

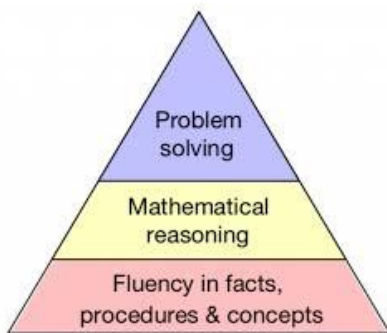
Maths at Elmlea Schools Trust

"I love choosing to be challenged in maths and getting stuck into solving problems."

Mathematics provides a vital tool that helps us to understand and change the world. We want all pupils at Elmlea Schools Trust to develop a love for maths, to be resilient and resourceful and encourage a curiosity for number which they can take with them into the wider world.

Our whole curriculum is shaped by our school vision which aims to enable all children to be 'forever learners'. We foster positive attitudes and a growth mindset, promoting the fact that 'We are all mathematicians!' At Elmlea, we aim for all children to be confident, successful and independent maths learners who want to challenge themselves.

By the end of KS2 we aim for children to be **fluent** in the fundamentals of mathematics with a conceptual understanding and the ability to recall and apply knowledge rapidly and accurately. They should have the skills to **solve problems** by applying their mathematics to a variety of situations with increasing sophistication, including in unfamiliar contexts and to model real-life scenarios. Children will be able to **reason** mathematically by following a line of enquiry and develop and present a justification, argument or proof using mathematical language.



At Elmlea, we are constantly evolving our curriculum, reflecting on the current needs of the children. We believe in a mix of blocking key concepts whilst covering the full breadth of maths objectives.

[Hyperlink to curriculum map and curriculum map +](#)

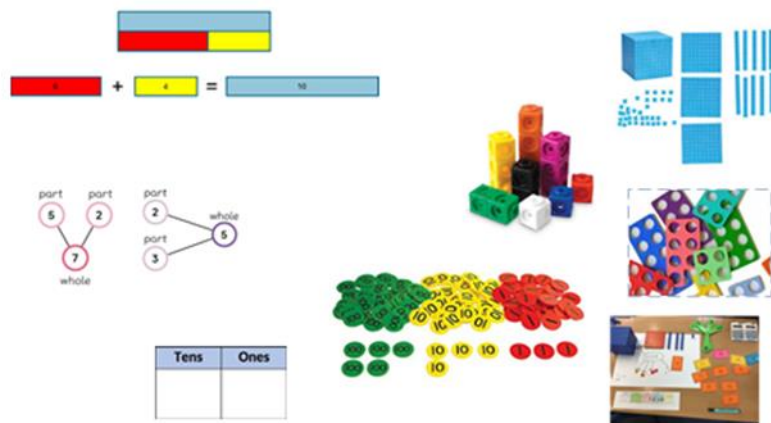
Our Learning Journey

We teach the National Curriculum, supported by a clear skills and knowledge progression. We believe all children can achieve in mathematics and teach for secure and deep understanding of mathematical concepts through manageable steps. We use mistakes and misconceptions as an essential part of learning and provide challenge through rich and sophisticated problems. They will spend time becoming true masters of content, applying and being creative with new knowledge in multiple ways.



Children can find maths difficult because it is abstract. At Elmlea, we use an approach which builds on children's existing knowledge by introducing abstract concepts in a concrete and tangible way. It involves moving from concrete materials, to pictorial representations, to abstract symbols. To start with, concepts are brought to life by allowing children to experience and handle physical (concrete) objects. At Elmlea, we use a wealth of resources which the children become increasingly confident in using independently. (See picture) Pictorial is the "seeing" stage. Here, visual representations of concrete objects are used to model problems. This stage encourages children to make a mental connection between the physical object they just handled and the abstract pictures, diagrams or models that represent the objects. Abstract is the "symbolic" stage, where children use numbers, notation, and mathematical symbols (for example, +, -, <, >). More details of the methods that we use can be found in our calculation policies.

Throughout the maths curriculum, key vocabulary is explicitly taught, referred to and orally rehearsed to enable the children to embed concepts and be able to articulate their mathematical thinking.



