



MATHEMATICS POLICY

Introduction

Mathematics teaches us how to make sense of the world around us through developing our ability to calculate, communicate, reason and solve problems. It enables children to explore, understand, and appreciate relationships and patterns, both in number and shape, in their everyday lives.

This policy outlines the teaching, learning and management of mathematics at Great Missenden School and is based on the new National Curriculum, implemented September 2014. The implementation of this policy is the responsibility of all teaching staff.

Aims

At Great Missenden School we aim for every child to:

- Have a positive and confident attitude towards mathematics.
- Develop the ability to think mathematically and solve problems in a range of contexts, understanding the importance of mathematics in everyday life.
- Be able to ask questions and communicate ideas and experiences with adults and peers, clearly and fluently, using appropriate mathematical vocabulary.
- Have a secure knowledge of the basic fundamentals, such as, number bonds, times tables and calculation methods, to enable quick recall and use of the most efficient methods.
- To persevere and have a willingness to learn from mistakes, without fear of making them

1.0 Teaching and Learning

1.1 Organisation

We provide a daily mathematics lesson of 45 minutes in Key Stage 1 and a daily lesson of 50 – 60 minutes in Key Stage 2. Where possible, links are also made to mathematics within the creative curriculum so that pupils have opportunities to develop and apply their mathematical skills in a variety of contexts.

In Years 3-6, the children are set according to mathematical ability. This enables the teachers to plan more effectively across a narrower range of ability. Grouping children by their mathematical ability is reviewed regularly and depending on ongoing assessments, some children may be moved between classes during the academic year. Any movements are at the discretion of the class teachers.

1.2 Planning

We use Active Learn by Abacus as a basis for our lesson planning. This is an online planning system in which every teacher follows the weekly planning format and objectives. All plans and activities are adapted by each teacher to address their particular class' needs. Final plans are saved on the school's central management system.

Years 2 and 6 are currently following the old mathematics curriculum for the existing SAT tests in May 2015. However, where possible, these teachers are using the new plans and resources, as they often exceed the expectations of the old curriculum. Years 2 and 6 will begin to implement the new mathematics curriculum from September 2015.

1.3 Early Years Foundation Stage

In our Pre School and Reception classes, we teach mathematics through The Statutory Framework for the Early Years Foundation Stage and follow the objectives laid out in the Development Matters and Early Learning Grid.

Abacus is currently developing plans and resources for Reception and these are due online in May 2015.

1.4 Mathematics Vocabulary

In KS1 and KS2, every classroom has a mathematics learning wall with relevant vocabulary displayed and referred to throughout lessons. Children will be encouraged to use the correct mathematical language and terminology to discuss their mathematics and to explain their reasoning.

1.5 Resources

In Foundation stage and where possible in Key Stage 1, the classes should have a well organised mathematics area which is clearly accessible and labelled in order to encourage independence for the children.

Across all classes, resources such as number lines and number squares, relevant to the children's current level of attainment, should be clearly displayed and also available on the children's desks or in their exercise books.

Any Mathematics resources, including teacher's resources and text books, which have the potential for being used on a daily basis, should be kept within each year group. Equipment that supports topics such as shape and space, time, measures etc should be stored centrally.

1.6 Approach to Calculations

A separate policy outlines how we teach calculation methods. This is based on the draft calculations policy supplied by Abacus. This provides guidance and progression in the methods a child will be taught whilst at our school.

1.7 Cross curricular links

Mathematics contributes to many subjects within the primary curriculum and opportunities will be sought to use mathematical experiences across a wide range of activities, allowing children to use and apply mathematics in real life contexts. For example, some children are involved in 'Enterprise' activities, which encourages them to decide how to spend a budget, then create, brand and cost a product or service in order to make a profit. (For example, Mini enterprise, The restaurant project)

1.8 Challenge for all

Quality First Teaching ensures all children whatever their ability are taught within a class group. Tasks are differentiated within each ability group but in line with our policy of Challenge For All, expectations are set high for all of the children, regardless of their ability and no ceiling is put on their ability to attempt a task. Where possible children will be encouraged to choose their own differentiated activity and work at a level of challenge that is right for them.

All children will benefit from the emphasis on oral and mental work and watching and listening to other children demonstrating and explaining their methods. However, a pupil whose difficulties are complex or whose mathematical understanding is behind their expected age range, will be supported individually or working as part of a smaller group during the main part of the lesson.

Extension work will involve more challenging, open ended problems or games to tackle.

1.9 Presentation of work

Children in Pre School and Reception are often involved in practical mathematics activities, where the teacher and/or LSA will make notes and record any comments and/or take photos. Any recording by the child may be on whiteboards or customised worksheets. Any recorded work is then added to their individual learning journal.

Children in Years 1 and 2 record any written learning in A4, 1cm² books.

