

Woolenwick Junior School Maths Policy V1

Policy Name	Maths Policy
Created by	MK
Responsibility of	Improvement
Reviewed by	
This Review Date	
Next Review Due	Sept 2018
Cycle	3 year
Approved by Full Governing Body / Sub-committee / individual governor (please place name in box)	Sub-Committee
Policy will be published	Website

Version History

Version	Amendments	Date	Author
V1	Original document	Sept 2015	MK

The main principles of teaching mathematics at Woolenwick Junior School are:

Pupils should be:

- * encouraged to engage and enjoy enthusiastically in their mathematics learning.
- * actively involved in experiencing the mathematics curriculum.
- * encouraged to make links to real-life and see the benefit of learning mathematics.

Aims and Objectives

- * To teach mathematics in line with the new National Curriculum (introduced in September 2014).
- * To develop a progressive understanding and fluency of mathematical concepts, skills and attitudes.
- * To ensure that pupils have access to a broad and balanced mathematical curriculum and are given opportunities to deepen their understanding.
- * To create a stimulating and exciting mathematical environment.
- * To encourage a positive attitude towards the learning of mathematics and the enthusiasm for the subject.
- * To promote an understanding of mathematics within real life situations.
- * To develop the correct use of mathematical vocabulary.
- * To ensure equal opportunities.
- * To develop pupils' understanding of mathematics through practical tasks, problem solving, real life situations and investigations, ensuring they are given opportunities to use and apply their skills.

* To encourage children to use mental strategies to approach a problem in the first instance.

Organisation

* The time allocation for mathematics is 5 hours per week. This time is spread across the week to ensure an hour's mathematics lesson each day.

* In addition to this, there are three 20 minute Big Maths sessions three times week where children focus on developing mental maths skills. There is also a "Times Tables Champs" test fortnightly, with a learning and recall session each week, focussing on pattern spotting.

* Maths and Big Maths are both planned using the school templates, including whole class, group, paired and individual work.

* Big Maths is a wave 2 intervention (Success 4 All) provided to all children. It is a scheme of work designed to improve mental maths and fluency within the mathematics curriculum. Children move between groups after showing two full mark test results. The Mathematics Leader analyses data to group children for Big Maths. These groups are reviewed at the end of each term.

* Lessons should include modelling and explanation by the teacher and pupils, practical activities, practise activities, mental maths opportunities, maths games, computing opportunities and use of the interactive whiteboard, problem solving and investigation activities. Not all of these have to be used in one session but should be evident over a series of lessons.

* We use two books to capture learning in mathematics. The children are provided with a yellow covered, square paper book and a blue covered, plain paper book. The yellow book is named 'Maths book'. This is where children will practise skills (i.e. addition on a number line) usually after a lesson has been heavily structured and modelled. The blue book is named "Maths Explorer book". This is where children carry out learning that embeds, develops and enhances their understanding after they have practised a skill in their yellow book. The Maths Explorer book should be the most heavily used book.

* Various published and online schemes may be used, although these are heavily modified and differentiated to meet the needs of individual classes.

* Teaching assistants are used to support mathematics where available. This involves giving support and guidance to small groups or individuals.

* Senior Teaching Assistants are used to teach small maths groups and provide 1:1 or 1:2 support.

* WAVE 3 intervention strategies are in place to support children with SEN in mathematics. This is monitored by the Mathematics Leader and the SENCO department.

Approaches to teaching and learning

* The application of the three-part lesson includes an oral and mental starter, a main teaching activity and a plenary, although there is flexibility in this structure (particularly for more experienced practitioners).

* VAK teaching and learning styles are catered for in planning.

* There is a high profile of direct interactive teaching to the class, small groups and individuals.

* Children are encouraged to share their mathematical thinking with the teacher and/or with other children. They are encouraged to explore and explain their own methods of working. This learning will require children to really unpick this through talk and written work (i.e. concept cartoons, creating steps to success, correcting the teacher's learning, etc).

* There is a strong emphasis on:

- speaking and listening, including questioning and "Talk for Maths".

- encouraging deeper understanding and strong dialogue by asking 'What do you notice? What is the same? What's different?'

- the development of mental calculation strategies and developing fluency. The children are encouraged to use 'what you know' to 'find out what you don't know'. Children are encouraged to use jottings alongside mental calculation.

- children developing their using and applying skills by exploring, referring to and using the maths powers.
- * Maths powers (Conjecture and Convince, Imagine and Express, Specialise and Generalise, Organise and Classify) should be built onto plans and used within lessons. These allow children to really develop their use of mathematics and their understanding of it. These are displayed within their passports and the children should be able to refer to them easily.
- * Work is differentiated with all pupils engaged in mathematics relating to a common theme. There should be flexibility within the differentiation and a child may move freely within a lesson or over a series of lessons.
- * Mixed ability tables in maths is encouraged within the school.
- * Providing choice for challenge is also encouraged – this is where children can choose their level of learning and are allowed to review their choice and change it during a session. The adults within the classroom should take a strong part in overseeing this and advising children appropriately.
- * For every mathematics lesson, a WALT should be set and shared. Where applicable, steps to success should be produced (with the class support) and displayed.
- * Every classroom should have an “active” working wall. The working wall should be added to daily and should display key vocabulary, steps to success, images, and links to other learning and in real-life. Children’s work can be added to the working wall in addition to teacher modelled work. The working wall should reflect the class’ learning journey for the unit of work.

