural and conceptual understanding are developed simultaneously.

Mathematics within the Early Years Foundation Stage (EYFS) is developed through purposeful, play based experiences and will be represented throughout the indoor and outdoor provision. The learning will be based on pupils' interests and current themes and will focus on the expectations from Development Matters/Early Years outcomes. As the pupils' progress, more focus is placed on representing their mathematical knowledge through more formal experiences. Pupils will be encouraged to record their mathematical thinking in their Leaning Diaries when ready and this will increase throughout the year. (See EYFS policy)

4. A Typical Lesson

A typical daily mathematics lesson from year 1 to 6 is structured as follows:

- Collaborative oral work (Talk Tasks) and /or fluency practice (approximately 10 minutes)

- The main teaching activity (approximately 40-50 minutes)
  This will include both teaching input and pupil activities and a balance between whole class, grouped, paired and individual work. Children are expected to move onto application tasks once they are sufficiently fluent.

- Regular mini plenaries
  These provide an opportunity for assessment, both self and teacher, through well- structured AFL questions and an opportunity to explore misconceptions.

5. Planning

The school uses the National Curriculum Framework 2014 to plan long term, medium term and weekly lesson plans. Starting from the appropriate national curriculum objectives, teachers use White Rose resources to plan lessons tailored to meet the needs of their own classes.

6. Home Learning

In Key Stage 1, children are encouraged to enjoy and practise mathematical skills using Doodle Maths and Times Table Rockstars regularly.

In Key Stage 2, children are set weekly homework tasks. These tasks may extend or reinforce learning, or provide opportunities for consolidation of various areas of mathematics. In addition, children are encouraged to continue enjoying and practising fluency with number using Doodle Maths and Times Table Rockstars.

7. Equal Opportunities and Inclusion

We believe in equal opportunities and therefore we aim to give every pupil the opportunity to experience success and achieve as highly as possible.

Intervention groups will take place both within the mathematics lesson and outside; these sessions may be delivered by the teacher or teaching assistants and may involve individual or small group work.

8. Assessment

Assessment for Learning is used to inform teaching in a continuous cycle of planning, teaching and assessment. Observations and quick assessments are an informal part of every lesson to check children's understanding and are used to inform teachers' day-to-day lesson planning. These are recorded throughout the year on School Pupil Tracker Online. Planning must be based on accurate assessment.

Three times a year (October, February, June) children will complete summative assessments using NFER and past SATs papers. Their data will be used by teachers and the school leadership team to monitor pupil progress and to set individual and team targets.

9. Monitoring and Review

Monitoring the standards of children's work and the quality of teaching in mathematics is the responsibility of the mathematics subject leader, who, in turn, reports to the Head teacher and the senior leadership team. The work of the subject leader also involves supporting colleagues in the teaching of mathematics, being informed about current developments in the subject, liaising with the trust and providing a strategic lead and direction for the subject in the school. A named member of the governing body is the link governor for mathematics.