Laceyfield Maths

At **Eastfield Infants' and Nursery Academy** we recognise that mathematics is essential to everyday life, critical to science, technology and engineering, and necessary for financial literacy and most forms of employment. Therefore, we recognise the importance of a high quality mathematics curriculum. We follow a **mastery** approach in order to allow *every* child to succeed.

Our Aims and Purpose

- to promote enjoyment and enthusiasm for learning through practical activity, exploration and discussion
- for children to become **fluent** in the fundamentals of mathematics so that they are able to recall and apply their knowledge rapidly and accurately
- for children to be able to **reason mathematically** by following a line of enquiry, hypothesising about relationships and generalisations, and developing an argument, justification or proof using mathematical language
- for children to be able to **solve problems** by applying their mathematics to a variety of routine and non-routine problems with increasing sophistication
- for children to be able to demonstrate and develop effective learning behaviours such as: perseverance, collaboration, questioning and organisation
- to develop children's understanding of the importance of Mathematics in everyday life

How do we do it?

Mathematics is taught as a discrete lesson every day. This will usually be an hour a day. Where possible, all children engage in the objectives specified in the National Curriculum for their year group.Where this is not possible, teachers are expected to adapt the learning to suit the children's needs. In all lessons, we use a CPA approach to develop a deep and sustainable understanding of maths. The CPA approach 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 and problems. By systematically varying the apparatus and methods used to solve a problem, children can craft powerful mental connections between the concrete, pictorial, and abstract phases.

The fundamentals

- ✓ A belief that every child can and will achieve mastery
- ✓ A focus on task design – everything is done on purpose
- ✓ Blue partner/ Green Partner
- ✓ Quick maths for fluency
- ✓ Reasoning and problem solving
- ✓ Whole Class Choral Response
- ✓ Pre and post learning intervention
- ✓ Same Day Intervention
- ✓ No ability groupings
- ✓ S planning
- ✓ Conceptual and procedural variation
- ✓ Demo and review phase
- ✓ Up-to-date working walls
- ✓ Concrete – Pictorial – Abstract
- ✓ Use of resources, including pictorial, in all year groups
- ✓ A focus on 'grown up mathemtical' vocabulary
- ✓ Pace, productivity, progress
- ✓ Children use Times Tables Rockstars/Numbots

Structure of a maths lesson:

1. Quick maths - for fluency and facts
2. New learning - I do, we do, you do, ping pong and whiteboard work
3. Independent task - mixture of varied fluency, problem solving and reasoning
4. Intervention - Where appropriate, intervention will be delivered to support with the next lesson.

Weekly arithmetic session and test when you feel is appropriate.

Planning

Teachers use the Laceyfield Bespoke medium term plans. This highlights when each strand should be taught throughout the year. This plan provides adequate time to be spent on each unit in order for children to achieve depth. We follow a cyclical approach to teaching maths as we strongly believe children learn best when small steps are continuously revisited, built on and deepened. Therefore, where possible, some units are revisited in the summer term. Teachers also use Whiterose to break each objective down into small steps. A large range of resources are used from various websites including NCETM, I See Reasoning, Whiterose, Classroom Secrets and Master the Curriculum in order to design tasks to suit the children's needs.

"Through developing a child's ability to calculate, to reason and problem solve, a high quality mathematics education provides a foundation for understanding the world, the ability to reason mathematically, an appreciation of the power of mathematics, and a sense of enjoyment and curiosity about the subject."