



MARYLAND PRIMARY SCHOOL

**Mathematics
POLICY**



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Mathematics Policy

Aims and objectives

Our key objective is for all pupils to develop a positive attitude to mathematics and learn to use it with confidence, understanding and pleasure. The following aims of mathematics are which drive the teaching, learning and development at Maryland:

- To ensure pupils understand that mathematics teaches how to make sense of the world around them.
- To promote enjoyment and enthusiasm for learning through practical activity, exploration and discussion.
- To ensure that all pupils become fluent in the fundamentals of mathematics (eg. mental arithmetic).
- To develop mathematical reasoning using the correct vocabulary.
- To instil confidence and perseverance in pupils when solving relevant real-life problems.
- To ensure pupils are competent when using formal written methods to calculate using the four operations.

Mathematics curriculum

The elements of the revised National Curriculum that require statutory force came into effect September 2014. Maryland have been planning and teaching from the revised curriculum since September 2013. Year-on-year teachers review medium and short term planning and make adjustments as necessary (eg. coverage of particular objectives to cater for a particular cohort, improving the quality of daily lessons).

Within the revised National Curriculum, the areas of mathematics are divided into the following strands:

- Number
- Measurement
- Geometry
- Statistics

Curriculum organisation and planning

Classroom timetables are produced termly for teachers by the Assistant Head. Pupils in each class receive 5x1hour lessons with 2/3 post-lunch slots (focus on arithmetic) lasting 10 minutes each – totalling a minimum of 5 hours 20 minutes of pure mathematics. Targeted underachieving pupils may receive more maths in the form of afternoon intervention, these sessions usually run 10 minutes daily for a period of 6 weeks.

The curriculum delivered in the daily maths lesson is planned for using the revised National Curriculum, this document is therefore the basis of our long term planning. Objectives are lifted from this document and placed on a medium term planning grid. The grid dictates how much time should be spent on each strand to ensure a balanced delivery. Priority is given to the teaching of number. It is the job of the teacher to decide which objectives within each strand are selected – this is based on the needs of the children. It is this grid which then informs short term planning. Weekly/daily planning is completed using a revised format which includes daily on-entry activities, mental maths and articulation (the use of Literacy to embed mathematical learning).

Mental maths

As well as post-lunch slots and on-entry tasks (as pupils enter their maths lessons) dedicated to rapid recall/use of arithmetic, mental maths tests are administered regularly to ensure that the children become familiar with the speed that is required and expected of them for their age when solving calculations mentally. The Deputy Head has developed a '5-a-day' book which promotes mental arithmetic skills. Mental maths homework is set each day from this and guidance has been provided to parents as to how they should use the book with their child to support them at home (as well as its use in school). All pupils have an 'account' with the online mental maths programme, *Mathletics*, that they access at home. They have weekly homework set, but they may choose to compete online with other users as well.

Calculation policy

Teachers plan and teach according to the school's calculation policy which was reviewed July 2013 in light of the revised curriculum. Staffs regularly access this document which is located on the school's system. This document ensures that there is progression and consistency across the entire school in regards to the strategies/formal methods used when solving calculations involving the 4 operations.

Problem solving

Using and applying the maths which is learnt is essential, therefore problem regular problem solving is a priority. Problem solving takes place weekly for each class from years 1 to 6 - this can involve; word problems representing a real-life scenario, practical challenges and those which require logic/strategic thinking. Teachers model to the children how to use the 'bar method' to represent problems pictorially which then informs their jottings and calculations. Problems that are not 'bar method friendly' are also exposed to the teachers and pupils. This method encourages consistency across the school in terms of its approach to solving problems and provides a key learning tool for difficult concepts to be understood and supports visual learners.

Differentiation

The following forms of differentiation ensures that all pupils learn effectively:

- Children are set across each year group according to ability, these groupings can change throughout the year based on teacher assessment
- The lessons delivered are differentiated through: resourcing, T.A/1:1 support, stepped activities and groupings within sets.

- Withdrawal groups have been set up to cater for individual pupils –these pupils have opportunity to learn at a level which is suited to them - these groups are planned for by the postholder who liaises regularly with the teaching staff.
- Teachers produce homework each week which is pitched at different levels according to the needs of the children.

Resources

Equipment/resources are audited annually to ensure effective learning takes place in the classroom. Requests for new purchases are made to the postholder. Pupils in year1-6 (including Reception pupils from April 2014) have access to 'Mathletics' - an online learning tool/website accessible in school and at home (see *Mental Maths* section above). This cross-curricular link of ICT and maths promotes the 'fun factor' which allows pupils to consolidate mathematical skills and knowledge. Children and parents are given a '5-a-day' book which is to be used for 5 minutes daily to practise rapid recall of mathematical facts (see homework below).

Homework

Differentiated homework is set weekly which consists of at least 1 written piece, 1 online task and a daily schedule of mental maths from the '5-a-day'. The homework set is recorded in every child's homework diary which is taken home for parents to sign. The homework set is to consolidate the learning which has taken place in school. Pupils are encouraged to participate in maths games/puzzles/critical thinking activities at home.

Marking

Books are marked regularly (more so for the borderline achieving pupils) and given back to the children so that corrections can be completed and misconceptions addressed. Children are encouraged to peer mark and provide feedback; this is limited to a maximum of twice a week.

Assessment

Plans are evaluated daily to highlight aspects which worked well in terms of what enabled good progression and also what could be improved for next time when the lesson is delivered. Notes can also be made on the daily plan with regards to particular pupils or aspects of learning to inform future planning.

Teachers and children use targets which are pasted into pupil exercise books to assess against; the evaluation triangle is used to state progress made against each target. These are updated throughout the term, either after a short assessment task or once the teacher is confident the learning is secure.

Formal assessments are carried out twice a year, once in November and again in May. The test papers are filed in the Current Children's Records files on a rolling year basis in line with the Assessment Policy.

Record Keeping

Formal bi-annual assessment levels are to be recorded on the cumulative tracking sheet in the Class Assessment Folder. Class teachers analyse the data against criteria and year group partner's data to inform them of progress against targets, and the progress of identified groups of children. From May 2014, teachers will update assessment grids after each of the formal assessments which will show the areas of maths which need to be developed based on the needs of the pupils in that particular cohort – this will then inform medium term planning for those children.

Reporting

A written report is sent to parents in Term 6 in which progress in mathematics is formally reported. Staff report interim progress to parents through parent evenings. Progress can also be reported during other appointments requested by either the parents or the class teacher. Progress from May 2015 will be reported to parents in %, not national curriculum levels, which are now defunct (except for Years 2 & 6 until July 2015).

Parents

The support from parents is paramount when ensuring pupils make the required progress. Parents are periodically informed of the school's aims in the form of annual maths evenings, parent workshops, through the newsletter produced each month and the school website.

The Role of the Co-ordinator

- . The co-ordinator, alongside the senior leadership team, have responsibility for monitoring of planning and assessment.
- . Pupil's books will be monitored and Numeracy lessons observed in line with the school Monitoring Policy.
- . Equipment/resources will be ordered and organised.
- . The co-ordinator will be available to give advice on resources, curriculum content and delivery of lessons as necessary.
- . Curriculum updates e.g. information from DfES or courses attended will be disseminated when available.
- . INSET will be organised for staff in line with the school SDP.
- . Staff will be advised of appropriate courses that they may wish to attend.
- . Year 2 and Year 6 staff will be given guidance on how to prepare children for the end of Key Stage tests.
- . The co-ordinator will report to governors in oral or written form.

Review

This policy will be reviewed in line with the school SDP.

Reviewed by: Darren Lock