

## MERE SCHOOL

### Mathematics Policy

#### **Our Statement of Intent:**

At Mere School we aim to provide for the development of mathematical skills and concepts as a means of making sense of the world in which we live. To develop logical thinking, reasoning skills and natural curiosity, thus encouraging confidence to tackle situations which arise, in Maths, and other areas of the curriculum.

**“Numeracy is a proficiency which involves confidence and competence with numbers and measures. It requires an understanding of the number system, a repertoire of computational skills and an inclination and ability to solve number problems in a variety of contexts. Numeracy also demands practical understanding of the ways in which information is gathered by counting and measuring, and is presented in graphs, diagrams charts and tables.” (DfES).**

‘We aim through the Primary Framework for mathematics to support and increase all children’s access to excellent teaching, leading to exciting and successful learning.’ (Primary Framework 2006)

#### **Curriculum:**

It is the policy of this school to use the Primary Mathematics Framework, block and unit medium-term planning guidance to develop medium term plans to provide a sequence and structure.

In addition teachers use resources from Abacus Maths scheme, Hamilton Trust website, 100 Maths Lessons (Scholastic) and the Primary Framework resources to support planning daily lessons. Wherever possible we will try to link our Maths teaching to other areas of the Curriculum and real life situations and incorporate ICT where appropriate.

#### **Teaching and Learning:**

We will prepare teaching programmes that reflect the Primary Mathematics Framework. These will include the seven strands of:

- Using and applying mathematics
- Counting and understanding number
- Knowing and using number facts
- Calculating
- Understanding shape
- Measuring
- Handling data

In our teaching we will:

- **structure maths lessons and maintain a good pace;**

- **provide daily oral and mental work to develop and secure pupil' calculation strategies and rapid recall skills;**
- **devote a high proportion of lesson time to direct teaching of whole classes and groups, making judicious use of textbooks, worksheets and ICT resources to support teaching, not replace it;**
- **demonstrate, explain and illustrate mathematical ideas, making links between different topics in mathematics and between mathematics and other subjects;**
- **use and give pupils access to number lines and other resources, including ICT, to model mathematical ideas and methods;**
- **use and expect pupils to use correct mathematical vocabulary and notation;**
- **question pupils effectively, including as many of them as possible, giving them time to think before answering, targeting individuals to take account of their attainment and needs, asking them to demonstrate and explain their methods and reasoning, and exploring reasons for any wrong answers;**
- **involve pupils and maintain their interest through appropriately demanding work, including problems that help pupils to develop communicating and reasoning skills.**
- **ensure that differentiation is manageable and centred around work common to all the pupils in a class, with targeted, positive support to help those who have difficulties with mathematics to keep up with their peers.**

We will use a variety of teaching approaches. There will be a focus on direct teaching which is interactive, lively and provides opportunities for discussion between teacher and pupils, and between the pupils themselves. Groups or pairs will work together as well as individuals being targeted for particular questioning and support. Appropriate practical work, including the utilisation of games and puzzles, will be used to develop the children's understanding of number and other mathematical concepts. Our teaching will include the application of mathematics to everyday situations and investigational work.

The varying abilities of children, including those with Special Needs will be catered for through differentiation within the classroom. This will take place in the following ways:

- providing work at the appropriate level,
- organisation,
  - 1) grouping of children of similar ability,
  - 2) differentiating tasks and materials within a class lesson,
- providing appropriate apparatus to aid learning.

More able children will also be considered, and be provided with challenging activities that will extend their mathematical knowledge.

Specific groups of children will be involved in extra mathematical activities according to funding available (eg Family Numeracy, Springboard).

Maths education at Mere has been designed to take into account children's differences in terms of race, gender, class or disability. In our teaching we will be aware of equal opportunities for all.

- In the early years, we encourage all children to explore construction toys and other toys which improve spatial awareness.
- In discussion and group work, we encourage oral responses and leadership from all pupils.

- We make sure there is equal access to calculators and computers which are supporting mathematical activities.
- We avoid emphasising stereo-typing

## **Early Years**

Teaching and learning in Mathematical development focuses on ‘encouraging children to be confident and competent in learning and using key skills’ (Early Years Foundation Stage). Activities include counting, sorting, matching, finding and making patterns, making connections between learning, recognising relationships and working with numbers, shapes, space and measures. As encouraged in the EYFS, children’s mathematical understanding is developed through stories, songs, games and imaginative play.

Role play areas all incorporate ways in which children can use and play with numbers and shapes, including larger than 10. Practical experiences that are underpinned by the children’s developing understanding and use of language are central to learning. By giving children activities and experiences that are imaginative, practical and enjoyable, facilitates the practitioner to observe and assess children’s development. This leads to effective planning for the next stage of learning.

In the Foundation Stage mathematical experiences are an integral part of learning in other subjects. When possible children are encouraged to use and practice skills and understanding; giving a purpose to their newly developed skills.

Before children are asked to record numbers (if appropriate to their development) children will have had many opportunities to write numbers in an informal way in role play areas, outside with chalk, on whiteboards (outside and in role play areas), etc. Children are encouraged to talk about mathematical problems and discoveries in an informal way during activities to encourage an every day use of mathematical language.

## **Assessment and Recording**

All children at Mere School are continually assessed by their teachers through discussion, observation and the checking of written work, so that the progress of each child is known. Future work can then be planned accordingly. Teachers also keep a class grid for their particular year group to record each child’s understanding of the key objectives. They also complete a tracking chart each term to record each child’s individual progress. Teacher’s own assessments towards the end of the year are based on work in the classroom, the National Standard Assessment tasks (SATs) for years 2 and 6 and optional SATs tests for years 3, 4 and 5.

Records will be kept on planning sheets which identify any pupil who is having difficulties in a particular area of mathematical understanding, or any child needing more challenging work.

Layered targets will be set 3 times a year and displayed in the classrooms. Parents will also be informed of their child’s target each term as well as receiving a Target Sheet showing what most of the children should be able to achieve by the end of a year. A written report on each child’s mathematical progress will be sent home to parents during the Spring term.

## **Resources**

Mere School uses the Abacus Maths Scheme. The Scheme includes: games, activity books, photocopy masters, challenge masters (for more able children), Numeracy support books (for less able children), assessment books, teachers books, children’s workbooks, textbooks, mental warm-up activities for all classes and simmering activities for Infants.

Other resources include A & C Blacks publications, Hamilton Trust resources, Interactive resources from the Primary Framework, 100 hours scheme, Wiltshire Bare Necessities, Wiltshire 27, other ICT resources, Mathematical Challenges for Able Pupils in Key Stages 1 & 2”

Each classroom has its own supply of basic resources e.g. unifix bricks, multilink, counters, dice, plastic money, number games, calculators, computers and software, etc. Apart from essential mathematical equipment, all apparatus is stored centrally. This allows for easier access, the sharing of equipment and the opportunity for the stock to be constantly checked.

## **ICT**

At Mere School we have a trolley of 30 laptops available to all classes as well as 2 computers in every classroom. Interactive Whiteboards and associated software is in all classrooms. The delivery of lessons is supported by the use of interactive software. We endeavour to integrate ICT into our Numeracy Work, if it supports our teaching and/or enhances the children’s learning – ICT strands of control, modelling and handling data are taught through numeracy.

### **Role of the Co-ordinator**

Please refer to “Role of the Co-ordinator” document  
Staff job descriptions.

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