



Mathematics policy

Policy Version			
Date	Document Version	Document Revision History	Document Author/Reviser
01.09.21			L Mills & R Law

This policy will be reviewed every 12 months in light of local and Government legislation.

School Mission and Aims

“Empowering children to shape the world of tomorrow”

Elmridge strives to ensure that all its pupils meet their full academic, social, emotional and physical potential through building solid foundations during this first chapter of their lifelong learning journey.

Our goal is to develop confident, understanding, global citizens with a love of learning and respect for each other and the world around them.

Elmridge Curriculum Aims

- Enable pupils to build essential knowledge and skills within each subject and provide opportunities for them to use and apply what they have learnt across other subjects
- Develop pupils’ confidence, leadership, resilience and enjoyment of learning through inspiring learning experiences
- Support and encourage pupils to establish good routines to help them maintain good physical and mental health now and into the future.
- Develop pupils’ awareness of current national and global issues and understand their locality in the context of the wider world
- Develop pupils’ moral values and spiritual awareness
- Develop pupils’ understand of the relevance of their learning, how their learning could be built upon in the next stages of their education and awareness of careers where their knowledge and skills could be applied

Curriculum intent

Mathematics Vision Statement

The language of mathematics is international. The basic skills of mathematics are vital for the life opportunities of our children. Our aim is for all children to think mathematically, enabling them to reason, solve problems and assess risk in a range of contexts.

At Elmridge Primary School, our Mathematics Mastery curriculum has been developed to ensure every child can:

- understand the importance of developing mathematical skills in readiness for their next stage of education and to prepare them for future opportunities and responsibilities of life.
- develop confidence whilst building resilience to be successful, independent and motivated learners
- achieve excellence in mathematics,
- experience a sense of awe and wonder as they solve a problem for the first time,
- display a deeper understanding through a concrete, pictorial and abstract approach,
- develop essential life skills and understand the impact mathematics has on the wider world.

Mathematics Mastery places emphasis on the cumulative mastery of essential knowledge and skills in mathematics. It embeds a deeper understanding of maths by utilising a concrete, pictorial, abstract approach.

Aims

We aim to provide the children with a mathematics curriculum that will produce individuals who are numerate, literate, creative, independent, inquisitive, enquiring and confident. We also aim to provide a stimulating environment and adequate resources so that children can develop their mathematical skills to their full potential.

At Elmridge Primary school, we aim to:

- To implement the current legal requirements of the Foundation Stage (FS) and the National Curriculum (NC).
- To foster positive attitudes, fascination and excitement of discovery through the teaching and learning of mathematical concepts.
- To ensure pupils become fluent in the fundamentals of mathematics, developing conceptual knowledge and an ability to recall and apply knowledge rapidly and accurately
- To ensure that pupils can reason mathematically and solve problems
- For our children to develop a 'can do' attitude and perceive themselves as mathematicians.
- To broaden children's knowledge and understanding of how mathematics is used in the wider world.
- For our children to use and understand mathematical language and recognise its importance as a language for communication and thinking.

Curriculum implementation

At Elmridge Primary school, we use a variety of teaching and learning styles within Math lessons. Our curriculum use the Maths hub White Rose curriculum which enables pupils to become fluent in the fundamentals of mathematics. This curriculum also enables pupils to reason and to solve problems. It provides guidance to help pupils to become:

- Visualisers – we use the CPA approach to help pupils understand mathematics and to make connections between different representations.
- Describers – we place great emphasis on mathematical language and questioning so pupils can discuss the mathematics they are doing, and so support them to take ideas further.
- Experimenters – as well as being fluent mathematicians, we want pupils to love and learn more about mathematics.

Our curriculum is carefully ordered to ensure pupils have strong foundations when understanding number. This effective approach to teaching and learning allows for children to continue building upon prior knowledge of number skills (e.g. place value, followed by addition and subtraction, multiplication and division) before tackling other topics which don't depend on each other (e.g. shape and statistics). We try to mix these so pupils have as wide a variety of mathematical experiences as possible in each term and year.

Planning

At Elmridge Primary School, in we use the White Rose Mathematics Hubs resources to support us in our planning.

- Long term plans map out the units to be covered each term, during each year group.
- Short term plans prepared by each teacher for each unit, highlight the skills and objectives of the lesson, and identify resources and appropriate differentiation. They also indicate key questions and stem sentences.

Resources

- Each class has a range of resources to support learning. These are easily accessible for the children so that they can lead their own learning.
- Access to different environments - classrooms, outdoor learning spaces and the hall.
- A range of ICT software to support the teaching of specific concepts including Times Table Rockstars which can be used at home.
- The White Rose Mathematics Hub Mastery resources are used by all classes for planning and activities.

Times Tables Scheme

Effective understanding and recall of times tables is the foundation of most of the mathematics children will do at primary school and the mathematics curriculum involves children being fluent in number skills. Our times tables scheme includes inverse operations, a range of representations and problem solving, which are all vital skills in mathematics. The children are tested weekly in years 3, 4 and 5.

