



Maths at Essex

Intent

We believe that a high-quality mathematics education provides a strong foundation for understanding the world and being able to function effectively within it. Therefore, pupils should:

- Be fluent in the fundamentals of mathematics in order to tackle and solve increasingly complex problems over time
- Be able to recall and apply knowledge rapidly and accurately
- Reason mathematically by following a line of enquiry, identifying patterns and relationships and making generalisations
- Be confident in articulating their thought processes, and justifying their answers, using correct mathematical vocabulary
- Be able to solve problems, by applying their mathematics to a variety of problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions, both independently and in collaboration with others
- Value physical and verbal representations of mathematics just as highly as abstract and written ones

Above all, we want our pupils to know that effort, self-belief and collaboration can result in everyone achieving success in maths.

Implementation

Our maths curriculum prepares our pupils to be 21st Century citizens by providing them with rich opportunities to problem solve, reason and make links. We ensure that pupils have a solid conceptual understanding of the fundamentals of maths, so that they can use these building blocks to make mathematical sense of the world around them.

At Essex Primary, we use a mastery approach to maths, where pupils use concrete resources, manipulatives and pictorials to help them understand a concept. We also encourage pupils to construct pictorial representations of their understanding, to help establish the deep comprehension required for flexible thinking and the solving of non-routine problems. Furthermore, our lessons encourage a collaborative approach to problem solving; this not only develops the pupils' mathematical abilities, but also their social, communication and team-working skills.

Pupils are required to regularly reflect upon their learning, following the teaching of a new strategy or concept, journaling what they have understood about the concept and how they could apply it to their future maths learning. This process has made learning more explicit to the pupils and has helped to develop their meta-cognitive skills, which will enable them to become the independent learners that we strive for all pupils at Essex to become.

Impact

Through pupil voice and regular monitoring of planning, lessons and pupils' achievements, it is clear that pupils enjoy their maths lessons and have become more confident in sharing their understanding of concepts as well as justifying their use of specific strategies. Pupils are confident in using pictorial methods to show how they have solved a problem. More able pupils are consistently provided with challenges and extensions that allow them to deepen their understanding of the concepts taught and articulate their thought processes.

Enrichment

At Essex, our teaching and learning of maths extends beyond the classroom. We participate in the Mayor's Maths Challenge tournament where our pupils compete against other schools in London. We also hold termly maths competitions to instill a love of maths in all pupils across the school. Additionally, we participate in the annual Times Table Rockstars and Splash Learn Springboard competitions where pupils compete against other schools at a national level. We organise an annual Maths Week and Maths Day, where pupils are given the opportunity to solve practical problems with their peers, whilst having fun, learning and achieving.