



Mathematics and Numeracy Policy

Date:	September 2019
Date approved by Management Committee:	
Signature of Chair of Management Committee:	
To be reviewed:	At the discretion of the Head Teacher

Mathematics and Numeracy Policy

This policy gives guidance to staff and should be read alongside the Teaching and Learning Policy, Marking Policy, Assessment Policy and Calculation Policy.

Introduction

At the Link School, we believe that Mathematics is a tool for everyday life. It is a whole network of concepts and relationships which provide a way of viewing and making sense of the world. It is used to analyse and communicate information and ideas and to tackle a range of practical tasks and real life problems. It also provides the materials and means for creating new, imaginative worlds to explore.

Rationale

Mathematics contributes to the school curriculum by developing learners' abilities to calculate; to reason logically, algebraically, and geometrically; to solve problems; and to handle data. Mathematics is important for learners in many other areas of study, particularly Science and Technology. It is also important in everyday living, in many forms of employment and in public decision-making. As a subject in its own right, Mathematics presents frequent opportunities for creativity and can stimulate moments of pleasure and wonder when a problem is solved for the first time, especially when learners have had to work hard for the solution.

It enables learners to build a secure framework of mathematical reasoning, which they can use and apply with confidence. The power of mathematical reasoning lies in the use of precise and concise forms of language, symbolism and representation to reveal and explore general relationships. These mathematical forms are widely used for modelling situations, a trend accelerated by computational technologies.

The subject transcends cultural boundaries and its importance is universally recognised. Mathematics helps us to understand and change the World.

Aims

We aim to develop and raise the standards of Mathematics for all of our learners. This means developing the ability of learners to use numeracy skills effectively in all areas of the curriculum and beyond. Learners should use numeracy skills to cope confidently with the demands of further education, employment and adult life.

Our aim is to develop:

- a positive attitude towards mathematics and an awareness of the fascination of mathematics
- competence and confidence in mathematical knowledge, concepts and skills
- an ability to solve problems, to reason, to think logically and to work systematically and accurately.

- initiative and an ability to work both independently and in cooperation with others
- an ability to communicate mathematics
- an ability to use and apply mathematics across the curriculum and in real life
- an understanding of mathematics through a process of enquiry and experiment
- to make at least good progress in maths and obtain formal qualifications where appropriate e.g. KS2 SATS or KS4 GCSE's.

Curriculum:

Mathematics within the curriculum

At the Link School we provide a curriculum that meets the needs of a diverse group of young people. This involves students embarking on a broad and balanced curriculum accredited through examinations and coursework requirements: Functional Skills; Entry Level Certificates; GCSEs and IGCSEs. The table on page 5 is a summary of how each subject area, with the exception of mathematics, contributes to the development of mathematical skills in our students. It should be noted that the skills of reasoning, problem solving and decision making are all important skills that are needed for effective use of numeracy. All subjects are able to contribute to the development of these skills, even when there is little numerical data handling or graphical demand within the subject.

Assessment

At EYFS/KS1 mathematics involves providing children with opportunities to develop and improve their skills in counting, understanding and using numbers, calculating simple addition and subtraction problems; and to describe shapes, spaces, and measure

At KS2 and KS3 learners follow the updated guidance for the National Curriculum. Teachers work closely with Local Authority advisors and have implemented the 'Sunderland Solution' in the assessment of maths. Staff at KS2 and KS3 effectively use a wide range of formative and summative assessment tools to regularly check on the progress of the learners and to provide a full profile of the learners needs.

- Use of Maths Progress Tracker
- Regular tasks are planned into lessons
- Staff planning
- Marking of children's work
- Assessment for Learning used to support accelerated progress.

At KS4 learners follow a course in GCSE Mathematics, GCSE Statistics, Functional Skills at Level 1 and 2 Staff at KS4 use both summative and formative assessment to check progress of learners. Within the GCSE controlled assessments, learners are encouraged to use the numeracy skills that they have acquired, alongside

assessment criteria to complete work for portfolios. Numeracy spans the curriculum which is evidenced in planning and marking within learners files.

Differentiation

This should always be incorporated into all mathematics lessons and can be done in various ways:

- Stepped Activities which become more difficult and demanding but cater for the less able in the early sections.
- Resourcing which provides a variety of resources depending on abilities e.g. counters, cubes, 100 squares, number lines, mirrors.
- Grouping according to ability so that the groups can be given different tasks when appropriate.
- Model provided
- Independent research set
- Choice of task.

Roles and responsibilities

Responsibility for promoting the highest quality of numeracy lies with the whole school community.

Key roles and responsibilities include:

- The Management Committee in defining and agreeing the principles underlying the school policy and in monitoring and reviewing its application;
- The Headteacher in framing the school policy and, with other members of the Senior Management Team, organising support for the implementation of the policy and the monitoring of numeracy;
- All staff in ensuring consistent application of the policy;
- Parents and carers, who will be encouraged to take an interest in their child's learning, working in partnership with the school to maintain high levels of progress;
- Learners need to be aware of what is expected of them in order that their learning, and that of those around them, is as effective as possible. It is important that they understand the value of the learning process.

The role of the Mathematics Teacher is

- To be aware of the mathematical techniques used in other subjects and provide assistance and advice to other colleagues, so that a correct and consistent approach may be used in all subjects.
- To see opportunities to use topics from other subjects in Mathematics lessons

- To establish and maintain constructive communication between Mathematics teachers and teachers of other subjects.
- To organise appropriate numeracy INSET for teachers.

Links with other departments

Subject	Contribution
Science	Experiments, calculations, measurements, present and interpret graphs, charts, tables, data, algebra skills,
Technology, including Construction	Measuring (metric and imperial), measurements when making models/shapes, drawing plans, proportion
ICT	Collecting and classifying data, use of computer models, formula in excel spreadsheets
Art	Geometric patterns and shapes, proportions, ratio and scale, perspective
PSHEE	Finance, budgets, bank accounts
PE/Games	Measurement of height, distance, speed, time
English	Teaching students to identify important information from texts will help them to better understand Mathematical examination questions.
Religious Studies	The discussion of moral and social issues is likely to lead to the use of primary and secondary data.

Professional development:

Staff will receive regular training on the policy and how to use it effectively to ensure high standards and progress are maintained.

Monitoring and Evaluation:

The Senior Leadership Team will review samples of planning and work (as per SEF calendar) from each area to monitor the implementation of this policy and the effectiveness of the delivery of numeracy throughout the school. An analysis will be made and feedback will be given to staff. A review of samples of work in work scrutiny, lesson observations and learning walks should inform the following:

- Improvement in learners' achievement and attainment
- Consistency in the delivery of numeracy across subjects and key stages; • Participation of learners in the process

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