Organisation of teaching and learning

Structure of a lesson

1. Aim / LO shared
2. Starter – mental arithmetic / pre or post learning activity
3. Whole class input
4. Task – independent or group work
5. Post learning assessment – self-assessment, peer assessment, reasoning problem

Foundation Stage

In the Foundation Stage (FS), teaching is planned through adult supported teaching and learning. Daily opportunities to informally develop mathematical understanding through child-initiated activities and routines are capitalised upon. As part of transition into KS1 the pupils begin to participate in more formal math lessons.

Key Stage 1 and 2

In Key Stage 1 (KS1) and 2 (KS2), teaching follows the National Curriculum and White Rose Hub materials. This involves a daily mathematics lesson, weekly homework and access to Times Table Rockstars for Y2 – Y6

The role of the parents

It is important that parents and carers are actively involved in the children's education. In order to help keep them informed of what is happening within school we have run yearly parent information sessions which prepares both parents and pupils for the year ahead. This is an opportunity for teachers to share teaching and learning, curriculum and assessment planned for particular year groups. Parents are also directed to the school website where they have access to:

- Long term plan
- Calculation policy
- Math policy
- Vocabulary list
- List of websites to support child's learning.

Inclusion

Elmridge Primary school is an educationally inclusive school as we are concerned about the teaching and learning, achievements, attitudes and well-being of all our pupils. We work hard to offer equality of opportunity and diversity to all pupils within school.

We believe we have a duty to ensure that all children have equal rights to the opportunities offered by education and that all children will be encouraged to fulfil their potential

Differentiation

At Elmridge Primary School we want children to achieve success, therefore we will ensure they are given differentiated tasks that are matched to their level of attainment so that they can demonstrate successfully what they know, understand and can do.

At Elmridge Primary School effective differentiation is achieved through good planning, effective teaching and learning with children making good progress.

SEND

Math forms a large part of the school curriculum policy to provide a broad and balanced education to all children and therefore taught to all children at Elmridge Primary School. Teacher, teaching assistants and SENco are responsible for ensuring the curriculum is accessible to all.

Assessment and Recording

As part of the Assessment for Learning progress – and in-line with Elmridge’s Assessment Policy – students will receive both verbal and written feedback to yield effective progression. Children are also encouraged to be critical of their own work and respond to feedback questions. Children also consider their own progress and have opportunity to evaluate their own and others work. Summative assessments take place at the end of each unit of work and end of each term. Formal national tests are taken at the end of KS1 and in KS2.

Curriculum impact

In Mathematics Mastery assessment is continuous. From the beginning of every lesson, teachers and teaching assistants will be assessing what their pupils are, or are not understanding and use this to scaffold each segment of the lesson.

Interventions will be both planned for and ‘live’, meaning that misconceptions are dealt with immediately and high attaining pupils are challenged appropriately. Pre and post teaching ensures that all children can achieve and are prepared for the following lesson.

For each unit of work, the children must complete a pre-learning assessment which determines a child’s target for that unit. This is conducted through a range of age appropriate ways: short written assessment, group work, whole class discussions.

Foundation Stage

- Reception Class practitioner’s ongoing observational assessments made early in Autumn Term 1 ascertain a baseline which then informs subsequent teaching and learning for each child.
- Future attainment is noted using photographs and observational notes. Progress is recorded using assessment tracker and the next steps to be taken are identified. Progress is monitored termly.
- Statutory assessments are made on entry and on exit of the FS.

KS1 and KS2

- In the daily mathematics lesson, formative assessments are made on a day-to-day basis. Practitioners observe, question and evaluate lesson outcomes to further determine progress made and the next steps in learning.
- Pre/ post assessments take place for each new unit of work.
- Summative assessments are made at the end of each term and end of each unit to monitor children's knowledge and understanding of concepts taught. White Rose Mathematics Hub tests are used in all year groups from 1 – 6.
- Progress is discussed at termly 'Pupil Progress Meetings' and focus children are indicated.
- 'Pupil conferencing' involves 6 'tracker' children from Year groups 1 – 6 who are interviewed during the Autumn, Spring and Summer terms by the maths subject leader.
- Statutory assessments are made at the end of each key stage.

Equal Opportunities

All children regardless of ability, race or gender will be given equal access to the range of teaching and learning material within school.

Monitoring procedures

The Head of school, assistant head teacher and maths subject leader play a central role in the monitoring and evaluation of the quality of teaching and learning of mathematics in the school.

The monitoring strategy:

1. Children's work and unit planning scrutinies are conducted.
2. Pupil progress meetings are held termly.
3. Lesson 'drop ins' and observations take place in all classes throughout the year.
4. Pupil conferencing takes place termly.

The subject leader is responsible for monitoring attainment and progress, the outcomes are collated in the subject leadership folder and fed back to staff at an appropriate time. Teaching and learning is monitored using different approaches on a termly basis.

The policy will be discussed and reviewed annually.

Next review date: 01.07.2021