A range of concrete and pictorial models used at Elmlea

Hyperlink to calculation policies

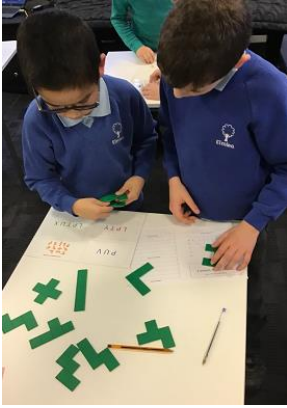
In EYFS discrete maths teaching is supported by high quality continuous provision and targeted objectives, building on the children's knowledge. The children are introduced to the concepts and resources they will use further up the school and have lots of opportunities to make real world links. Across the trust, mathematics is taught daily by the class teacher. Units of maths are taught in blocks but pupils continuously make links across these areas of learning. These daily sessions will often include a re-cap of previous learning and tackle misconceptions. New skills and vocabulary are introduced and reinforced using working walls (see picture) and children have the time to consolidate and apply their knowledge. In the Infant School we use the Mastering Number scheme from the NCTEM. These are short, discrete sessions on number taught 4x a week which aim to provide children with a deep understanding of the composition of number.

Enrichment and Support

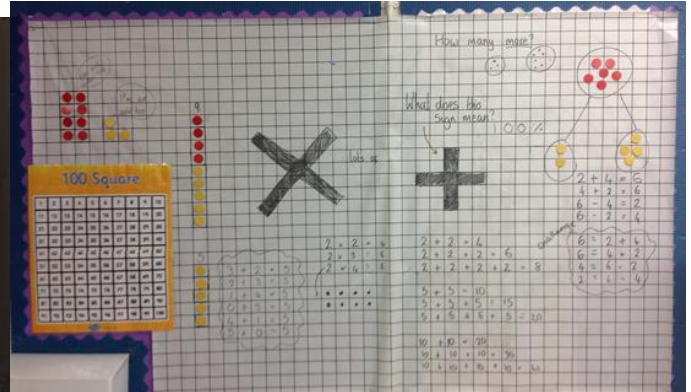
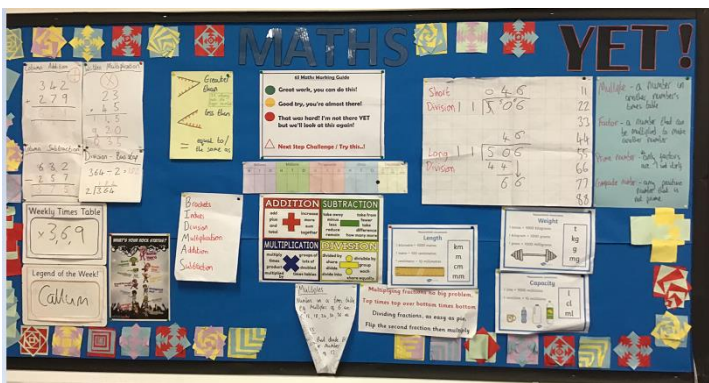
The expectation is that the majority of pupils will move through the units at broadly the same pace. However, decisions about when to progress are always based on the security of pupils' understanding and their readiness. Pupils who grasp concepts rapidly are challenged through being offered problems before any acceleration through new content. Those who are not sufficiently fluent with earlier material have the time and support to consolidate their understanding before moving on. In KS2, children are grouped so that the curriculum can be effectively adapted to meet their needs.

At Elmlea, we provide various maths enrichment opportunities to give children real-life experiences, help them make links and compete at the highest levels. These include city-wide interschool challenges, 'maths bees', money week and we celebrate significant figures in the STEM world.

Our curriculum is also enriched by the use of the following online learning platforms: Times tables Rock Stars, Mathletics and Doodlemaths. Achievements in these are recognised and celebrated across the school.



Children working collaboratively to solve problems



Example of working walls

What do the children think?

- 'Maths is great fun we love playing lots of games!'
- 'We like spotting mistakes and pretending to be the teacher.'
- 'I love choosing to be challenging in maths and getting stuck into solving problems.'
- 'There are lots of useful resources around my classroom that help me with my maths.'

Maths Curriculum Leaders: Millie Crook, Laura Sheffield & Tom Weller