Baines School

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The Governors of Baines School

Numeracy Policy 2025-2027

Last Updated	
Approved by the Governing Body	9th February 2027
Date of Last Review	9th February 2026
Next Review Due	February 2027

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1. Statement of Intent

Baines School is committed to raising the standards of numeracy of all of its students; we want our students to be Encouraged, Engaged and Empowered to be confident and capable in the use of numeracy to support their learning in all areas of the curriculum and to acquire the skills necessary to help achieve success in further education, employment and adult life.

Baines School is committed to raising the standard of numeracy of all 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 continuing education, employment, and adult life. Numeracy will be consolidated and enhanced through opportunities to apply and develop numeracy skills across the curriculum. Poor numeracy skills hold back students' progress and can lower their self-esteem. All teachers and support staff will have a role to play in supporting students' progress in numeracy.

Definition of Numeracy
The development of the concept of "numeracy":

1959 - (*Crowther report*) - Numeracy is defined as a word to represent the mirror image of literacy.

1982 - (*Cockcroft report*) - A numerate pupil is one who has the ability to cope confidently with the mathematical needs of adult life. There should be an emphasis on the wider aspects of numeracy and not purely the skills of computation.

1995 - (*OED*) – numerate means acquainted with the basic principles of mathematics. There are a number of definitions. This is what we believe is the most appropriate:

"Numeracy is a proficiency, which involves confidence and competence with numbers and measures. It is more than an ability to do basic arithmetic requiring an understanding of the number system, a range of mathematical techniques and an inclination and ability to solve quantitative or spatial problems in a range of contexts. It demands an understanding of the ways in which data are gathered by counting and measuring, and presented in graphs, diagrams, charts, and tables". (*National Numeracy Strategy*)
(*Framework for Teaching Mathematics - yrs. 7 to 9 - DfES*)

"Mathematical literacy is an individual's capacity to identify and understand the role that mathematics plays in the world, to make well-founded judgements and to use and engage with mathematics in ways that meet the needs of that individual's life as a constructive, concerned and reflective citizen". (*PISA*)
Context

1.1.1 Numeracy is not the sole responsibility of the mathematics department. All subjects can contribute to the development and enhancement of students' numeracy skills including their ability to describe and explain their strategies and reasoning.

1.1.2 Where students enter Baines School having made limited progress throughout KS2 it is mainly because of lower-than-average literacy and numeracy skills. As a result, it must be ensured that these students aim to make accelerated progress throughout their secondary school experience that allows them to catch up with their peers nationally.

1.1.3 Baines School is further developing a numeracy strategy to develop numeracy within its setting. This entails a consistent approach to develop numeracy, identification where students have gaps in foundational knowledge, and strategies to close these gaps.

1.1.4 Baines School is further developing the work with feeder primary schools to ensure there is continuity between year 6 and year 7.

1.2 Does numeracy matter?

1.2.1 Yes, and more than might be expected.

1.2.2 Low numeracy is linked to narrowed life chances, but mostly in terms of outcomes relating to physical and financial health (Rowlands, 2009). Innumeracy increases vulnerability from everyday things like pay, taxes, utilities, etcetera, to accessing the job market to the ease with which you can be exploited or manipulated. (*About 26% of skills shortage vacancies result from a lack of numeracy skills, according to UKCES in 2014*). For example, someone with low numeracy might not appreciate how significant an APR of 5.8% or 58% actually is.

2. Expected Numeracy Capabilities

2.1 At Baines School, we intend that all of our students should have the following foundational knowledge to build on:

- have a sense of the size of a number and where it fits into the number system
- be able to use strategies successfully to solve number-related problems mentally
- apply an appropriate method to help solve a problem, e.g., mental, oral, and written methods
- make sense of number problems and identify and use the required operations to solve them
- restrict their reliance on using a calculator and use them only when it is appropriate to do so
- develop their skills in estimation and approximation and have strategies for checking the reasonableness of their answers
- be able to explain their methods and reasoning using consistent language and mathematical terminology
- be able to make and use sensible estimates of a range of measures in everyday situations
- be able to interpret, explain and make predictions from information given in graphs, charts, and tables
- improve their general problem-solving skills.

