



# Maths Policy

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## Document history

Issue 1:           This is a re-write of the original policy.

## **1 Introduction**

Mathematics is a tool for everyday life. It is a whole network of concepts and relationships which provide a way of viewing and making sense of the world. It is used to analyse and communicate information and ideas and to tackle a range of practical tasks and real life problems. It also provides the materials and means for creating new imaginative worlds to explore. We aim to ensure that all pupils can communicate mathematically and to promote high standards of numeracy. We acknowledge the importance of mental proficiency with numbers before teaching formal methods.

At KS1 and KS2 teachers use the NNS Framework for Teaching Mathematics to ensure that all parts of the National Curriculum Programme of Study are taught.

The Headteacher has overall responsibility for the provision of the mathematics curriculum within the school. It is the responsibility of the Numeracy co-ordinator and the teaching staff to implement this policy. It will be reviewed annually.

## **2 Aims**

Through Mathematics teaching, we hope to develop:

- a positive attitude towards mathematics and an awareness of the fascination of mathematics
- competence and confidence in mathematical knowledge, concepts and skills
- an ability to solve problems, to reason, to think logically and to work systematically and accurately
- initiative and an ability to work both independently and in cooperation with others
- an ability to communicate mathematics
- an ability to use and apply mathematics across the curriculum and in real life
- an understanding of mathematics through a process of enquiry and experimentation

## **3 Breadth of Study**

Through careful planning and preparation we aim to ensure that throughout the school children are given opportunities for:

- practical activities and mathematical games
- problem solving
- individual, group and whole class discussions and activities
- open and closed tasks
- a range of methods of calculating e.g. mental, pencil and paper and using a calculator
- working with computers as a mathematical tool

## **4 Scheme of Work**

Our school scheme of work is a working document and as such is composed of ongoing plans produced on a week by week basis. This is developed from the NNS Framework and takes into consideration the needs of our children. Y6 uses the NNS unit plans in preparation for SATs.

## **5 Cross curricular opportunities**

Throughout the whole curriculum opportunities exist to extend and promote mathematics. Teachers seek to take advantage of all opportunities.

## **6 Planning and delivery**

The school uses the National Numeracy Framework and the National Curriculum for Mathematics as its basic documents for planning.

Teachers make reference to 'P' levels when planning for pupils with additional needs.

The approach to the teaching of mathematics within the school is based on three key principles:

- a mathematics lesson every day
- a focus on AT1 and problem solving, in particular reasoning
- an emphasis on mental calculation

Each class organises a daily lesson of between 45 and 60 minutes for mathematics. Additional booster lessons take place in Y6 from January and in other year groups dependent on the needs of the children.

Lessons are planned using a range of planning formats and are collected and monitored by the mathematics coordinator and/or the Headteacher. All plans should include daily mental/oral starters, guided group reasoning sessions and reference to the relevant class target in maths.

## **7 Equal opportunities**

We are committed to high achievement in mathematics by children regardless of gender, race, class or disability. We aim to include all pupils by providing effective learning opportunities. (refer to the Special Needs and Inclusion Policies).

Children with SEN are taught within the daily mathematics lesson and are encouraged to take part when and where possible. The language used in materials for mathematics is appropriate for SEN children.

Where applicable, children's IEPs incorporate suitable objectives from the NNS Framework and teachers keep these objectives in mind when planning work.

When additional support staff are available to support groups or individual children they work collaboratively with the class teacher.

Within the daily mathematics lesson teachers not only provide activities to support children who find mathematics difficult but also activities that provide appropriate challenges for children who are high achievers in mathematics.

## 8 Differentiation

This should always be incorporated into all mathematics lessons and can be done in various ways:

- Ability groups are flexible for different mathematical activities.
- The mathematics offered to children is taken from a variety of sources, not just one published scheme.
- Stepped activities are provided which become more difficult and demanding but cater for the less able in the early sections.
- Common tasks are used which are open ended activities/investigations where differentiation is by outcome.
- A variety of resources is provided depending on abilities e.g. counters, cubes, 100 squares, number lines, mirrors.
- Grouping is according to ability so that the groups can be given different tasks when appropriate. Activities are based on the same theme and usually at no more than three levels.

## 9 Marking

Work in mathematics can generate a great deal of marking and it is recognised that it is not always desirable to mark every piece of work. The children themselves can mark exercises which involve routine practice with support and guidance from the teacher.

The quality of marking is crucial. A simple 'X' is of little assistance to a child unless accompanied by an indication of where the error occurred, together with an explanation of what went wrong.

Marking should be both diagnostic and summative and it is best done through conversation with the child, however, constraints of time do not always allow this.

Marking should make reference to the learning objective and should sometimes make clear the next steps in learning.

## 10 Monitoring, Recording, Assessment

### 10.1 Assessment and record keeping

Ongoing assessment is an integral part of teaching. Short term assessments are an informal part of every lesson.

APP is the main form of assessment throughout the school with levelled tests and Testbase used to support this judgement. Y6 does not use APP but uses tests for ongoing teacher assessment. These are also supplemented by the compulsory National Curriculum maths tests for pupils in Years 6 and by the tests for Years 3, 4 and 5 provided by the QCA. Teacher Assessment will be used in Y2, supported by the KS1 SATs materials. In the Foundation Stage, practitioners complete the Foundation Stage Profile and Nursery Tracker.

A summative entry on an individual child's record will indicate the National Curriculum Level achieved. In Year 1, a 'best fit' judgement will be based on National Curriculum level descriptions, alongside on-going teacher assessment.

## **10.2 APP**

Teachers in Years 1-5 collect/cross reference samples of work from 3 children and highlight APP guidelines accordingly. APP moderation meetings are held each term to agree interpretations of guidelines and level descriptions.

Each child's levels are entered on a tracking grid three times per year during agreed assessment periods. (See assessment and procedures policy documents).

## **10.3 Reporting To Parents**

Reports are completed before the end of the summer term and parents are given opportunity to discuss their child's progress on 3 separate occasions.

Teachers use the information gathered from their ongoing assessments to help them comment on individual children's progress.

A child's maths targets are shared with parents/carers each half term.

## **10.4 Monitoring and evaluation**

The purpose of monitoring and evaluation is to raise the overall quality of teaching and levels of pupil attainment.

Planning will be scrutinized by both the Headteacher and co-ordinator.

Work sampling, based on an above average, an average, and a below average child's work in a chosen area of focus, will monitor progression and coverage of the numeracy curriculum. The Headteacher and co-ordinator are responsible for monitoring this.

Quality of teaching will be monitored through lesson observation and feedback.

# **11 Additional Adults**

We encourage additional adults to use precise mathematical language and to use open questions, when appropriate, when engaging in dialogue with children. They are encouraged to become familiar with the APP process.

# **12 Learning Environment**

Teachers will provide an effective learning environment that will support pupils in their learning of mathematics.

## **13 Homework**

Teachers will set homework as appropriate, in mathematics. (refer to the Homework Policy).

## **14 Resources**

The Mathematics National Curriculum as set out in: The National Curriculum Handbook for Primary teachers in England (DfES 1999).

The National Numeracy Framework

A variety of resources are referenced in the Foundation Stage, and in both key stage 1 and 2.

QCA's Teaching Mental Calculation Strategies.

QCA's Standards In Maths

The DfES's Mathematical Challenges for Able pupils in KS1 and KS2.

Overcoming Barriers In Mathematics levels 1-5

Securing levels 1-5