# Rugby Free Secondary School: Numeracy Strategy 2025-2026 Academic Year

## Pre-Amble:

Numeracy is an essential life-skill for all young people; without it, they will be disadvantaged throughout their life. Numeracy and Literacy strategies combined aim to support young people to achieve a secure foundation as they move through Key Stages on their school journey. It is vital that our stakeholders understand that numeracy is of personal, social and economic importance, and the grasp of this enables our students to be 'set for life'.

## Research Underpinning Our Approach:

At RFSS, our plan is rooted in research and best practice that then been evaluated adapted for our context. The primary foundations for our Numeracy strategy plan have centred on the following research:

- 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 was 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.

As a consequence of the above, and taking into account the Department for Education's (DfE) 'National Numeracy Strategy' (1999), we recognise Numeracy as follows:

*'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.'*

## What Is Numeracy?

Numeracy is a skill which involves confidence and competence with understanding and using numbers and measures. It requires an understanding of the number system, a variety of basic number skills and an ability to solve number problems in a variety of contexts. It also demands practical understanding of the ways in which information is gathered by counting and measuring, and is presented in graphs, diagrams, charts and tables. As a teacher you can help young people to acquire these skills by giving a focus to the relevant aspects of mathematics embedded within your subject. The outcome should be young people who are skilled in numeracy and confident and tackling mathematical problems with increasing independence.

## Our Principles:

As a consequence of the above, we want our students at Rugby Free Secondary School to be able to do / undertake / understand the following:

- Have a sense of size and number when it fits into the number system and increasingly know by heart number facts such as number buttons, multiplication tables, doubles and halves

- Use what they know to figure out answers mentally or via the calculator
- Calculate accurately and efficiently both mentally and with pencil and paper
- Recognise when it's important to use a calculator and be able to do so effectively
- Make sense of number problems including non-routine problems and recognise strategies to solve them;
- Explain methods and reasoning
- Judge whether their answers are reasonable and have strategies for checking
- Suggest suitable units for measuring and make sensible estimates of measurement
- Explain and make predictions from the numbers in graphs, diagrams, charts and tables.

## Numeracy in Subjects:

Numeracy contributes to many subjects of the secondary curriculum, often in practical ways:

- In Geography, students apply number skills in the classroom and in fieldwork to measure, gather and analyse data. They use mathematical information to understand direction, distances and scale and to determine locations when using plans, maps and globes
- In ADT, students apply number skills such as measurement, estimates, scale, proportion, pattern and shapes to develop, inform and resource their creative activities. Students will also use numeracy in terms of weights and timings in Food and Nutrition / Hospitality and Catering.
- In Resistant Materials, students use mathematical information and data, presented numerically and graphically, to research and develop their ideas. They use number to measure and calculate sizes, fits and materials.
- In English and Drama, students use number through identifying pages in texts or lines in poetry to read and/or perform.
- In History, students develop their number skills through developing chronological awareness, using conventions relating to time, and making use of data, e.g. events chronology and statistics.
- In ICT, students use mathematical information and data presented numerically and graphically in data-handling software. They use number to collect and enter data for interpretation in spreadsheets and simulations and present their findings as graphs and charts, checking accuracy before processing.
- In MFL, students develop number skills through a range of activities in the target language. These can include number rhymes; ordering numbers; ordering events in time; using number in relevant contexts such as currency exchange; gathering information in a variety of ways, including questionnaires and recording and presenting results in a variety of formats.
- In Music, students develop important numerical skills with structure and rhythm.
- In PE, students develop their number skills by using mathematical information and data. They use the language of position (including co-ordinates and compass points) and movement, as well as data handling and measures in athletic and adventurous activities. They use scale in plans and maps. They measure and record performances, e.g. time, distance and height, and use the data to set targets and improve their performance.
- In Religious Studies, students develop skills in the application of number by using information such as ordering events in time, by measuring time through the calendars of

various religions, and by considering the significance of number within religions. They interpret results/data and present findings from questionnaires, graphs and other forms of data in order to draw conclusions and ask further questions about issues relating to religion and the world.

- In Science, students work quantitatively to estimate and measure using nonstandard and then standard measures, recording the latter with appropriate S.I. units. They use tables, charts and graphs to record and present information. With increasing maturity they draw lines of best fit on line graphs, use some quantitative definitions and perform scientific calculations;

## Maths and Numeracy Booster Groups:

For students who require additional support, smaller groups are available, taught by a trained Secondary Maths teacher. In these timetabled lessons, students will be taught on a smaller scale, and learning may be in smaller steps. In addition to this, there are a range of academic interventions in place, especially in Key Stage 3, for those students who require Numeracy catch-up opportunities. In these sessions, students may possibly come out of another subject for a fixed period of time, in order to undertake additional Numeracy and Maths work, again on a smaller scale.

## Vocabulary:

In Mathematics lessons, Mathematics teachers will emphasise literacy skills when tackling Mathematical problems. Keywords are emphasised and their spellings and meanings reinforced. The problems are broken down into manageable chunks, starting with the ‘Set for Learning’ recall and retrieval Starter activity. In other subjects, we encourage our staff to:

- Use Mathematical vocabulary. For example, instead of 'lines on a graph’, use the term ‘axis’.
- Use a variety of words that have the same meaning e.g. add, plus, etc. multiply as a replacement for times.
- Discuss words that have different meanings in Mathematics from everyday life e.g. take away, volume, product etc, where appropriate.
- Highlight word sources and stems e.g. quad means four.
- Encourage our students to inform the class of where a section of text may sit within the main text, using numbers and instructions to do this.
- Enable students to use a calculator, where appropriate.
- Encourage students to count, add, subtract, multiply and/or divide, when applicable.