Lever Edge Primary Academy

Mathematics Policy

Reviewed Autumn 2022

The main intent of Mathematics at Lever Edge School is to ensure children develop, from an early age, the fundamental concepts and essential Mathematical skills.

Our Intent

- To encourage all children become fluent with the number system – including place value
- To enable all children to develop the ability to think logically and clearly, whilst developing ways to record systematically
- To enable all children to apply their Mathematical knowledge and understanding independently
- To enable all children to use mathematical language effectively and accurately
- To create an atmosphere in which all children feel able to confidently explain their strategies and talk about their mathematics.
- To encourage all children to develop positive attitudes to Mathematics
- To allow all children to use and apply Mathematical skills in other curricular areas

Curriculum Content

Mathematics teaching at Lever Edge School provides opportunities for:

- group work
- paired work
- whole class teaching
- individual work

Pupils engage in:

- the development of mental strategies
- written methods
- practical work
- investigational work
- problem solving – including pictorial / visual representations
- mathematical discussion
- consolidation of basic skills and number facts

Planning (Please also refer to planning guidance)

To put the New National Curriculum into practice, the school implements the following:

- Long and medium term plans to scaffold and direct fluid learning across school.
- Medium term planning allows for depth of learning within own year group targets.
- Skills Progression map: This whole school document shows each year group citing the necessary skills across: Number, Fractions, Decimals & Percentages, Measure, Geometry, Algebra, Statistics, and Problem Solving.

- Weekly planning: weekly grids of tasks, activities, exercises, vocabulary, key questions and teaching points, including how pupils will be grouped *(grouping is fluid based on prior attainment and AfL)* and displaying how teachers will use any support. Teachers follow the School's Weekly Mathematics Planning Format.
- Basic Skills are covered through oral / mental starters and are referenced on weekly planning.
- Arithmetic is taught discretely and methods are applied to all areas of calculation within the Mathematics Curriculum. Taught Arithmetic sessions also provide basic skill coverage.
- Multiplications: A whole school approach in place. Each year group focuses on their given times tables. *Higher* or *lower* Multiplication facts are also taught depending on attainment. Related multiplication and division facts are taught appropriately. Weekly 'challenges' and rewards are in place to support and stimulate times tables learning.
- Independent / Context based learning is planned for as applicable and is referenced on weekly planning formats.

Lesson Organisation

Every lesson in School, regardless of Year Group, generally follows a similar structure:

A *Typical* Mathematics Lesson

Oral & mental calculation	(About 5 to 10 minutes) *Whole class work to re-hearse, sharpen and develop mental and oral skills. Over the week there should be a variety of activities.* Within this session, it *MAY* be more effective for adults to withdraw specific children (or groups of children) to work on Learning Objectives more focused to their attainment. This part of the lesson is perfect for a 'Remember me' element to review previous learning.
Main teaching activity	(About 30 to 40 minutes) *Main teaching input occurs here, followed by pupil activities. Children can be working in a variety of ways: in whole class, in groups, in pairs or as individuals.*
A Plenary	(About 10 minutes) *This rounds off the lesson. The whole class sorts out misconceptions and identifies progress; it may also summarise key facts and ideas or things the children should remember. A plenary could also make links to other work, discuss the next steps or be a time when homework is set. Plenaries are also used throughout each session as and when applicable.*

Recording and Setting out of Mathematics Work

Children in Mathematics need to be allowed the freedom to develop their own methods of recording their workings-out, but can only do so within a basic structure adhered to by the whole school.

It should be understood that presentation and order in Mathematical recording is important but it is more significant that the answer is correct. Informal methods of recording may seem less structured and more cluttered than formal workings, but all should still be presented with care.

- In EYFS, practical activities are available daily. Learning is evidenced in floor books.
- In KS1, children must write the date for each piece of work, and, when using squared paper for recording their calculations, should move toward the use of one square for each number.
- In the KS2, children must draw a margin of three squares on each page in their mathematics book, ruling off their last piece of work and writing the date abutted to the margin each time they begin a new session of work. As in KS1 children should continue to record one number to each square.
- The title for each lesson should be written before any work is undertaken.

Corrections

If a child has misunderstood a concept and this is demonstrated by numerous errors in their answers, corrections should always be given by the class teacher and completed in a timely fashion. Simple errors in work, where only a couple of questions have been completed incorrectly, need not always be fully corrected. Any inappropriate presentation should always be repeated and/or corrected.

Homework

Please refer to the School's Homework Policy.

Mathematical Vocabulary

It is important that mathematical vocabulary is introduced and reinforced on a regular basis in all aspects of a Mathematics lesson.

Children need to recognise, read and understand mathematical vocabulary and also be able to express their mathematical ideas using the correct terminology. Vocabulary displayed on working walls in classrooms and changed as appropriate per subject area.

Differentiation - EAL, SEN, G+T and Equal Opportunity Issues

Alongside clearly differentiated and appropriate tasks and activities within the classroom, additional support may be coordinated to target children with Special Educational Needs or English as an Additional Language if appropriate. This support is made to give children access to mathematical concepts and vocabulary at a level of understanding that is relevant to them.

Children may also have access to intervention groups. These groups will primarily support those children who need further support to learn and apply key facts, such as methods of calculation or rehearsal of number bonds as number facts. These sessions are also used to support missing prior learning that is essential for progression within a subject area. This has become more prominent post Covid.

Appropriate differentiation and support should also be available for the gifted and talented children who may be accessing work above and beyond the average. This support can challenge the greater depth learners by encouraging the depth of their understanding and application.

Target Setting

Target setting by the Class Teacher

Targets are specific, defined and set for each lesson through the relevant level of attainment with support from the appropriate year group standard document.

Target setting by the Class Teacher and SLT

Targets are set across: Pupil Progress Meetings, via long-term assessment and data outcomes, book scrutiny and lesson observations.

Assessment

Short Term Assessment

There is ongoing, daily assessment of progress which occurs in every classroom within school. Short-term assessment is judged against the skills cited in the skills progression document,
[Mini-plenaries, within lessons, will also be an important part of ongoing Assessment for Learning.]

Long Term Assessment

There is an assessment of children's progress at the end of each term, either through optional tests for Years 3, 4, 5 and compulsory Year 2 and Year 6 SATs.
Multiplication and related number facts – including division – are both short and long term assessed.

Records

Maintaining records on children within Lever Edge School is important to track their progress through the mathematics curriculum. The following records are completed by teachers:

- Weekly record of Arithmetic
- Weekly record of Tables Test scores
- Termly recording of scores / levels taken from optional SATs and QCA papers or assessments

Monitoring of Mathematical Standards within School

Medium and Short (weekly) Termly mathematics planning is monitored by SLT to examine and evaluate Mathematical teaching and learning throughout the school. The teaching and organisation of Mathematics at Lever Edge School is monitored by planning and book scrutiny and observations by SLT to give positive feedback of good practise and to help others where support (coaching and / or mentoring) is required.