

# Malbank Numeracy Policy

*“Numeracy is a proficiency which is developed mainly in mathematics but also in other subjects. It is more than an ability to do basic arithmetic. It involves developing confidence and competence with numbers and measures. It requires understanding of the number system, a repertoire of mathematical techniques, and an inclination and ability to solve quantitative or spatial problems in a range of contexts. Numeracy also demands understanding of the ways in which data are gathered by counting and measuring, and presented in graphs, diagrams, charts and tables.”*

Framework for Teaching Mathematics – yrs 7 to 9 – DfES.

## Our Vision

Malbank School is committed to raising the standards of numeracy of all of its students, so that they develop the ability to use numeracy skills effectively in all areas of the curriculum and the skills necessary to cope confidently with the demands of further education, employment and adult life.

The purposes of our whole-school numeracy policy are:

- to develop the standards in numeracy across the school;
- to raise the profile and importance of numeracy across the curriculum and for future life;
- to ensure consistency of practice across the school including methods, vocabulary, notation, etc.;
- to assist the transfer of pupils’ knowledge, skills and understanding between subjects.
- to make it clear that all teachers contribute to the development of numeracy in our students.

## Roles & Responsibilities

- Senior leaders
  - lead and give a high profile to numeracy
- Maths department
  - Ensure that students are equipped with the appropriate skills to apply their numeracy skills to varied contexts.
  - To regularly promote basic numeracy & calculator skills in lessons through the numeracy ninjas programme and starters in KS4
- Teachers across the curriculum
  - Ensure that all opportunities are taken to promote numeracy and the usefulness of problem solving in all aspects of their teaching and link it to their areas of the curriculum where appropriate.
  - To not use negative language that encourages the view that it’s “ok to be bad at Maths”.
- Numeracy coordinator
  - Run the numeracy ninjas programme, track student progress and ensure that the correct materials are being used for each class.

- Provide numeracy work for form tutors to do with their classes in form time.
- Form tutors
  - Actively promote and encourage pupils to engage with the numeracy problems and challenges provided.
- Parents
  - Encourage and support their children in numeracy and encourage their children to talk about and use their numeracy skills
- Pupils
  - Take responsibility for their learning and recognise where they need to work to improve their numeracy skills.

## **Aims**

### Teachers of mathematics will:

- Be aware of the mathematical skills and techniques used in other subjects and provide advice to other departments so that a consistent approach is used in all cases.
- Seek opportunities to use topics and questions from other subjects in maths lessons.
- Attempt to ensure that pupils have the numeracy skills required to access the mathematical aspects of other subjects.

### Teachers of subjects other than mathematics will:

- Ensure that they are familiar with correct mathematical language, notation, conventions and techniques, relating to their own subject, and encourage students to use these correctly.
- Provide information for maths teachers about what specific techniques and skills are required by particular groups.
- Provide resources such as topic titles or examinations questions which could be used by maths teachers in their lessons.

Students should be also encouraged to use both mental methods as well as calculators when appropriate. Students need to be proficient in using a scientific calculator and should bring their own to lessons for use.

## **Differentiation & reviewing progress**

To support the development of numeracy, we run a “numeracy ninjas” programme in years 7 & 8 to develop basic numeracy skills. These are progressive and are reviewed by the numeracy coordinator and head of Maths regularly to check that progress is being made and which set of questions are required next.

We also use numeracy check-lists and tests for our lower achieving students in year 7 and extra intervention lessons are targeted to improve their identified areas of weakness and then tested to measure progress.

In KS4, students are regularly encouraged to use their core numeracy skills through starters and for problem solving questions.

**By the end of KS4 pupils should be able to:**

- have a sense of the size of a number and where it fits into the number system;
- recall mathematical facts confidently;
- calculate accurately and efficiently, both mentally and with pencil and paper, drawing on a range of calculation strategies;
- use proportional reasoning to simplify and solve problems;
- use calculators and other ICT resources appropriately and effectively to solve mathematical problems, and select from the display the number of figures appropriate to the context of a calculation;
- use simple formulae and substitute numbers in them;
- measure and estimate measurements, choosing suitable units and reading numbers correctly from a range of meters, dials and scales;
- calculate simple perimeters, areas and volumes, recognising the degree of accuracy that can be achieved;
- understand and use measures of time and speed, and rates such as £ per hour or miles per litre;
- draw plane figures to given specifications and appreciate the concept of scale in geometrical drawings and maps;
- understand the difference between the mean, median and mode and the purpose for which each is used;
- collect data, discrete and continuous, and draw, interpret and predict from graphs, diagrams, charts and tables;
- have some understanding of the measurement of probability and risk;
- explain their methods, reasoning and conclusions, using correct mathematical terms;
- judge the reasonableness of solutions and check them when necessary;
- give their results to a degree of accuracy appropriate to the context.

Reviewed by RAB, November, 2017

Chair of Governors: Scott Harding

Date: December 8<sup>th</sup>, 2017

Headteacher: Jeannette Walker

Date: December 8<sup>th</sup>, 2017

Date of review: December 2019