

# Little Bollington C of E Primary School

## Mathematics Policy

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## **MATHEMATICS POLICY**

### **1. INTRODUCTION**

Mathematics equips pupils with the 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.

Mathematics is important in everyday life. It is integral to all aspects of life and with this in mind we endeavour to ensure that children develop a healthy and enthusiastic attitude towards mathematics that will stay with them.

The National Curriculum order for mathematics describes what must be taught in each key stage. Little Bollington C of E Primary School follows the National Curriculum for mathematics. This ensures continuity and progression in the teaching of mathematics. In early years the curriculum is guided by the Early Learning Goals, which mirror the reception Learning Objectives in the National Curriculum.

This policy follows a whole school format and rationale.

### **2. RATIONALE**

All school policies form a corporate, public and accountable statement of intent. As a primary school it is very important to create an agreed whole school approach of which staff, children, parents, governors and other agencies have a clear understanding. This policy is the formal statement of intent for mathematics. It reflects the essential part that mathematics plays in the education of our pupils. It is important that a positive attitude towards mathematics is encouraged amongst all our pupils in order to foster self-confidence and a sense of achievement. The policy also facilitates how we, as a school, meet the legal requirements of recent Education Acts and National Curriculum Requirements.

### **3. EQUAL OPPORTUNITIES**

We incorporate mathematics into a wide range of cross-curricular subjects and seek to take advantage of multicultural aspects of mathematics eg. Islamic patterns in RE.

All children have equal access to the curriculum regardless of their gender. This is monitored by analysing pupil performance throughout the school to ensure that there is no disparity between groups.

### **4. PRINCIPLES**

We aim to develop in our pupils:-

- A positive attitude towards mathematics
- A sound knowledge and understanding of mathematical concepts and skills
- An understanding of the patterns and processes in maths
- The ability to apply their knowledge and skills when solving real-life and practical problems
- The ability to predict, analyse, communicate and present mathematical information
- The ability to test, modify and extend their own mathematical ideas
- An awareness of the power of maths to communicate and explain the world in which we live.

## **5. AIMS**

### **5.1 General**

We aim to provide the pupils with a mathematics curriculum, which will produce individuals who are literate, creative, independent, inquisitive, enquiring and confident. We also aim to provide a stimulating environment and adequate resources so that pupils can develop their mathematical skills to their full potential.

### **5.2 Specific**

Our pupils should

- have a sense of the size of a number and where it fits into the number system
- know by heart number facts such as number bonds, multiplication tables, doubles and halves
- use what they know by heart to figure out numbers mentally
- calculate accurately and efficiently, both mentally and in writing and paper, drawing on a range of calculation strategies
- recognise when it is appropriate to use a calculator and be able to do so effectively
- make sense of number problems, including non routine problems, and recognise the operations needed to solve them
- explain their methods and reasoning using correct mathematical terms
- judge whether their answers are reasonable and have strategies for checking them where necessary
- suggest suitable units for measuring and make sensible estimates of measurements
- explain and make predictions from the numbers in graphs, diagrams, charts and tables
- develop spatial awareness and an understanding of the properties of 2d and 3d shapes

## 6. PROVISION

Pupils are provided with a variety of opportunities to develop and extend their mathematical skills in and across each phase of education.

The teaching of mathematics at Little Bollington provides opportunities for:

- group work
- paired work
- whole class teaching
- individual work

Pupils engage in:

- the development of mental strategies
- written methods
- practical work
- investigational work
- problem solving
- mathematical discussion
- consolidation of basic skills and number facts
- use of Numicon where appropriate to support development

At Little Bollington C of E Primary School we recognise the importance of establishing a secure foundation in mental calculation and recall of number facts before standard written methods are introduced.

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

‘It is important that time is found in other subjects for pupils to develop their Numeracy Skills, eg. there should be regular, carefully planned opportunities for measuring in science and technology, for the consideration of properties of shape and geometric patterns in technology and art, and for the collection and presentation of data in history and geography’.

We endeavour at all times to set work that is challenging, motivating and encourages the pupils to talk about what they have been doing.

## 7. HOMEWORK

We recognise the importance of making links between home and school and encourage parental involvement with the learning of mathematics parents evening, maths evenings and workshops and assemblies.

Homework provides opportunities for children

- to practise and consolidate their skills and knowledge,
- to develop and extend their techniques and strategies, and
- to share their mathematical work with their family
- to prepare for their future learning.

Homework activities will be short and focused and may help to form the basis of assessment.

## **8. THE ENVIRONMENT**

The school aims to provide a mathematically stimulating environment:

- through displays that promote mathematical thinking and discussion
- through displays of pupils' work that celebrate achievement
- by providing a good range of resources for teacher and pupil use.

In every classroom, resources such as number lines, hundred square, place value charts and multiplication squares are displayed as appropriate and used as resources for whole class or individual work, for children to become confident in their use and understanding of the number system.

## **9. Special Educational Needs**

All pupils take part in the daily numeracy lesson.

Teachers plan lessons so that all pupils can be included and can make progress in the lesson.

In oral work teachers plan a range of differentiated questions, with some targeted at specific pupils.

Teachers also ask open questions that allow all children to take part.

Teachers use a wide range of visual resources to illuminate meaning.

During whole class teaching, discreet help is given to particular children by teaching assistants where available.

During activities, children are supported by teaching assistants where available.

## **10. Marking of written work**

All work is marked

Written feedback provides pupils with guidance on how to improve their work.

Written feedback also targets next steps for the children and encourages the children in a 'write and respond' system.

See **Marking Policy** for further details.

## **11. ASSESSMENT**

Assessment is regarded as an integral part of teaching and learning and is a continuous process.

Assessment is carried out:

- orally through questioning
- by observation of children at work
- marking of children's work
- through planned assessment activities linked to the key objectives
- Informal assessment takes place continuously and teachers record on the back of weekly planning sheets names of children who have exceeded/not achieved expectations, to inform planning.
- QCA optional tests are used in years 3, 4 and 5
- Teachers make and record an end-of-year assessment of each child's 'best fit' against the new cluster assessment sheets.

### **Target setting**

- Analysis of children's performance in tests helps the school to identify and set curricular targets for groups of pupils.
- School targets are set for pupil attainment for the end of Key Stage.
- QCA optional tests are used to help set end of Key Stage targets.

## **12. PARENTAL INVOLVEMENT**

At Little Bollington C of E Primary school we encourage parents to be involved by:

- Inviting them into school for parents evening to discuss the progress of their child
- Inviting parents into school in the summer term to look at their achievements over the year.
- Inviting parents to curriculum evenings or circulating information via newsletters when significant changes have been/are made to the mathematics curriculum

Holding workshops for parents focusing on areas of mathematics.