Year groups 3-6 use A4, 8mm² books unless a child would benefit from 1cm² due to special educational needs.

Any separate work sheets may be trimmed and stuck into books, keeping learning in chronological order, or if more appropriate, kept in a separate, individually named, yellow folder.

All mathematics work is recorded in pencil and a ruler must be used to draw any straight lines. All work must have a margin, short date and a title, which begins with the WALT ("We are learning to..."). The heading and date must be underlined.

All children are expected to use the 'one digit per square rule especially when calculating using traditional written methods.

2.0 Home learning and Parents

The daily mathematics lesson will provide opportunities for children to practise and consolidate their skills and knowledge, and to prepare for their future learning. These will be extended through home learning activities. These activities will be short and focussed and may need to be completed on line or on paper, as directed by the teacher.

Children will also be expected to learn their times tables as these will be tested regularly in mathematics lessons. The school website is a useful source of helpful information for both parents and children

3.0 The Role of the Learning Support Assistant

LSAs are planned for within the teacher's weekly plan. During the class teaching sessions, the LSA will sit near targeted pupils who have been identified as needing extra support or encouragement so that they can participate to the best of their ability and gain the most from each lesson. During the independent or group working part of the lesson, the LSA will not necessarily work with the same individual or group every day, and this will be identified in the teacher's planning. The teacher will make time to converse with the LSA to assess the children's achievement and in some instances the LSA will make specific notes for the teacher. All LSAs will be provided with their own copy of the weekly plan.

4.0 Marking and Assessment

4.1 Marking and Feedback

When responding to the children's work, we provide praise, support, encouragement and feedback. In line with our school's marking policy, we give the children time to respond to SIR (Success, Improvement, Response) marking, which is aimed at moving their learning forward.

4.2 Assessment

Assessments take place at three levels: short term, medium term and long term. These assessments are then used to inform teaching in a continuous cycle of planning, teaching and assessment.

Short term assessments are an informal part of every lesson to check pupils' understanding and give the teacher information, which will assist in adjusting day-to-day lesson plans.

Medium term assessments will take place at the end of every half term and are part of the online planning system. They will assess the objectives covered during that period and will consist of two short papers, i) arithmetic paper and ii) a problem solving and reasoning paper. These tests are in the same format that the children will be assessed in at the end of year 6 (May 2016 onwards). Children will be made aware of their results and will be helped in reviewing areas that they found difficult. It may be appropriate for these tests to be sent home as part of a home learning task.

Long term assessments will take place towards the end of the school year to assess and review pupils' progress and attainment against the National Curriculum descriptors. These will be made through compulsory National Curriculum Mathematics tests in Year 2 and Year 6 until 2015 and supplemented by the optional QCA tests for other year groups. Results from these assessments are recorded on the school's central management system and form the basis of the Teacher Assessment levels.

Teachers will also draw upon their class record of attainment against key objectives and supplementary notes and knowledge about their class, to produce a summative record. Accurate information will then be reported to parents at parents' evenings and in the annual school report and to the next teacher.

5.0 Target Setting

From September 2014, there is now no statutory requirement to assess using levels, however as this is a transitional time, level descriptors will continue to be used until a replacement system is agreed.

Each child will have the level descriptors that they are working towards stuck in to the front covers of their mathematics books. During each unit of work, the children will be alerted to these objectives on their level descriptors and either given the opportunity to self assess against those objectives, or the teacher will assess and date when those objectives have been met.

6.0 Attainment and Progress

Attainment and progress are measured through the assessment process outlined above. Pupil Progress Meetings take place every half term and enable review and discussion of pupils' progress. This information is used to identify those children who are underachieving in mathematics. They will be given additional help and support in class to close the gap.

7.0 Management of Mathematics

The Senior Leadership Team and the Mathematics Co-ordinator are responsible for monitoring the mathematics planning. The governors take an active role in the subject of mathematics and are involved in visits to the school to regularly review the teaching and learning.

7.1 Role of the subject leader

- Ensure that teachers are familiar with the on line planning system and the new National Curriculum and help them to plan lessons where appropriate
- Prepare, organise and lead INSETs, with the support of the Headteacher
- Observe colleagues and review planning regularly and in accordance with the work scrutiny policy.
- Attend training with a view to updating staff on current and new mathematics teaching methods
- Hold parent seminars to inform parents about how we teach mathematics in school
- Liaise regularly with the Governor responsible for Mathematics
- Order resources and be accountable for the Mathematics budget

7.2 Role of the Headteacher

- Feedback to Governors about attainment and progress
- Monitor and analyse targets, SAT's and assessment results
- With the Mathematics Governor, keep the governing body informed about the progress of the New National Curriculum.

Liz Harbord
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This policy will be reviewed again in September 2015 in response to any changes or advice given by the DfE, especially regarding assessment procedures.