Subject: Maths

Rationale

Mathematics is both a key skill within school, as well as a life skill, to be utilised throughout every person's day to day experiences. Mathematics equips pupils with uniquely powerful tools to understand and change the world. These tools include logical reasoning, problem solving skills and the ability to think in abstract ways. Mathematics is therefore not just important in our everyday lives, but integral to success in the modern world, enabling us to manage our lives effectively. At Pleasant Street we endeavour to ensure that children develop a positive and enthusiastic attitude towards mathematics that will stay with them for life. We value every pupil and the contribution they have to make.

Characteristics

The National Curriculum for mathematics aims to ensure that all pupils:

- Become fluent in the fundamentals of mathematics, including through varied and frequent practice with increasingly complex problems over time, so that pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately.
- Progression from mental and informal methods to standard algorithms, builds upon children's developing understanding of our number system. Children are encouraged to develop 'number sense', and solve problems using a variety of methods, including the empty number line and the bar-modelling approach. Procedural methods are taught alongside these methods, with daily practice 'four a day' used to embed standard methods for all four operations.
- Reason mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language.
- Can solve problems by applying their mathematics to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions.

Curriculum Intent

We aim to ensure that every child achieves success and that all are enabled to develop their skills in mathematics in accordance with their individual level of ability. To develop fluency in mathematics, children need to secure a conceptual understanding. It is important to make connections between concrete materials, models and images, mathematical language, symbolic representations and prior learning. Our approach to the teaching of mathematics ensures that these aspects of mathematics are all considered when planning an appropriate, engaging and challenging curriculum forour pupils. We also ensure that children have opportunities to practise key skills, whilst developing the understanding and knowledge to apply these skills into more complex problems and investigations.

We strongly believe that every child is a mathematician and that every child can achieve in mathematics. We aspire for our children to be confident mathematical communicators who share their mathematical ideas and knowledge in a safe and nurturing environment. We want learners to be equipped with an understanding of mathematics that will be relevant and useful not only in education but also in the wider world of work and their everyday lives.

Curriculum Implementation

All pupils have a daily maths lesson. The structure of each lesson is flexible and will vary depending on the needs of the children and the content of the lesson. Typically, a maths lesson will include; a learning objective, activities that provide challenge for each ability group, key questions and the use of additional adults. Planning and teaching of mathematics in Pleasant Street is based on the core principles of a practical, fluency and application process. Each new topic begins with a practical approach with the use of concrete materials to help develop their understanding of the new skill being taught. Children will then be given time to develop their fluency skills before finally being able to reason and apply the new skills they have learned into different contexts. Other areas for consideration include; steps to success, teacher modelling, as well as a variety of teaching and learning approaches, known as 'Learning to Learn' which help to develop children's enjoyment and engagement of the subject.

At Pleasant Street we have an additional BIG MATHS session, outside the daily maths lesson. This ensures time is available for children to practice and master the basic skills, using the CLIC method. This involves; Counting along number lines, (multiples, decimals, fractions and negatives numbers), Learn its (number facts), It's Nothing New, (related facts using place value) and Calculation. The knowledge of the basic skills is fundamental in helping pupils move towards procedural efficiency. The session gives teachers the opportunity to link with previous, current or future learning so that the prerequisite skills of an objective can be regularly practised and rehearsed. This session also includes a daily practice of the four rules of number in the form of 'Four a Day' calculations, increasing in difficulty as children master each technique in turn. All children have access to practical equipment for counting and measuring within the classes 'Maths Boxes'. These provide children with concrete models provided to support their development of abstract thinking.

Curriculum Impact

We have an environment in Pleasant Street that helps children develop an enthusiasm and confidence in Mathematics. Our pupils not only relish the opportunity to solve mathematical problems but they are also confident communicators who enjoy sharing their mathematical knowledge with their peers and learn together as a result. Through our approach, children display a deep understanding of different mathematical concepts, strong fluency skills and can form connections and recognise relationships that can be used to solve mathematical problems in new and unfamiliar contexts.

Our teachers also use a wealth of stimulating and engaging teaching and learning approaches, using concrete resources, the latest technology, revisiting daily maths skills and using Times Tables Rockstars and Numbots programmes. Furthermore, as a staff, we continually keep up to date with current research and engage in lesson studies to ensure teaching and learning is outstanding through programmes such as the NCETM Maths Hubs.