

ROMAN ROAD

Policy for Mathematics

Reviewed: May 2021
Next Review: May 2023

This policy reflects the values and philosophy of Roman Road in relation to the teaching and learning of Mathematics. It sets out a framework within which staff, both teaching and non-teaching work. It gives guidance on planning, teaching and assessment.

This policy should be read in conjunction with the National Curriculum programme of study for Mathematics and the Framework, which gives detail of what children in different year groups are taught.

Audience

This policy, having been presented to and agreed upon by the whole staff and Governing Body is distributed to:

- All teaching staff
- School governors

A copy of the policy is kept in the head teacher's office for the school's General Advisor(s) and for Inspector(s).

Subject Aims

Mathematics is a core subject within National Curriculum. The aims for Mathematics are:

- Consistency with school philosophy and Newham Borough following Curriculum Policy Guidelines
- To take into account the National Curriculum Statutory Guidance for Mathematics and the schemes of work tailored created and tailored for our school.
- To fulfil the requirements of National Curriculum Programmes of Study and Attainment Targets for Mathematics
- To promote positive attitudes towards mathematics and an enthusiasm for mathematics in school
- To use mathematics to analyse and communicate information
- To develop mathematical understanding through practical tasks, enquiry and experiment
- To provide breadth and balance of mathematical activities for all children
- To create an awareness of the relevance of mathematics to the whole curriculum
- To provide a differentiated mathematics curriculum to meet the needs of all the children through the continuity of experiences

- To ensure a progressive development of mathematical concepts, knowledge, skills and attitudes

Work in Mathematics follows the structure of the National Curriculum, being based on the Programmes of Study and Attainment Targets Level Description.

Children at Roman Road follow the National Curriculum for Mathematics and work at levels appropriate to their ability. It is expected that most children will achieve expected level by the end of Key Stage 1 and Key Stage 2 and the more able to reach greater depth. Children's progress is tracked using an assessment system.

A new scheme of work 'White Rose' was introduced in December 2020. The scheme lends itself to a mastery led curriculum, fits in with SATs and provides opportunities to build reasoning and problem solving within every lesson for effectiveness in children making good levels of progress and attainment.

In the teaching and learning of Mathematics, we can identify a number of objectives which will enable children to learn through a CPA (concrete, pictorial, abstract) approach, apply knowledge and skills, establish a solid understanding of key concepts, build on reasoning skills, solve problems of a practical and investigative nature and communicate their ideas to others using appropriate mathematical language.

The children will:

- Experience a balanced range of mathematical activities as an integral part of the whole school curriculum
- Have opportunities to develop basic mathematical skills, concepts, attitudes and knowledge appropriate to the development of the child
- Have opportunities to acquire, practise and develop mathematical skills using a variety of tools including ICT.
- Have opportunities to work in a variety of ways, class, group, individually, depending on the task.
- Have opportunities to build reasoning and problem solving within every lesson.
- Have opportunities to use mathematical language
- Have access to practical tasks
- Be able to perform basic operations and apply them in a variety of contexts

Curriculum and School Organisation

In order to achieve these aims and objectives, the teaching of Mathematics is organised into strands with key learning objectives. These strands relate to specific mathematical concepts, skills and knowledge.

The National Curriculum Mathematics Programme of Study is in place from Year 1 to Year 6 with Early Years following the Early Years Foundation Stage.

The aim of the National Curriculum for Maths is that every child gains mastery in the programme of study covered. The expectation is that teachers build and deepen on the knowledge acquired for that year group and manipulate different situations whereby the child would be able to apply their knowledge in any context.

The termly overview for each year highlights which topics are being taught during that term and the coverage within them. The scheme consists of broad and balanced objectives with ideas to build on and ideas to move the children forward to gain mastery. Within the scheme of work, learning activities are sequenced to ensure progression. This may be by means of direct teaching to the class or small intervention groups led by experienced teachers.

