

Woodmancote School

Mathematics Policy

Designated Members of Staff: Mr R Evans, Mrs C McCormack, Miss A Waters

Woodmancote School firmly believes that a good understanding of all aspects of maths is developed using a 'mastery approach' in the teaching and learning of mathematics.

"Mastery learning is a specific approach in which learning is broken down into discrete units and presented in logical order. Pupils are required to demonstrate mastery of the learning from each unit before being allowed to move on" (Final report of the Commission on Assessment without levels, September 2015).

Aims

Woodmancote aims to develop 'Mastery learning' through promotion of key principles of learning within Mathematics; these principles being: fluency, variation, coherence and mathematical thinking.

Within sessions, children will be provided with time to recap on prior learning, explore and rehearse new concepts and deepen their understanding with these concepts in a variety of ways (application, discussion, representation, explanation etc.). Open ended tasks and challenges will be implemented where possible instead of worksheets to allow children to challenge themselves and control their own learning. Learning will be matched to the individual needs of the children, progress at an appropriate pace depending on the security of the learning and maintain an appropriate level of challenge for all.

Planning

- Guidance from the National Curriculum objectives for maths and EYFS framework is used to inform planning.
- Teachers use the Woodmancote School maths overview to form medium term plans and ensure coverage of all objectives.
- Teachers plan for short term units of work according to objectives. Each lesson is adapted daily according to the needs of the pupils.

Teaching

All teaching aims to deepen the understanding the children have of key mathematical concepts. Within a session, children progress from exploring a specific problem (based on the concept being taught) through a number of tasks matched to their year group stage that relate to the same concept. Once the children have explored and embedded a concept within their individual stage of learning, they then have the opportunity to deepen their understanding of this concept. This is achieved using a variety of application tasks, problems and questions. Children learn together, and any groupings that emerge are fluid and change depending on the progress of the children within a session, the assessments being made by the teacher and the self-assessments conducted by the children. Mental proficiency (Arithmetic/Bonds and tables) is taught discretely at the beginning of a

session and provides children with the opportunity to rehearse, develop and embed their knowledge of [key mental maths skills](#). Over the course of a year, key concepts are revisited to provide children with the opportunity to further embed and progress their learning.

Teaching and Learning

- Throughout the school children are taught within the realms of their ability, with support provided for those who struggle and depth provided for rapid graspers.
- A range of teaching strategies are used that provide conceptual to procedural learning. This is done through either whole classes learning together or appropriate ability groups, using concrete objects to develop structure in maths followed by pictorial representations leading to formal written methods.
- Activities are focused on developing problem solving skills and deepening understanding by providing a range of low ceiling, high threshold tasks, which look at the mathematical concept from a variety of angles. For example – empty box problems; what is the answer not?; justify your answer; explain your answer; convince me that this is correct; what is the odd one out?
- Throughout the school, a range of stimulating and appropriate resources are used, including ICT and practical resources.

Assessment and Record-keeping

- Assessment will be evident within every session in order to determine when and which children require progression, support or additional time to fully understand a key concept.
- Formative assessments made within sessions will then be used in conjunction with other evidence such as learning in books, pupil responses during questioning, extra challenge responses and evidence from tests to update statements on Target Tracker (TT). Additionally, further methods of assessments such as Testbase, Big Maths and BAM (Build a Mathematician) tasks may be used to validate judgements made.
- Statements on TT should only be highlighted blue when there is clear evidence to suggest a child has fully understood the concept in question. Standardised tests (PUMA) should only be used to validate the evidence gathered and should not be used as the main source of evidence.
- Pupils are encouraged to evaluate and assess their own progress by responding to feedback and addressing misconceptions pointed out by the teacher.
- Where appropriate, unit plans are annotated with the assessment information to inform future planning and teaching.
- A range of pupils' work is collated (see Subject Leader's File) to create a bank of evidence to illustrate work at different levels.
- An overall age-related judgment based on information taken from Target Tracker is made at each Assessment Window, four times a year.
- The overall level judgement is tracked on SIMs to provide a Year/Class tracking grid and evidence of pupil progress in numeracy.
- Teachers conduct regular moderation with their teaching partner as well as teachers from other year groups.
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Resources

- Central and class resources are regularly maintained.
- Central resources (including ICT software and games) are kept in the Maths resource cupboard and in classrooms.

Home-School Relationships

- We believe in establishing a strong home-school link from the child's earliest days in school. Initially, the Reception staff meet with parents to explain our approach to numeracy and to suggest ways in which parents can support their children at home.
- All staff explain objectives and activities to parents via the termly curriculum newsletters, parent-teacher consultation evenings, curriculum evenings and Home-School diaries/Class Dojo or informal appointments.
- There is a library of games and activities that are available in school for parents to use at home if desired.

Homework

- KS1 aim to send home one piece of differentiated numeracy homework per term.
- KS2 set homework each week (see Homework policy) which consolidates or applies skills learnt in school during the week.

Monitoring and Evaluation

This policy was reviewed/updated in:

March 1995

September 1996

July 1997

March 2001

October 2001

February 2003

May 2006

February 2010

January 2016

April 2017

Date: 04 April 2017

Signed (Chair)

Review: April 2017