



Cliddesden Primary School

# Mathematics and Calculation Policy

## **Mathematics Policy Statement**

Mathematics is a subject that children should enjoy and feel confident doing. All children at Cliddesden primary School should be numerate, confident when calculating and able to tackle problem solving in a variety of ways. It is also important for them to understand the relevance of Mathematics in real life contexts.

Mathematics 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.

**The national curriculum for mathematics aims to ensure that all pupils:**

1. Become **fluent** in the fundamentals of mathematics, including through varied and frequent practice with increasingly complex problems over time, so that pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately.
2. **Reason mathematically** by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language
3. Can **solve problems** by applying their mathematics to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions.

## **Aims**

In addition to achieving the learning outcomes and statutory requirements set out in the National Curriculum, we also aim to:

- Promote a positive attitude to Mathematics.
- Develop an understanding of Mathematics in everyday life and make connections between contexts.
- Cater for a range of learning and teaching styles, giving children a wide range of experiences.
- Promote clear and logical thinking, independence and an enquiring mind.

- Develop understanding of the number system, spatial awareness and pattern, and use the relationships between them to solve problems independently.
- Develop initiative and an ability to work both independently and in co-operation with others.
- Develop the confidence and ability to estimate and approximate in all areas of mathematics.
- Develop an ability to solve problems, to reason, to think logically and to work systematically and accurately.
- Use mental calculations as a first choice where appropriate.
- Use mathematical language with confidence and ease.
- Use ICT to enhance teaching and learning of mathematics.
- Develop cross-curricular links.
- Equip pupils with the mathematical skills needed to access the secondary school curriculum.

### **Inclusive Entitlement and Differentiation**

In the primary curriculum, Mathematics is broken down into four domains and statutory requirements.

- Number
  - Number and Place Value
  - Addition and Subtraction
  - Multiplication and Division
  - Fractions
- Measurement
- Geometry
  - Properties of shape
  - Position and Direction
- Statistics

All children are entitled to access all domains of the curriculum at an appropriate level.

Groups are organised and planned by teachers throughout the school in order to encourage high level mathematical thinking and to provide further support for children who need it.

### **Implementation**

The approach to teaching is based on four key principles:

- Dedicated mathematics lessons every day - KS1 - 5 hours per week including mental maths basic skills lessons. KS2 - 5  $\frac{1}{2}$  hours per week including mental maths basic skills lessons.
- Direct teaching and interactive oral work with the whole class.
- An emphasis on mental calculations
- Controlled differentiation with all pupils engaged in mathematics relating to a common theme.
- A mathematical themed activity during basic skills lessons.

In the main part of the lesson, teachers will group their pupils in a variety of ways according to the nature of the activity, including some grouping by ability and mixed ability groups. We endeavour to set work that is challenging, motivating and encourages the pupils to talk about what they have been doing.

The basic skills maths sessions are used to develop mental maths skills and practise basic mathematical skills. Some mathematical lessons are grouped by ability across the year group, other year groups' work in mixed ability groupings. This depends on the activities being taught and the needs of the children within that particular year group. This is decided with consultation with Maths Coordinator.

Pupils will consider methods of recording their work for a variety of purposes, such as a presentation, through class assemblies, photographs, or use of ICT such as spreadsheets. They will also be encouraged to make jottings in forms meaningful to them.

### **Homework**

MyMaths is used to set work for particular topics within Mathematics and is completed online weekly. Timestables are also set weekly.

### **Planning**

Teachers plan activities that encourage speaking and listening to aid children's mathematical understanding and appropriate language development in the case of bilingual children. They ensure that teaching and learning takes place in every lesson and that all children are challenged and moving forward with their mathematical learning. Each lesson is differentiated to suit the needs of the pupils within the year group.

### **Assessment and Record Keeping**

Children are assessed regularly at Cliddesden and children receive feedback on their learning so that they understand what it is that they need to do better. The school uses ongoing maths assessments. These allow teachers to focus on the key objectives from the appropriate level that the children are working at and use them as a diagnostic tool, ensuring that future lessons are moving children forward with their mathematical learning.

Ongoing assessment is used in all year groups. Year 2 also carry out the optional KS1 SATs tests. QCA tests are used in Years 3, 4 and 5. SATS tests take place in Year 6.

### **Resources**

Each classroom is equipped with a range of practical equipment and is placed either within a central class resources area, or a specific Maths Area. Children are allowed free access to the equipment as their needs permit. Larger, more specific items are stored in the central stock cupboard. Each class uses an interactive whiteboard, iPads and a range of computer programs to which the children have access.

### **Display**

Every class has a mathematics display relevant to the work the children are doing. Displays should include a hundred square, place value chart and the mathematical vocabulary that is being covered during the current week. In addition, the symbols and key vocabulary of the four operations should be on display at all times. Displays and teaching materials should reflect the language spoken by the children in the class/school.

Numbers, words, games and activities should be expressed in appropriate languages, where possible.

### **Parental and Community Involvement**

Parents are encouraged to involve themselves in projects within the school. Through parent workshops, they are welcomed into school to work alongside teachers in the daily mathematics lesson. Parents should be given the opportunity to understand how simple and everyday resources can be used to support their child. Parents are invited into school three times a year to look at their children's work, and a report on their child's progress is given out to parents termly. The community is encouraged to work alongside the school to promote mathematical learning. Organising presentations from positive role models, who use mathematics in everyday life helps to motivate the children's learning in this area. Parent helpers are encouraged to support

learning and make resources within the school.

### **Enrichment**

To ensure that Cliddesden pupils are exposed to an exciting and enriching mathematical curriculum, the school hosts many events that encourage the use of mathematical learning including:

- Visits from external companies such as Happy Puzzle Company
- Educational visits
- Annual Timestableathon.
- Maths weeks within year group planning, where the curriculum allows.
- Homework projects, where the pupils can work alongside parents to produce a mathematical piece of work e.g. creating a number board game.

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

- To plan, order and deliver staff INSET
- To revise the school policy.
- To monitor, review and update resources.
- To encourage maths display in classrooms and around the school by providing examples and support.
- To monitor pupil progress.
- To maintain and build priorities set by the school.
- To monitor the planning, record keeping, assessment and teaching of Maths throughout the school, using observation, samples of work, planning etc.
- To ensure that Parents are confident in how to support their child's mathematical development.
- Be aware of new projects which can develop mathematical learning.