Mathematics is taught as a separate subject and is planned and timetabled in each year group five times a week. In addition there is also skills/target time/times to climb every week.

The National Curriculum objectives and our scheme of work is used as a resource for teaching of Mathematics. These objectives are then used to plan the lessons which are annotated on a daily basis as evidence of tailoring lessons to suit the needs of all the children. All children have written homework each week as well as 'times to climb'.

For the calculation policy please refer to **Roman Road Primary School** Mathematics Written Calculations Guidance policy and the calculation policy from White Rose.

The National Curriculum is a number heavy curriculum. As a result, maths targets focus purely on number. They are broken up termly and each class focuses on five targets per term. Teachers regularly assess to see if children have met their targets. Evidence of targets being met is shown in books where teachers date targets and evidence alongside the targets for each child.

All children also have class targets to work towards in each term. The targets are initiated through the outcomes from the termly Pupil Progress Meetings and test analysis. These targets are given focused teaching and then regular review through maths lessons or skills time.

A 'Times to climb' initiative has been running for the past three years for years 1 to 4 where children are encouraged to learn their number facts, multiplication and division facts. Each year are given targets to meet and children have a weekly recall test to see how they are progressing. Scores are recorded by the class teacher and stored centrally. Planning and evaluation for Mathematics takes place on a weekly basis by the class teacher. This is recorded in the short-term plans. Furthermore all groups like EAL, SEN and different abilities are catered for within every lesson. These plans are then submitted on the M.L.E (Managed Learning Environment) visible to all and sundry and the annotated plans are

submitted to the Assistant Head and phase leaders for regular analysis. Teachers then receive planning feedback appropriately.

Mathematics is led by an Assistant Head with a team of two phase leaders. Any decisions regarding Mathematics are made by the Mathematics team.

Time Allocation

The time allocated for the teaching of Mathematics is based on the national recommendations. In line with these recommendations, 126 hours of teaching time in one year takes place at Key Stage 1, and 126 hours at Key Stage 2.

The teaching of mathematics is prescribed to one hour a day. Additionally, each class has a Mental Maths slot once a week and a Target/Skills slot every week.

Planning

See the standard policy statement on Whole School Planning.

Class Organisation and Teaching Style

At Roman Road class teachers are responsible for their own class organisation and teaching style in relation to Mathematics, but at the same time ensure these reflect the overall aims and philosophy of school.

Within classes children are taught:

- As a class – there are occasions in Mathematics when it is appropriate to teach the whole class.
- In groups – these may vary in structure. Children are grouped by ability. Years 2 to 6 are streamlined into three ability groups to assist in progress and attainment. Teaching groups gives the teacher the opportunity to introduce topics or mathematical concepts to smaller structured groups of children. This can be used to inform further reinforcement work and it also gives teachers the opportunity to refine the tasks and evaluate tasks set on a daily basis. Group work provides children with opportunities to work together, share ideas and learn from each other. The third group also has a teaching assistant to support the children.
- Individual teaching and learning also takes place. This allows the child to work on individually prepared tasks with work matched to each child's own development. It is important to encourage children to work individually on occasion, especially on assessment tasks and in preparation for SATS.
- Throughout all aspects of class organisation and teaching style, every effort is made to differentiate work so that it is matched to the individual or group. Work is differentiated a minimum of two ways within an ability group and three ways within a whole class.

Assessment

Mathematics is assessed in a variety of ways:

- Observations of child or group
- Discussion with children about their task
- Work in books
- Monitoring of planning
- Monitoring of books
- Learning walks
- Children's own evaluation of their work
- Teacher assessments
- Test results
- Against the termly targets from PPM.

These assessments:

- Inform future planning
- Provide information about individuals or groups
- Provide summative information
- Provide information for parents as to what further support their child requires at home
- Provide data to choose the next targets

These assessments are carried out throughout both Key Stages and are the responsibility of the class teacher with support from the Mathematics team.

Reporting

See Whole School Reporting Policy for details.