Planning

- * Teachers are expected to create an overview of intended learning for a term, prior to the term starting. This should be shared with the Mathematics leader.
- * The overview of learning should be based on the National Curriculum objectives and based on each classes QLA (Question Level Analysis) and the teacher’s assessment for learning.
- * Short-term planning gives detail of lesson-content and how it’s being taught. This may be applied to the three-part lesson structure, or adapted as necessary. The designated planning teacher should only produce a skeleton plan (in consultation with their year partner). The skeleton plan should then be built on/adapted by the class teacher to suit the needs of their class.
- * The short-term plan should identify TA support, differentiation, required resources, objectives take from the National Curriculum, key questions, using and applying opportunities/maths powers and a “by the end of the unit” statement. Key children (invisible girls or boys) should be named and targeted on plans.
- * Teachers should monitor, amend and annotate their plans daily.

Assessment Cycle

- * At the end of each term, teachers submit a teacher assessment, with a ‘phase’ level based on the HFL (Herts For Learning) assessment scheme. The judgement is informed by:
 - observations made during the lessons
 - teacher questioning
 - discussions with other members of staff
 - discussions with pupils including guided sessions
 - marking written work
 - tests taken during assessment wheel.
- * Assessment is recorded daily on short-term plans and used to inform planning and next steps.
- * Learning books are marked regularly and where a significant piece of learning is taking place, they are marked following the school’s marking policy. Purple comments should reflect the WALT and Green For Growth comments should be given appropriately.
- * Progress in the books should be evident.
- * To support identifying progress and to allow lessons to be pitched appropriately, a pre and post-assessment task must be carried out prior to and after a unit. The pre-assessment provides differentiated questions around

the units focus (i.e. subtraction) and must be used to influence planning and to ensure children's needs are met correctly. This supports ensuring pitch and challenge is appropriate to all children. These are printed on coloured paper (green-challenge 1, yellow-challenge 2, red-challenge 3) and the children should be given the opportunity to choose their level and move freely between them. For the post-assessment task, the same questions are then asked, and printed on the same colour paper as the pre-assessment task. If additional levels of challenge are needed blue and purple paper can be used (blue-challenge 0 and purple-challenge 4). Marking of the post-assessment should reflect on progress since the pre-assessment task. Both of these should be done in their Maths Explorer book.

- * All children receive a learning passport at the start of the year. The children should receive a passport target which supports the development of the child and matches the units objective. The teacher and teaching assistant should then look for evidence, and discuss this with the children, to mark off the passport target as they achieve it.

- * Passport targets are pre-written and follow the new national curriculum. Children should only be given targets which match the age-related expectation they are working to.

- * A written report, which sets appropriate targets, is sent annually to parents/guardians.

- * Parents/guardians are invited to attend consultation evenings and may discuss their child's progress at other times.

- * Eight pupils are identified in each class as "APP children" (Assessing Pupils' Progress). These are across the ability range. Each term standardisation and moderation is carried out. This information is kept in APP folders and stored in teachers' classrooms. It is monitored by the Mathematics Leader.

Resources

- * Each class is resourced with a selection of maths equipment. Resources are stored in a set of colourful drawers in each classroom; these are the same throughout the school, including in small learning rooms and the Learning Zone.

- * Each classroom has a SMART board which gives a wealth of maths resources from the internet, including interactive games, and a visualiser for modelling mathematical concepts and calculations.

Presentation of work

- * Work is presented through discussion, recording in individual books (yellow and Maths Explorer book), whole class/group recording, graphs, tables, pictures and models.

- * Children work in pencil, unless asked to work otherwise.

- * Children use a ruler to draw lines in mathematics.

- * All work is dated.

- * Each piece of work has a WALT (We Are Learning To) as a title.

- * A success criteria may be provided to stick in books.

- * In yellow books (squared paper), children should use the "one number per square" rule.

- * Rubbers should only be used to correct pictures, graphs and diagrams. Although "editing" (pink) pen use should be encouraged rather than rubbing out.

Differentiation, Gifted and Talented and S.E.N.D.

- * Children on the S.E.N.D. register may have extra specific learning targets for mathematics (additional to their passport targets).

* All children have access to the mathematics curriculum. To ensure the needs of all children, including gifted and talented are met, differentiation is addressed by:

- Varying the task
- Teacher intervention
- Adult support
- Expected outcome
- Variety, complexity and modification of resource
- Grouping strategies
- Extension activities

Homework

* Children receive weekly homework for mathematics. In year 5/6 this is through a Learning Log activity. In year 3/4, children receive an appropriately levelled maths game.

* Children are expected to practise their times tables at home.