

Maths Vision Statement

What are we trying to achieve in Maths?

At Purlwell, our aim is for children to leave our school as skilled, confident resilient mathematicians who understand that mathematics is a fundamental part of everyday life and the world we live in. Mathematics is integral to all aspects of life and with this in mind, we endeavour to ensure that children develop a healthy and enthusiastic attitude towards Mathematics. We want children to develop their curiosity and passion for problem solving, find enjoyment in tackling puzzles and knowing that it is okay to make mistakes. We aim to give our children the teaching, opportunities and experiences they need to develop a deep, embedded understanding that will stay with them for life.

How is the subject taught?

In Key Stage one, Mathematics lessons are taught daily supported by materials from 'White Rose Maths'. Within the provision, children have the freedom to further explore these mathematical concepts through concrete resources and creative opportunities. In addition to this, they are encouraged to follow their own mathematical lines of enquiry, which are supported through effective adult modelling and interactions. Mathematics is taught using the CPA approach from Early years to Year 2, providing children with a deep and sustainable understanding of maths in pupils. Our children have the opportunity to explore, experience and handle physical (concrete) objects, with every abstract concept first being introduced using physical, interactive concrete materials. Children then progress to the abstract, encouraging children to make a mental connection between the physical object they just handled and the abstract pictures, diagrams or models that represent the objects from the problem. Once children have a deep and secure understanding of the concrete and pictorial elements, they will be introduced to the concept at a symbolic level (abstract), using only numbers and mathematical symbols. Pupils are supported in moving up and down the stages appropriate to their level of needs within concepts and are taught to appreciate that using concrete equipment is positive step in their learning. Within each classroom, maths toolboxes are used to aid learning. These contain a range of mathematical resources made available for children to self-select. These include, but are not limited to, base ten, place value counters, number lines, hundred squares and part whole models.

Varied starting points and timely teacher interventions are utilised in response to teachers' ongoing formative assessments. By the end of KS1, each child is encouraged to become fluent within addition sums to 20. For this to be achieved, a progression in number bonds scheme has been implemented alongside numbots to aid the children in their rapid recall of facts. Some pupils with SEND receive a tailored programme of maths teaching in order to close their gaps and ensure they are able to make good progress.

In Early Years, our pupils are taught mathematics through a balance of adult led teaching and opportunities to apply, explore and develop their learning in our well resources indoor and outdoor provision, both independently, with peers and with high level adult interactions. Classroom environments are number rich and have a range of resources to support the CPA approach to mathematics. Pupils are encouraged to select resources independently to take ownership of their own learning within the provision.

Observations and interactions inform future planning and enable adults to address misconceptions and build on children's learning and understanding, ensuring that progress is not limited.

Our pupils are also taught through real-life learning experiences and opportunities to ensure they have an embedded, secure knowledge of number that they can

retrieve and apply to a range of real life situations. Enterprise events, fayres and the topic-linked 'jumble sale' provide our pupils with opportunities to become money-smart, and apply their learning to relevant and relatable situations.

Impact

Children are becoming more confident, resilient learners who enjoy tackling new challenges. Children are able to apply their knowledge and understanding in a range of real-life situations whilst listening to others and sharing ideas. Through the teaching of the CPA approach, children will have a secure concept of number and be equipped with a range of strategies to solve problems. Children are equipped with the knowledge and understanding needed to continue to make good progress in their next phase of learning whilst also having the ability to retrieve and apply their learning to new concepts and problems. They are able to apply their understanding of maths in 'the real world' appropriate to their age and have the foundations to build on as they continue through their education.

Work scrutiny, data, observations and discussions with pupils shows a progression of skills and an accurate recall of number facts and strategies to solve problems.

All staff at Purlwell have a clear understanding of the stages of progression in maths and the skills and strategies needed for children to progress. Staff are confident in planning for and delivering lessons using the CPA approach, whilst continuously striving to challenge pupils to achieve their full potential.

Values

Resilience
Independence
Curiosity
Confidence
Communication/explanation and questioning
Challenge

SMSC / PSHE / British Values

Through the Maths curriculum, our pupils will develop skills in other areas, such as Cultural awareness;

- Celebrating and respecting diversity in local, national and global communities.
- Recognising the things people and communities share in common

Moral understanding

- Develop an understanding of right and wrong and the consequences of their behaviour and actions.

Social skills;

- Engaging with British values (mutual respect and rule of law) and positively contributing to life in modern Britain
- Understanding rights and responsibilities as community members.

Spiritual awareness;

- Reflecting on experiences.