

*"At Hilltop Infant School, everyone will work together in a nurturing environment to provide each child with challenging opportunities that encourage a desire for life-long learning."*



Hilltop Infant School  
*Mathematics Policy*

Ratified by the Governing Body in Spring 2011

Signature John Young

Chair of Governors

## **MATHEMATICS POLICY**

### **The purpose of the Mathematics Policy**

This Mathematics Policy is a statement of our school's agreed approach to the Mathematics curriculum. It is to inform teachers, governors, parents, pupils and our partner Junior Schools. It is a whole school statement of our intents and beliefs, arising for debate and discussion among staff and senior management, reflecting our school's values.

It informs and reflects our own classroom practice.

It translates the whole curriculum principles into particular areas.

### **Our Philosophy about teaching Mathematics**

We believe that children learn best when they enjoy and see relevance in what they are doing. We want children to enjoy maths and be fascinated by it, so we work from a basis of enjoyment, understanding and practical involvement.

We believe that children need concrete experiences to enable them to develop mathematical concepts. They refine their understanding and develop concepts by talking about what they are thinking and what they have done.

Children need plenty of opportunities to apply what they have learnt, and to relate it to other areas of the curriculum, and their own lives. It must also prepare them for an effective adult life.

The following four principles (from 'A Framework for the Curriculum in Essex' - see Bibliography) underpin the Mathematics curriculum policy. The aims, related to these principles, provide coherence and make explicit the relationship between principles and practice.

#### **Principle 1. Access and entitlement**

We believe that every child is entitled to benefit from access to a curriculum and a range of learning experiences of the very highest standard possible, which will be provided irrespective of gender, ethnic background, age or disability.

We aim to encourage a positive attitude to learning and using mathematics in all our pupils by raising awareness of the creative aspects of the subject and increasing understanding through a practical and investigational approach. In making maths investigational we aim to give children the skills to solve problems, not just find correct answers.

The classroom ethos will be such that there is an expectation of quality, within which contributions from all children will be respected and valued.

## **Principle 2. Curricular Balance**

Children benefit from access to a curriculum which is carefully planned to ensure breadth, depth and relevance, and to enable progression, taking account of needs and aspirations. It must value and build on the children's experiences. To enable children to extend and realise their potential, they must be offered challenges, learning experiences and support which match their individual needs.

Our planning includes sufficient flexibility to offer experiences which meet the needs, interests and cultural diversity of our pupils.

## **Principle 3. Differentiation and Potential**

Children extend and realise their potential when they participate in a curriculum which offers challenge, learning experiences and support matched to individual needs. We aim for all children, regardless of their starting points, be provided with learning experiences which will enable them to experience success, gain confidence and acquire competence in all areas of mathematics. We set targets which are challenging but achievable, encouraging children to view mistakes positively and as vehicles for learning.

## **Principle 4. Preparation for the future**

We give our children an awareness of the usefulness of mathematics in everyday life and experience of using their mathematical knowledge and understanding to solve real problems. It is our aim to develop a positive attitude towards mathematics, to encourage an appreciation of the basic structure of mathematics and to develop an ability to think clearly and logically, with confidence, independence of thought and flexibility of mind.

In today's world of calculators and computers we believe that it is still necessary for children to learn basic computational skills, but that it is even more important that they should understand the processes that they are using and be able to apply them correctly in unfamiliar situations. We believe that the calculation skills they need are best developed through application to practical situations, which are meaningful to them, problem solving and investigating. We believe that children need to use calculators and computers as tools which they can use.

We believe that pattern in life is vital and that once children see patterns and realise their value they can use them to help them to organise their life and their learning.

We believe that children must be allowed to develop reliable personal methods of working and recording, with algorithms (conventions) taught after practical experience.

## **Our aims in teaching Mathematics**

### **Attitudes and Behaviour**

These are the attitudes and behaviour we aim to promote:-

- ⇒ to enable children to find enjoyment and fascination in Mathematics, through practical involvement and understanding;
- ⇒ to develop in children a positive attitude towards mathematics with an increasing confidence, concentration and perseverance when carrying out mathematical tasks and investigations;
- ⇒ to equip children to think for themselves and talk about their thinking processes;
- ⇒ to enable children to see relevance in what they are doing;
- ⇒ to equip children to use a variety of calculating aids to assist them in their present and future lives.

## **Our objective in teaching Mathematics**

We follow the Primary National Strategy for Mathematics for Key Stage 1 and use the Early Years Foundation Stage Curriculum in the Reception Classes.

### **Concepts**

There are a range of concepts we expect our children to develop or begin to develop. We expect the majority of children to be able to show understanding of:-

- ⇒ the meaning and values of numbers and their place values;
- ⇒ number operations and how to apply them in everyday situations;
- ⇒ the need for and value of measures and how they apply to everyday situations;
- ⇒ patterns, realise their value and use them to help to organise their life and their learning;
- ⇒ shapes in both 2- and 3- dimensions and their relationship to each other and the everyday world.

### **Skills and Competences**

There are a range of skills and competences we will foster. Most children will be able to:-

- ⇒ learn and use basic computational skills;
- ⇒ understand the processes they are using and be able to apply them correctly in unfamiliar situations;
- ⇒ develop reliable methods of working, including individual ones where appropriate, and record their work, using conventions where applicable;
- ⇒ acquire a variety of skills and apply what they have learned to other areas of the curriculum, in both familiar and unfamiliar situations;
- ⇒ have gained greater independence in working, investigating and recording results.

## Experiences

These are the experiences we shall extend to the children:-

- ⇒ working on a range of activities using appropriate apparatus and selecting appropriate strategies and methods of recording;
- ⇒ experiencing working co-operatively in pairs, groups and whole class situations, as well as individually.

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## **Monitoring:**

This policy was developed after consultation with staff, parents and governors. The curriculum leader will be responsible for monitoring the efficiency and effectiveness of the Maths Policy. Feedback from parents/carers is welcomed at any time in written form or by making an appointment to see the headteacher. The Policy will be reviewed on a regular basis.