



Greenholm Numeracy Policy

'At Greenholm, we want to nurture a lifelong passion for Numeracy.'

AIMS OF MATHEMATICS AT GREENHOLM

- To develop a confident and positive attitude by encouraging children to see mathematics as an enjoyable and satisfying experience through fluency, reasoning, problems solving and practical relevance in everyday life through a mastery curriculum.
- To provide the opportunity for children to develop the practical skills and understanding of concepts, facts and operations as outlined in the National Curriculum Programmes of Study for Mathematics through the Mastery approach, which includes pupils being taught through concrete, pictorial and abstract (CPA) methods.
- To help children observe and understand the patterns and relationships which are the heart of Mathematics.
- To encourage the use of Mathematical language to discuss, explain and express ideas and results both correct and incorrect.
- To provide a stimulating Mathematical environment where maths is celebrated and promoted through the curriculum.
- Continually strive to provide equal access to all aspects of the Mathematics Curriculum for every child or adult involved in the learning of Mathematics.

CLASSROOM ORGANISATION

The classroom should provide a stimulating maths environment. Maths resources should be clearly labelled and accessible to all children. The following materials should be evident within the classroom (depending on year group):

- A number line
- Concrete resources
 - Pictorial representations
 - Abstract written methods
- Number square
- Maths language
- Maths games or challenges
- Questions to encourage children to think about their mathematical learning.

An audit of the maths environment will be carried out by the Maths team at the end of each academic year.

PLANNING MATHS

Planning is initially done annually through creating an (academic year) overview which is broken down into Autumn, Spring and Summer terms. Copies of these plans are available, for reference, based on the National Curriculum Programmes of study. The overview is then further broken down into a weekly plan and/or flipchart. These need to show objectives, CPA methods, clear objectives for mental maths, the main (fluency, reasoning and problem solving) activity, resources, and evaluations. Teachers are required to hand in their weekly plans/flipcharts on the Greenholm Staff Common area, which allows the Maths team to view them for monitoring and other teachers in their year group to view them for adaptive teaching of their group.

THE MATHS LESSON

All lessons should provide opportunities to practise and rehearse (Fluency), explain, and discuss their understanding using mathematical vocabulary (Reasoning); and apply their learning in lots of different contexts (Problem Solve). The maths lesson should have a clear objective(s), and children should be made aware of this at an appropriate point in the lesson. The maths lesson should reflect the following aspects:

- a) an interactive, purposeful warm-ups to develop rapid recall facts as well as mental strategies. It is at the teacher's discretion when they deliver this in their lesson. This could be verbal, using ICT or assessment questions.
- b) Anchor Problem retrieval grid. This (depending on the year group) has up to four boxes; last lesson, last week, last term and last year. This checks the retrieval skills of the children and allows the teacher to use assessment on current, previous and future learning (5-10 minutes).
- c) Guided Practise. Through effective questioning, the teacher can then tailor the tasks to best support and challenge the children. A variety of tasks will be presented in different ways, where CPA methods are undertaken using practical equipment and written methods simultaneously. (15 minutes).
- d) Independent Practise. Children can show how they work through tasks independently using the skills and methods practised in the Guided Practise part of the session. (20 minutes)

It is at the teacher's discretion as to how they choose to order the above stages to their lesson (retrieval grid must be at the beginning). Set homework or challenge

Targets should be set for the children before the main activity about time and quantity of work produced, so the children know exactly what is expected of them.

USING AND APPLYING (Mastery)

Every opportunity should be taken to encourage aspects of using and applying maths or currently referred to as 'Mastery,' i.e. taking the knowledge gained and applying it to different contexts. This identifies the need to use a variety of resources. Give children the opportunity to discover key concepts by providing guided activities. Investigational skills should be continuously developed and encouraged throughout the school. The children should decide on how to develop the investigation and note what they discover. Incidental investigation work should be encouraged, if children produce a question or query the mathematics, they should be given the opportunity to explore and develop the idea. A 'systematic' approach to investigations should be promoted i.e. start at the beginning or the easiest step and reflect on prior knowledge. Encourage children to record their findings/results, using a variety of methods (for instance, tables, pictograms), so that they are easier to analyse.

DIFFERENTIATION:

Differentiation can be catered for in different ways:

- By outcome (particularly in the case of investigations)
- By the support given
- By varying the task
- Through targeted questioning
- By focused input
- Use of resources
- Giving the children opportunity to choose their task

ASSESSMENT

Teacher Assessment should be ongoing:

- Daily and weekly evaluations (through observation)
- Marking
- End of unit tasks/tests (written or oral)
- Assessment week (times tables tests; arithmetic and reasoning papers)

To get a fuller assessment of a child's capability the child needs to be assessed on several pieces of work, using several the above. Children are assessed more formally in Reception using Baseline Assessment, Year 2, and Year 6 by use of the Statutory Tasks and Tests for end of Key Stages. In Year 1 end of unit tests/tasks. Year 3, Year 4, and Year 5 assessment week papers.

Special Educational Needs and Disability (SEND)

A variety of resources are available for children with SEND Maths planning needs to reflect the needs of all children. Targets for Maths should be set in Individual Target Plans. The Maths Continuum can be used to support and plan for pupils who have specific needs in Maths. SEND and pupil premium learners are identified on the weekly plans/flips to ensure their needs are planned for.

HOMEWORK AND PARENTAL INVOLVEMENT

Maths homework should not just be a consolidation exercise, but open-ended activities and Maths games, investigational activities related to ongoing work in the classroom, should also be sent for homework. Homework is set weekly.

At Greenholm, we enjoy involving parents in all aspects of school life, and Maths is no exception. Reception parents are inducted with a numeracy workshop at the beginning of the academic year. Parents are invited to participate in any maths events. Parents are always welcome to observe Maths lessons, or work with their children by prior arrangement. Parents are also encouraged to participate in industry linked maths projects.

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