Foremarke Hall
Repton Preparatory School

Policy Statement

Numeracy Across the Curriculum

This policy is a whole-school policy including EYFS. It is relevant to all academic staff and should be read in conjunction with the following:

- Curriculum
- Teaching and Learning
- Assessment, Recording & Reporting
- Marking and Feedback
- Presentation of Work
- Learning Enhancement – SEND
- Learning Enhancement – EAL
- EYFS - SEND
- Joint Foremarke/Repton Numeracy Strategy

Introduction

The use of Mathematics is a core skill which needs to be developed throughout the curriculum experienced by all of our pupils. Mathematics is essential to everyday life, critical to science, technology and engineering, and necessary for financial literacy and most forms of employment. Pupils must be able to work confidently and competently with Number, Shape & Space, Measurement, Statistics and Problem Solving skills. While the actual mathematical content of the National Curriculum is covered within Mathematics lessons, it is the responsibility of all staff to develop pupils' numerical skills, as they occur naturally, so that pupils will feel confident to employ their skills in familiar and unfamiliar situations.

Aims

The National Curriculum for Mathematics aims to ensure that all pupils:

- become **fluent** in the fundamentals of Mathematics, 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.
- **reason mathematically** by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language.
- can **solve problems** by applying their mathematical skills 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.

At Foremarke Hall these aims will be implemented by all staff across many subjects and areas of the curriculum.

It is the responsibility of all staff to:

- build numeracy skills throughout a pupil's time in school, in order to help to prepare them to leave school as numerate adults.
- contribute to the development of mathematical skills where situations arise naturally.
- encourage discussion between pupils and pupils/staff, regarding the choice and suitability of numerical strategies employed.
- encourage and support the development of the understanding of mental methods and the usefulness of partitioning numbers in aiding mental calculation.
- boost pupils' confidence in using number, shape & space, algebra, measurement and statistical

concepts.

- have an understanding of the mathematical methods appropriate for different situations and for different age groups and to demonstrate these methods where possible using the correct terminology.
- liaise with the Mathematics Department to discuss specific mathematical emphases within their subject and to ensure that such content corresponds with Maths schemes of work (e.g. types of graphs, use of specific formulae).
- provide examples of how numeracy skills are important within their particular subject.

Within learning situations the pupils should be encouraged to:

- have a sense of the size of a number and where it fits into the number system.
- have a sense of how our system of place value works and the effect of multiplying and dividing numbers.
- know number facts such as number bonds, times-tables (up to 12 x 12 and including zero), doubles and halves.
- use what they know by heart to figure out answers mentally.
- calculate accurately, both mentally and with pencil and paper, drawing on a range of calculation strategies.
- recognise when it is appropriate to use a calculator and then do so competently (Year 7 and Year 8 only).
- make sense of number problems and recognise the operations needed to solve them.
- be able to explain their reasoning and method, using correct mathematical terms.
- suggest suitable apparatus and units for measuring and make sensible estimates of measurements.
- explain, interpret and make predictions from numbers in graphs, charts and tables.
- think creatively when developing solutions to problems, including the use of diagrams, algebra or written methods where appropriate.

Implementation:

When planning lessons and other activities, teachers should explore opportunities to include numeracy content where possible. These may include formal mathematical activities such as drawing and interpreting graphs, performing calculations or using measuring devices. Similarly opportunities may involve informal discussions about how Maths relates to a particular aspect of the subject. Younger pupils may be exposed to mathematical concepts through play or less formal tasks.

Where necessary, teachers should refer to the **Joint Foremarke/Repton Numeracy Strategy** for more detailed information concerning methods taught within Upper School Mathematics lessons. This document describes how methods are taught as well as providing suggested cross curricular links. Further guidance is available from the Head of Mathematics.

During lesson observations (including those for performance management) observers will be encouraged to identify numeracy content within lessons. A box to indicate this is included on the school's Lesson Observation form.

Each year, the Head of Mathematics will conduct a numeracy audit with other HODs to ensure that the school's Maths curriculum is meeting the needs of all pupils. Content from this audit will be included in future updates of the **Joint Foremarke/Repton Numeracy Strategy**.

If teachers are concerned about the numeracy development of any pupil they should be referred to the Head of Mathematics who will then be able to assess the pupil in consultation with the Learning Enhancement Department.

When providing numeracy related activities and materials in lessons, teachers may need to make reasonable adjustments to ensure that all pupils are able to access the material. Pupils with SEND or EAL needs may require differentiated activities or additional support to further their numeracy development.

Review

The 'Numeracy across the Curriculum' policy is the responsibility of the Academic Team, led by the Head of Mathematics and will be reviewed according to the school's policy review cycle.

Last Revised: Lent 2017
Next Review: Lent 2018