

Maths Policy

Chisenhale Primary School



Learning Together for a Better Future

September 2016

Chisenhale Primary School

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Approved by governors:

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Chisenhale Primary School
Successful learners, confident individuals, responsible citizens.
Maths Policy

Introduction

This policy outlines the teaching, organisation and management of mathematics taught and enjoyed in Chisenhale Primary School.

The school's policy is based on the National Curriculum 2014 and the planning documents agreed on for use by all staff.

Our Aim

This policy is set within the context of the school's overall vision, aims and policy on teaching and learning. Mathematics taught at Chisenhale should also aim to promote a love and passion for the subject of mathematics and allow all children to fulfil their academic potential and go on to be successful in the future. All children should be given the opportunity to 'master' the curriculum.

Why study mathematics?

Mathematics at Chisenhale supports the main purposes of the National Curriculum:

"Mathematics is a creative and highly interconnected discipline that has been developed over centuries, providing the solution to some of history's most intriguing problems. It is essential to everyday life, critical to science, technology and engineering, and necessary for financial literacy and most forms of employment. A high-quality mathematics education therefore provides a foundation for understanding the world, the ability to reason mathematically, an appreciation of the beauty and power of mathematics, and a sense of enjoyment and curiosity about the subject."

[The National Curriculum 2014: Purpose of Study]

When children leave Chisenhale they should have:

- *become fluent in the fundamentals of mathematics, including through varied and frequent practice with increasingly complex problems over time, so that pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately*
- *the ability to reason mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language*
- *strategies to solve problems by applying their mathematics to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions*

[The National Curriculum 2014: Aims]

Teaching Maths

Mathematics will be taught on a daily basis in individual year groups. Within these lessons there will be a balance between whole-class work, group teaching and individual practice.

Children will also get many opportunities to practice a range of different skills including mental skills; written calculation; and problem solving and reasoning.

A typical lesson will include:

- mental calculation practice
- recapping of key skills or non-negotiables
- mathematical discussion
- Teacher input (modelling and explanation) and pupil activity (group, pair or independent) around a main learning intention
- an opportunity to apply skills to a problem or investigation
- A chance for children to reflect on their learning

Sometimes 'a lesson' will take place over more than one day.

Links will also be made to mathematics where appropriate and possible within the wider curriculum allowing children the opportunity to practice their maths skills in a range of contexts.

At Chisenhale, we believe all age groups should be learning through the use of concrete and pictorial representations before moving into abstract concepts and so children should have access to a range of practical resources during mathematics.

Planning

- Planning begins from a thorough understanding of the children's abilities and knowledge taken from a range of assessment methods (formative and summative) combined with high expectations for all children.
- The Borough assessment documents will be used alongside the White Rose planning documents to inform medium term planning. This will ensure a thorough coverage of the new national curriculum and a logical and progressive teaching sequence.
- Short term planning will have well-pitched learning intentions with clear steps to success demonstrating what is needed for the child to achieve that learning intention. Teacher's individual planning will display a clear and logical progression in learning and show the '*interconnectedness*' of the subject.
- Teachers will adapt their planning through the week
- Where children are significantly below age-related expectations, learning will be differentiated accordingly allowing children to close gaps with extra support where necessary and access to supporting equipment. This may mean that some children will require separate learning intentions.
- Where children are significantly above age-related expectations, lessons will be differentiated effectively to allow them to gain a greater depth of knowledge. Documentation and assistance will be provided to staff where necessary to support the teaching of mathematics at a deeper level. Children should not be moved onto the learning intentions of a higher year group as a means of extension.
- Whenever possible, children will be given opportunities to develop their reasoning and problem solving skills including mathematical communication within all maths lessons. Problem solving includes: word problems; 'big problems'; and maths within maths. Children will be provided with the opportunities to develop their skills within all areas of problem solving. Teachers will provide at least one opportunity to work on a 'big problem' every half term which may take more than one lesson to complete and will involve a greater depth of investigation.

- For written and mental calculation, all staff will follow the school's Calculation Policy.

Recording of work

Mathematics work can be recorded in a variety of ways appropriate to the learning intention and activities taking place. Pupil's work will be presented in books in accordance with the school's Handwriting and Presentation policy. These may include:

- Formal written work in pupils individual books
- Group worked carried out on large paper
- Whiteboard work
- Photos and annotations made by the teacher or the pupil

Assessment

Because of changes to assessment procedures at a national level, assessment at Chisenhale is going through a transitional phase and staff are trialling a range of assessment methods for mathematics under the supervision of the maths lead and SLT.

- Assessment for learning (formative) should take place in all maths lessons in a range of different ways including: observation; questioning and discussion; and bookwork.
- Pupil work should be marked in accordance with the school's marking policy.
- Pupils will be given the opportunity to provide their own feedback through self marking recorded in their books with blue pen.
- Summative assessment will take place at the end of each half term using a combination of written assessments (White Rose and Testbase) and teacher assessment using the Tower Hamlets Maths Toolkit.
- All assessment will inform planning.

Each year group will have a set of targets taken from the National Curriculum for children to work towards throughout the year. These shall be considered to be non-negotiables.

Parental Involvement

At Chisenhale, we believe that parental involvement is key to reaching a child's potential. With this in mind workshops will be run for parents on key skills and key documentation such as the calculation policy will be available to parents. When homework is sent with a specific method in mind, a cover sheet will be provided to give guidance on how parents can support their children.

Display and Resources

Access to practical resources is essential to allow children to build a strong understanding of key mathematical concepts. All classrooms will have crucial equipment to allow children to opportunity to use it as and when they need to. It is our aim to teach children how to choose appropriate equipment to support their learning and that by the time they leave Chisenhale they will be confident in deciding what will help them as independent learners.

As well as classroom equipment, other mathematical resources linked to specific mathematical areas such as measures will be stored in a central location to allow easy access for all staff. It is the responsibility of all staff to ensure that equipment is looked after

and stored correctly and that any problems or gaps in equipment are reported to the maths lead to allow them to be replaced.

All classrooms should have a mathematics working wall displaying key vocabulary and supporting the mathematics being taught. These will be used in accordance with the Learning Environment Expectations and Guidelines and the Mathematics Expectations and Guidelines.

Mathematics Interventions

At Chisenhale, we believe all children can achieve a good level of mathematics. Where children are below the age-related expectations and classroom differentiation is not appropriate, children will be supported through intervention. The phase leaders and SENCO will decide who will receive intervention in discussion with class teachers and those running the intervention.

Interventions provided include:

- First class@ number
- First class@ number 2
- Success@ arithmetic

Intervention may be run by teachers or trained support staff in small groups outside of daily maths lessons. The aim of intervention at Chisenhale is to provide an intense, short course of lessons to allow the pupils to close gaps and catch up with their peers and are not intended for the long-term.

Some children may require a more intense intervention taking them out of the mathematics lesson to provide them with 1:1 support.

CPD

Professional development is key to ensuring mathematics is taught effectively especially in the light of the changes to the national curriculum and assessment methods. Staff will receive appropriate professional development where necessary and any training staff attend will be fed back to other members of staff.

The Maths Lead

The role of the maths lead includes:

- write, monitor and review the mathematics action plan
- monitor the teaching and learning of mathematics across the school to ensure coverage of the national curriculum
- ensure teachers are familiar with planning documents and support in planning where necessary
- Prepare, organise and provide INSET for staff based on staff feedback and monitoring outcomes
- Work co-operatively with other curriculum leaders
- attend INSET provided by outside agencies and feedback to staff
- keep up to date with progression in maths teaching
- audit, organise and order resources

Policy to be reviewed October 2017