

What does maths look like at Great Doddington Primary School?

Intent

Maths is part of our everyday life. Not a day goes by when humans aren't using some sort of maths. At Great Doddington Primary School, we aim to provide a high-quality maths education that develops a natural enjoyment and curiosity- teaching children the essential skills and knowledge to prepare them for the next steps in their life. We strive for our children to take responsibility in their work and be resilient learners- always trying to be the best they can. In line with the National Curriculum (2014), our overall intent focuses on all pupils being able to:

- Succeed.
- Secure the basic mathematical skills and concepts to become confident individuals.
- Be prepared for their future mathematical journey.
- Develop the acquisition of oracy skills via the accurate use of mathematical vocabulary and stem sentences.
- Use and understand a wide range of appropriate mathematical language to discuss, explain and justify their mathematical thinking and reasoning.
- Make connections across mathematical ideas to develop fluency, mathematical thinking, and competence in solving problems.
- Revisit, explore and deepen their learning to enable the fluency of skills and application of skills learnt.
- Successfully use manipulatives and mathematical representations to secure and deepen their understanding of mathematical concepts.
- 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.
- Reason mathematically making mathematical connections and generalisations, develop justifications using mathematical language confidently.
- Apply mathematical knowledge across the curriculum and to real life situations.

Implementation

At Great Doddington Primary School, we use the White Rose Scheme in order to offer comprehensive coverage of the National Curriculum (2014). This allows the children the chance to develop their understanding of practical (Concrete) mathematics, before moving on to more abstract concepts. Underpinning our practise is the use of concrete and pictorial resources, which allow all children the opportunity to successfully understand the theory of maths before implementing this in real life scenarios. This teaching style will hereby be known as CPA approach. The below model outlines mastery in mathematics showing CPA approach as part of their mathematics education, they were able to build on each stage towards a greater mathematical understanding of the concepts being learned, which in turn led to information and knowledge being internalised to a greater degree.

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Impact

The use of single year group teaching, along with the CPA approach to mathematics allows the children the opportunity to flourish and see their own development through different units of work- especially number-based topics where use of concrete or pictorial materials is vital in the initial stages of teaching. The use of CPA teaching also allows children the opportunity to make links between different strands of maths- causing them to be a better mathematician.

Children have a sound understanding of mathematical concepts prior to answering more abstract questioning- CPA sets the children up for success.

The result of clear CPA teaching is that children can develop their reasoning and problem-solving skills later in lessons- showing a deep and secure understanding of a topic.

Principles of learning in maths:

- To develop and promote an 'everyone can' attitude- for all children to succeed
- To frequently revisit learning
- To have high expectations for all pupils
- To prepare children for next steps in learning
- To develop confident learners
- To develop learners that are independent and resilient
- To develop the acquisition of oracy skills through the use of a broad vocabulary
- To develop their understanding and expand their vocabulary
- To support children to make connections in their learning with other subjects.