

Mathematics Education



Let all you do be done in love (1 Corinthians 16:14).

“...teachers’ knowledge of mathematics for teaching must be like an experienced taxi driver’s knowledge of a city, whereby one can get to significant places in a wide variety of ways, flexibly and adaptively.”

(Ma, 1999, p. 123)

Subject lead: Sam Govey (Year 4/ 5 class teacher, art and RE lead)

Link Governor: Alison Skinner

Aims

Great Easton’s maths curriculum aims to ensure that all children are well prepared for the next stage of their education and for futures post-16. We want to ensure teaching is consistent; making all lessons at least good with many outstanding, so that every pupil receives a good mathematics education.

We aim for all of our children to be strong mathematicians because they:

- Have a strong conceptual understanding of maths; its structures and its relationships
- Can recall and apply their knowledge confidently and efficiently
- Are secure in using written methods for which they have a clear understanding
- We aim to place problem solving and investigative skills at the heart of our mathematics teaching.
- We recognise that collaboration and communication are crucial life skills and should be developed in our mathematics teaching.
- The expectation is that all children welcome challenge and that teachers foster the attitude that we all, even the most able among us, should expect to struggle.
- Through careful assessment, planning and preparation we aim to ensure that all children progress when they are ready. New knowledge and skills should be secured before new material is introduced. For those who grasp new material quickly, they should apply this to rich problem-solving tasks.

Teaching and Learning

Underpinning all good or outstanding teaching in mathematics is the expertise and sound subject knowledge of the staff. Clear policies and regular professional development from a range of sources will develop the expertise of staff to help:

- in delivering the school’s curriculum thoroughly and consistently
- in enhancing staff subject knowledge
- in weaving mathematical ideas into a coherent whole
- in choosing practical resources, visual images and information and communication
- technology that promote inclusive teaching and a deeper understanding for all
- in using good Assessment for Learning techniques to listen flexibly to children and to check and probe their understanding throughout

Curriculum

The school works to the expectations set out in the framework document for the national curriculum in England 2014, for Years 1 to 6 and the Early Years Foundation Stage, 2012. We follow the White Rose scheme of work, however at Great Easton our curriculum for mathematics is also tailored to meet the individual needs of each cohort and to fulfil our ambition for the children by the time they leave us.

The school’s curriculum places an emphasis on rich, applied mathematical tasks which allow the children many opportunities to persevere with problem solving. While some maths needs to be taught discretely, there is an emphasis on giving the maths a context so there is purpose for learning. Using the school environment and the wider world, the curriculum ensures children explore, make connections, seek patterns, recognise relationships and are creative with mathematics.

A good understanding of place value and key number facts is extremely important therefore we encourage use of a wide range of practical equipment to support this conceptual development including Numicon, Base Ten, Counting Sticks, Cuisenaire Rods, number lines, one hundred squares and much more.

Throughout all stages, children play with numbers, measures, shapes and patterns to develop numerical awareness and explore the idea of 'proof.' We promote mathematical games that involve point scoring and personal bests (both electronic, and 'hands on') as we know that if managed properly this is highly motivating.

SEND, disadvantaged and Higher Potential Learners (HPL)

Lessons and activities are planned to include and extend all children by utilising a range of approaches. For children on the SEND register this may include child specific support, use of equipment to support learning, and mixed ability grouping to develop peer teaching.

Assessment for learning, carried out by the class teacher, will support the identification of children working at different abilities and teaching and support will be adapted in line with this.

Higher Potential Learners (HPLs) within R.E demonstrate strengths and skills such as, thinking in an abstract way, applying what is learnt lessons to everyday life and an interest in learning and exploring further. Through discussion as a staff team, children who embody these strengths and skills may be added to the HPL register. To further extend these learners opportunities are sought to take part in activities, enrichment trips visits and clubs.