Monitoring

Monitoring is carried out by the Mathematics team. Weekly plans are monitored in detail once every half term. The planning is scrutinised to see whether there is a clear learning journey that takes into account children's prior knowledge, skills and understanding. Continuity and progression is key. Activities should be stimulating, appropriate and challenging for the year group.

The Mathematics team carries out a book scrutiny for each class every half term. The teacher is provided with verbal and written feedback and the Head/Deputy Head/Assistant Heads are informed of any issues that may arise.

Progress in addition, subtraction, multiplication and division are monitored by the Assistant Heads termly. Each year group is provided with verbal and written feedback.

Additionally, a cycle of lesson observations takes place. This rota is created by the Deputy Head. The Deputy Head/Assistant Head/Phase Leaders will undertake the required observations. Verbal and written feedback is given to the individual teachers. Copies of the observations are given to the Deputy Head, class teacher and the Mathematics lead.

Learning walks take place regularly.

Leader's Role

Sapna Mahmood is designated as the Mathematics Leader. She works alongside Sawaira Safdar (phase leader for years 1,2,3 and Nooreena Hossenbux-Ali (phase leader for years 4,5,6).

She supports all the staff in Mathematics. This can include:

- Advice and specific support
- Help with teaching
- Help with marking
- Help with planning
- Writing a yearly Action plan and Subject Leader's Report
- INSETs
- Managing budget and monitoring resources
- Leading Maths Pupil Progress Meetings
- Managing 'Times to Climb'
- Managing interventions
- Parent workshops/meetings

Resources and Accommodation

A variety of Mathematics resources are available in school. These include:

- White Rose 'scheme of work'
- Teacher reference books
- Photocopiable resources

- Practical Mathematics equipment
- Topic books
- Concrete and pictorial resources
- Inset materials

Resources are shared amongst year groups or phases. Some equipment is located in each class. Most resources are kept in a designated classroom. Mathematics reference books are kept in the classrooms.

The Mathematics Leader is responsible for purchasing resources, maintaining them, monitoring their use and organising their accessible storage. This is reviewed annually. Staff are consulted and asked to submit lists of any resources required.

The purchase of resources is planned each year by the Mathematics Leader. There is a set Mathematics budget each year.

INSET Provision

INSET needs are identified through:

- School development planning
- New developments
- Curriculum review and evaluation
- Individual needs

These are prioritised by the Headteacher.

See Whole School Policy on INSET and Staff Development.

Equal Opportunities, Special Needs & Providing for Children with English as an Additional Language

All teaching and non-teaching staff are responsible for ensuring that the pupils in their care, irrespective of gender, ethnicity, language group, disability, religious beliefs, social circumstances and ability, have equal access to the whole curriculum and equal opportunity to undertake all aspects of work in Numeracy in order to make the maximum progress.

We aim to do this by

- Taking the individual needs of children into account
- Using language which is appropriate to each child's ability
- Choosing books, worksheets, posters, etc., which display positive images
- Choosing resources which are user friendly and easily accessible to all children

- Showing in our planning how tasks are differentiated and targeted for children of differing abilities
- Ensuring that recording and assessment is fair and gives equal value to different activities

See Whole School Policy on Equal Opportunities.

The provision of equal opportunities in Mathematics is the responsibility of the class teacher. General monitoring is the responsibility of the Deputy Headteacher and Assistant Headteachers.

Cross-curricular Skills and Themes

The school's Curriculum Overview provides information relating to opportunities for developing cross-curricular skills in English and Maths as well as in the use of ICT

Evaluation

Evaluation and review of the policy for Mathematics and any schemes of work take place on an annual basis.

Throughout the year the whole staff are encouraged to feed back information and ideas to the Maths Leader. This may include comments on work the children are undertaking, comments on the availability and suitability of resources and any other relevant comments about the overall structure of the Mathematics Schemes of Work.

This policy was reviewed by the Mathematics Leader, Sapna Mahmood May 2021.

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