

# **HANOVER SCHOOL POLICY FOR MATHEMATICS**

November 2008

## **POLICY STATEMENT**

This policy outlines the teaching, learning, organisation and management of the mathematics taught at Hanover Primary School. The policy is based on the revised numeracy strategy 2007. It has been drawn up as a result of staff discussion and has the full agreement of the governing body.

The implementation of this policy is the responsibility of all teaching staff at Hanover.

## **AIMS**

The aim of this policy is that teachers at Hanover have a shared vision for the teaching and learning of mathematics and that children's experience of mathematics is consistent as they progress through the school.

The teaching of mathematics at Hanover is focused on enabling every pupil to develop their mathematical skills, understanding and confidence so that they can express themselves and their ideas using the language of maths with growing assurance.

Pupils should be able to:

- Become numerate and tackle mathematical problems confidently
- Develop skills which are needed to meet the demands of adult life
- Develop the ability to think logically and clearly
- Develop positive attitudes to mathematics
- Apply mathematical skills across the curriculum

## **TEACHING & LEARNING**

### **Teaching time:**

Daily mathematics lessons may vary in length from 45 minutes in key stage 1 to 60 minutes in key stage 2. In the foundation stage the Early Learning goals have been adopted. At this stage pupils experience some mathematics on a daily basis. This early introduction to mathematics will generally be undertaken orally and often in the context of a class theme, e.g. a particular story. Wherever possible, opportunities for mathematics will be exploited during the day. Links will also be exploited within other curricular areas so that pupils can develop and apply their mathematical skills in different contexts.

### Class Organisation:

Within lessons there will be a balance between whole class, group, paired and individual work.

In years 5 & 6 pupils are grouped and taught in 3 classes according to mathematical ability. These groups are fluid and enable teaching to be targeted to pupil need more effectively.

This setting system will be introduced in years 1-4 in the second half of the Autumn Term.

### Lessons:

The typical lesson may follow the Oral and Mental Starter (5-10mins), Main Activity (30-40mins) and Plenary (10-15mins) structure. However the revised framework allows a degree of flexibility and it is up to the professional judgement of the class teacher to plan and deliver mathematical lesson(s) that fit the need of their pupils.

We use a flexible common planning format, sharing learning objectives through the phrase '*We are learning to...*' and whenever possible place the learning in a context by explaining further '*So that...*'

Lessons will have Success Criteria's, which may be shared by the teacher or could be developed by the children themselves.  
(See planning and assessment policy)

Teaching strategies will be varied and will encourage a high level of interaction, for example through talk partner work, investigations, hands on activities and problem solving.

ICT will be used in various ways to support the teaching and motivate children's learning. ICT will involve the computer, calculators, on-line learning programmes and audio-visual aids. They will be used in a daily mathematics lesson when it is an effective and efficient way of meeting the lesson objectives.

Display has a vital role in the teaching and learning of mathematics and we aim to provide a mathematically stimulating environment. Every class will have a mathematics display board that displays work, posters and other resources that will support and stimulate children's mathematical thinking and celebrate achievement.

### Homework:

Regular homework is set weekly in Key Stage 1 and 2. It provides opportunities to practise, rehearse, refine or extend pupils mathematical skills and understanding. 'Mathletics' on-line tasks are set for Key Stage 2 on a weekly basis, jottings and workings should be recorded in their 'Mathletics' jotter and handed in to teacher weekly. Paper tasks will also be set as required.

These activities will be focused and will be referred to and valued in subsequent lessons.

### EVERY CHILD COUNTS!

As a school we endeavour to maintain an awareness of, and to provide for equal opportunities for all our pupils in mathematics. We aim to take into account cultural background, gender and Special Needs, both in our teaching attitudes and any resources we use with our pupils.

Mathematics lessons and learning opportunities at Hanover aim to include all learners, learning styles and abilities. They are designed to provide challenges to individuals and groups through differentiated teaching, appropriate challenge, effective questioning and relevant tasks. Setting children according to mathematical ability and confidence also allows us to target teaching to the specific needs of individual children.

In Key Stage 2 we have a system of *Booster classes* (outside of the daily maths lesson). These are small group 30 minute sessions, planned and delivered by teachers, that are targeted to pupils who are attaining just below 'Age Related Expectations'. They are designed to enable these children to develop their mathematical skills, understanding and confidence.

In Year 6, these sessions are followed by short (10-15 minute) paired/individual tutorials where they work on specific aspects of their mathematical learning and have the chance to discuss any mathematical problems they have had in class or beyond.

The aim of these sessions is that fewer children will need these booster sessions as the year progresses as they close the gap and achieve A.R.E.

Year 6 homework club also runs weekly from October to May and is specifically targeted at children who may be finding mathematics challenging or find it hard to concentrate at home.

For children who are attaining significantly below 'A.R.E' we have trialled and implemented a system of 1 on 1, short tutorials following the 'Power of 1 & 2 programme. These sessions are based highly on mental skills and speed of calculation and are run by experienced Teaching Assistants.

All these 'intervention' programmes are closely monitored and evaluated by the leadership team, teachers, teaching assistants, assessment & maths co-ordinator and SENCO as to their effectiveness.

*Please read in conjunction with ECM, SEN and Equal Opportunities policies*

## **PLANNING & ASSESSMENT**

Planning and assessment is an on-going process and should enable pupils to make good progress in each maths lesson and across maths lessons/topics.

It should include opportunities for oral questioning, observations of children at work, marking of work and planned assessment opportunities. Notes and observations should be made, by teachers and T.A's, to add to planning and help inform future planning and teaching.

We use a common planning format that includes share learning objectives through the phrase 'We are learning to...' and whenever possible place the learning in a context by explaining further 'So that...'

Lessons will have Success Criteria (I can statements), which may be shared by the teacher or could be developed by the children themselves during the lesson.  
(See planning and assessment policy)

APP (Assessing Pupils Progress) assessment materials will be introduced and used to help level 6 key pupils (2 higher ability, 2 middle ability and 2 lower ability) in each class/maths set. Other pupils in the class/set will be assessed in line with these 6 key children. This process will help ensure the accuracy and consistency of our assessments, whilst clearly indicating gaps in the pupil knowledge and next steps in their learning. Assessment methods will be regularly reviewed and adapted as a whole school when required.

We will use QCA end of Year tests (Years 2-6) to conduct summative assessments of pupil knowledge and progress. These will also feed into the planning and assessment cycle by highlighting areas for personal/group/class development.

Work is marked selectively, providing written feedback to pupils and including guidance on how to improve their mathematical skills. 'Improvement Points' and 'Challenges' may also be set to help the pupil correct errors or provide an extension task. These are designed to get the pupils thinking about their mathematics.

*Please read in conjunction with policy for planning and assessment and marking policy.*

## MANAGEMENT

### Numeracy Leader's role:

- To lead the development & improvement of mathematics teaching and learning at Hanover
- Teach demonstration lessons & team teach to support colleagues
- Prepare, organise & lead INSET
- Analyse management data with leadership team to help identify development areas
- Observe mathematics teaching and give feedback to teachers and leadership team, identifying any support required
- Attend LEA INSET, feedback to staff

### Monitoring and Evaluation:

Monitoring and Evaluation will be carried out by the Leadership team and mathematics co-ordinator.

It will include:

- Scrutiny of medium and short term planning, assessment
- Lesson observations
- Book Looks and discussions with pupils
- Analysis of test data and papers
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Feedback will be given to individuals and groups of teachers after these processes as appropriate.

**Developed and Agreed by Whole Staff: ... 2008.**

**Date for Review: ... 2009.**