2.2 The DfE's KS3 Mathematics Strategy has identified the following priorities for cross-curricular development work:

- to improve accuracy in measurement, calculation, and graphical work
- to improve the interpretation and presentation of graphs, charts, and diagrams
- to improve reasoning and problem-solving

3. Raising the Profile of Numeracy Across the Curriculum

We will use a range of activities to raise the profile of numeracy across the curriculum, examples include:

- mathematics teachers leading INSET subject-specific teaching particular mathematical topics
- developing liaison with feeder schools
- illustrating the importance of mathematics/numeracy, for example:
- students being able to make sense of information in chart/graphical form and be able to describe the 'story' behind the graph.
- students being able to make sense of calculation answers, check the reasonableness of an answer and select the most appropriate method of solution. keyword posters e.g., the language of operations, pre-fixes
- providing support for students who are not yet at age related expectations of foundational knowledge
- examples and exercises used in mathematics lessons based on examples and the schemes of work of other subjects, where needed
- key vocabulary/key facts to be embedded in maths lessons
- glossary of maths terms to be available in all teaching rooms (*subject-specific*)
- maths activities included in forms – in Years 7, 8 and 9 students participate in weekly multiplication grids, Year 10 students have access to a numeracy form, when required and Year 11 students are based in core subject forms dependent on areas for development.
- key maths words used as part of our Word of the Week, where appropriate
- Poster on school website explaining calculation methods to families
- to develop the use of Sparx maths to encourage independent learning, and use RAG sheets following assessments to support interventions

4. Objectives

Baines School will adopt a whole school approach to numeracy:

Short-term objectives

- to promote opportunities for numeracy throughout the curriculum
- to develop cross-curricular use of numeracy by building opportunities for numeracy into all schemes of learning (Curriculum@Baines)
- to raise the profile of numeracy across the school

- to provide staff training where necessary
- to build upon the work done in feeder primary schools and the use of KS2 SATs question level analysis
- to use data from CATs assessments

Long-term objectives

- to raise standards of numeracy by enhancing the quality of teaching and learning
- develop schemes of learning across subjects to ensure quality first teaching of numeracy is embedded into every curriculum through Curriculum@Baines
- support departments to create schemes of learning that include specific numeracy objectives where appropriate. These objectives will inform what is taught, how it is taught, what is learnt and how it is learnt
- develop suitable assessments to show progress and areas for development

5. The Numerate Student

5.1 At Baines School we aim to develop numeracy skills with all students to avoid putting a ceiling on achievement.

5.2 Students in all lessons should:

- make correct use of mathematical vocabulary when providing oral and written answers or asking questions
- present ideas and information they have collected in the form of displays of charts and tables
- interpret, describe, and explain their work and not simply reproduce graphs, tables and charts or statements concerning percentages and other numerical data set their work out systematically and with care.

5.3 Where there are calculations these should always be set out, so the method used is clear. Where there are graphs these should always show a suitable scale, be correctly labelled and have a title.

6. Delivery of Numeracy Support

Where students have been identified as needing additional support to make expected progress in line with their peers, using KS2 data, CATs data and professional judgement, the Numeracy team will work together. PDSA cycles will be used to measure the impact of the strategies.

7. Roles and Responsibilities

7.1 The Role of the Numeracy Team

It is the role of members of the numeracy team to:

- Identify students who are working at a level below that of their peers
- Identify and implement the strategies needed to support students to make accelerated progress
- Evaluate the impact of these strategies

- Develop a whole school approach to numeracy strategies

7.2 The Role of the Mathematics Department
It is essential that mathematics teachers provide students with the knowledge, skills and understanding they need to access other areas of the school curriculum with confidence.

7.3 The Role of Teachers and Learning Support Assistants
In order for the cross-curricular strategy to be effective, it is important that all staff:

- understand what numeracy is and are aware of how they can support the delivery of numeracy within their subject
- ensure that numerical tasks in their lessons are age and ability appropriate and used accurately
- consider numeracy in their short and mid-term planning
- ensure that they are familiar with correct mathematical language, notations, and techniques relevant to their subject and encourage students to use these effectively

7.4 The Role of Subject Leaders
In order that the policy becomes whole school practice, it is important that Subject Leaders ensure that:

- schemes of learning have opportunities for numeracy included and identified as part of Curriculum@Baines
- lesson plans include relevant numeracy learning foci where appropriate
- each department has a resource of relevant mathematical methods accessible to staff
- new staff are aware of the numeracy policy and its inclusion in the subject
- the promotion of numeracy in lessons is included in the regular evaluation of teaching and learning and departmental self-review
- mathematics teachers are provided with resources which will enable them to include applications of numeracy relating to other subjects in mathematics lessons

8. The Baines Approach to Calculators
8.1 All students are encouraged to use the Classwiz Casio calculator

8.2 Any staff who need support using the Classwiz Casio Calculator will receive it from the maths team

9. Monitoring and Evaluation
9.1 The numeracy policy will be monitored and reviewed through:

- the School Improvement Plan
- lesson observations
- sampling of students' work
- discussion with staff, parents / carers and governors
- reviewing planning
- analysing assessment data

- discussion of students and with students
- impact reports

9.2 The policy will be reviewed on a two-yearly basis by the Deputy Headteacher for Numeracy and considered for approval by the Curriculum Committee.