

INTAKE PRIMARY SCHOOL



# Mathematics Policy

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Subject Leader: K. Woodall

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& Curriculum Team 1

## **Philosophy**

We believe that teaching mathematics is important because of its significance in analysis and communication of information and ideas. This document serves to explain how we see the mathematical needs of all our children within both school and adult life.

## **Aims**

The following are intended for all pupils, although the way they are implemented will vary according to their age and ability.

- To deliver the national curriculum for mathematics
- To promote progressive development of, mathematical ideas and skills.
- To use these skills and knowledge across the curriculum and in real situations, which occur in children's lives.
- To develop a positive attitude to mathematics through enjoyment from and confidence in their mathematical experiences.
- To challenge children of all abilities.

## **Aims into Practice**

We believe that there is no one best way to teach mathematics. All teachers in this school use a balanced variety of approaches

Exposition	the direct presentation of ideas
Discussion	Learning by sharing ideas and talking things over
Activity	Learning by doing
Enquiry	Learning to solve problems and using investigative approaches

Good mathematical lessons will often use several of these approaches.

## **Objectives**

Pupils must know/remember basic facts to progress confidently

- Terms

Correct use of mathematical vocabulary will be used appropriately at all levels

- Notation

Pupils will be encouraged to develop a facility in the use of symbols and an understanding of the meaning attached to them.

- Results

Part of the structure of mathematics. If pupils know some results, they may be able to deduce others from them.

## **Skills**

We will encourage

- The ability to communicate mathematics.
- The ability to form basic operations by using the methods outlined in the schools 'Progression in Mathematics' documents and operation posters.
- The use of Computing in mathematical activities.

## **The Role of the Subject Leader**

- Lead policy development by means of the action plan
- Monitor progress and continuity in liaison with the Head teacher
- Will assist in the implementation of the curriculum and offer help to individual members of staff
- Take responsibility for the purchase of resources and their organisation
- Run Inset days as necessary
- Keep up to date with the latest developments and pass relevant information on to members of staff

## **Principles of the Teaching and Learning of Numeracy**

Our approach to teaching is recognised by four key principles:

- Dedicated mathematics lessons everyday
- Direct teaching and interactive oral work with the whole class and groups
- An emphasis on mental calculation and the teaching of number fact thoroughly before standard written methods are introduced
- Controlled differentiation, with all pupils engaged in mathematics relating to a common theme

The National Curriculum sets out the objectives for each year group.

## **Whole School Principles and Strategies for the Teaching of Numeracy**

The school is committed to high standards by ensuring the following are in place:

- Leader for Numeracy with the expertise, opportunity and support needed to influence practice
- A desire to secure high standards through effective teaching and learning that pervades the whole school.
- Clear, realistic targets for raising standards, and a manageable plan for achieving them, with regular evaluation of the schools progress towards the targets in the school Developing Excellence Plan
- Systematic monitoring and review of progress
- Whole school approach to the professional development of teachers
- Teaching assistants are used effectively and feel part of the teaching and learning process
- Booster classes and interventions where appropriate.
- Parents kept well informed and encouraged to be involved in homework
- Governors involved and informed in policy monitoring, evaluation and progress.

## **Pupil's Experience and Activities**

- We introduce all new ideas through practical experience wherever possible. We encourage children to select and use appropriate equipment and strategies at all times.
- Oral work is a major aspect of all activity, including discussing with peers, talking through difficulties, describing, explaining, clarifying ideas, giving examples, making predictions, asking questions and reporting outcomes.  
We develop oral work through individual, paired, group and whole class activity.
- Arithmetic forms the basis of mathematical effectiveness. Good Arithmetic methods rely on an understanding of the underlying ideas. We encourage all pupils to develop:
  - Mental methods of calculations

- Recall of number bonds and multiplication facts
- Mental imagery of mental pictures of situations
- Children should not be encouraged to move too quickly to written work. In the early years practical, oral and mental work takes precedence.  
As children develop we encourage them to:
  - Base their recordings on their mental methods
  - Record their work in a variety of ways
  - Develop informal, personal methods of recording
  - Compare and discuss efficient methods
  - Refine and practice useful methods

Mathematics will be taught daily in varying ways as appropriate. Use of whole class, setting, groups, pairs and individual work.

### **Special Educational Needs**

We recognise the special needs of the more able and less able children. Pupils with special needs in Numeracy may receive extra support from a teaching assistant or teacher. Small steps, 'targets' for improvement will be set out in their Personal Profiles which should relate directly to the Numeracy objectives at the appropriate level. Every child, whatever their needs, should have full entitlement to the same opportunities in Numeracy and this will be ensured by adaptations of content, organization, or equipment etc.

### **Homework**

This is used to support the teaching of mathematics by:

- The learning of number bonds and times tables
- Short weekly tasks directly related to the work done in class as required.

### **Marking**

Marking of Numeracy aims to:

- Be encouraging and supportive in the main
- Include written comments on how to improve (personal targets based on learning objectives)
- Be carried out as a group or individually
- Be as immediate as possible to provide constructive and useful feedback.
- Feedback to be acted upon by pupils whenever possible.

### **Computing**

Computing is being used increasingly to support the teaching of mathematics e.g. in the use of spreadsheets, databases and modeling programs for shape and space. Roamers and other programmable toys are also used for the simple programming of direction. Computing is available to all pupils at all stages in the school.

### **Equal Opportunities**

It is our aim that every child has equal opportunities in all aspects of mathematical studies, in accordance with the school Equal Opportunities Policy.

## **SMSC IN MATHEMATICS**

In Maths lessons pupils are encouraged to delve deeply into their understanding of Mathematics and how it relates to the world around them. Our Maths teaching actively encourages risk taking which enables pupils to explore and try new ideas without the fear of failure. This is fundamental to building pupils' self-esteem within Mathematics.

We aim for our students to use Mathematics to explore and question the way the world works and also to apply their reasoning to puzzles for their personal satisfaction.

### **Assessment Strategies (Refer to Marking and Feedback Policy)**

This is achieved by teacher assessment and testing:

#### **Formative Assessment**

Pupils will be assessed continuously in order to improve their learning. The vast majority of this assessment will be informal, will be done by teacher observation and will not always be recorded.

#### **Formal Summative Assessment**

This takes place in the form of SATs at the end of Key Stage 1 and Key Stage 2 in Years 2 and 6. Tests are also administered termly for Years 1, 2, 3, 4, 5 and 6.

And by monitoring progress:

- Through teacher assessment
- The above tests
- The use of information for diagnostic purposes
- To inform future planning

### **Strategies for Recording and Reporting**

- Teachers own records
- Pupils' portfolio work
- Annual written report sent to parents, including SATs results for Years 2 and 6, Level of Attainment against end of year expectations (WTS, EXS, GDS) for Years 1, 3, 4 and 5 and Foundation Profile for Foundation Stage pupils.
- Oral reports and termly progress is shared at Parents Meetings or whenever a parent requests.

### **Resources**

Each class has a basic level of everyday mathematical resources. Central stores for KS1 and KS2 are available for use and it is the responsibility of all staff to ensure that it is used, maintained and stored correctly.

Policy Agreements

This policy has been agreed by:

Headteacher

Name:

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Date:

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Governor:

Name:

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Date:

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